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8. Sdělení Ministerstva zahraničních věcí o vyhlášení přijetí změn a doplňků Přílohy A – Všeobecná ustanovení týkající se nebezpečných látek a předmětů a Přílohy B – Ustanovení o dopravních prostředcích a o přepravě Evropské dohody o mezinárodní silniční přepravě nebezpečných věcí (ADR)
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8**SDĚLENÍ****Ministerstva zahraničních věcí****o vyhlášení přijetí změn a doplňků****„Přílohy A – Všeobecná ustanovení týkající se nebezpečných látek a předmětů“****a****„Přílohy B – Ustanovení o dopravních prostředcích a o přepravě“****Evropské dohody o mezinárodní silniční přepravě nebezpečných věcí (ADR)**

Ministerstvo zahraničních věcí sděluje, že na zasedáních Pracovní skupiny pro přepravu nebezpečných věcí Evropské hospodářské komise Organizace spojených národů v letech 2011 a 2012 byly vypracovány návrhy změn a doplňků „Přílohy A – Všeobecná ustanovení a ustanovení týkající se nebezpečných látek a předmětů“ a „Přílohy B – Ustanovení o dopravních prostředcích a o přepravě“ Evropské dohody o mezinárodní silniční přepravě nebezpečných věcí (ADR)¹⁾.

Změny a doplňky „Přílohy A“ a „Přílohy B“ vstoupily v platnost na základě článku 14 odst. 3 Dohody ADR dne 1. ledna 2013 a tímto dnem vstoupily v platnost i pro Českou republiku. Platnost „Přílohy A“ a „Přílohy B“ ve znění změn přijatých v letech 2009 a 2010, vyhlášených pod č. 17/2011 Sb. m. s., končí dnem 30. června 2013, pokud není v nových přechodných ustanoveních stanoveno jinak.

Anglické znění „Přílohy A“ a „Přílohy B“ a jejich překlad do českého jazyka se vyhláší současně.

¹⁾ Evropská dohoda o mezinárodní silniční přepravě nebezpečných věcí (ADR), přijatá v Ženevě dne 30. září 1957, byla vyhlášena pod č. 64/1987 Sb.

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ECE/TRANS/225 (Vol.I)

Economic Commission for Europe
Committee on Inland Transport

ADR

applicable as from 1 January 2013

European Agreement
Concerning the International Carriage
of Dangerous Goods by Road

Volume I



UNITED NATIONS
New York and Geneva, 2012

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United Nations Economic Commission for Europe (UNECE)

The United Nations Economic Commission for Europe (UNECE) is one of the five United Nations regional commissions, administered by the Economic and Social Council (ECOSOC). It was established in 1947 with the mandate to help rebuild post-war Europe, develop economic activity and strengthen economic relations among European countries, and between Europe and the rest of the world. During the Cold War, UNECE served as a unique forum for economic dialogue and cooperation between East and West. Despite the complexity of this period, significant achievements were made, with consensus reached on numerous harmonization and standardization agreements.

In the post-Cold War era, UNECE acquired not only many new member States, but also new functions. Since the early 1990s the organization has focused on analyses of the transition process, using its harmonization experience to facilitate the integration of central and eastern European countries into global markets.

UNECE is the forum where the countries of western, central and eastern Europe, Central Asia and North America – 56 countries in all – come together to forge the tools of their economic cooperation. That cooperation concerns economics, statistics, environment, transport, trade, sustainable energy, timber and habitat. The Commission offers a regional framework for the elaboration and harmonization of conventions, norms and standards. The Commission's experts provide technical assistance to the countries of South-East Europe and the Commonwealth of Independent States. This assistance takes the form of advisory services, training seminars and workshops where countries can share their experiences and best practices.

Transport in UNECE

The UNECE Inland Transport Committee (ITC) facilitates the international movement of persons and goods by inland transport modes. It aims to improve competitiveness, safety, energy efficiency and security in the transport sector. At the same time it focuses on reducing the adverse effects of transport activities on the environment and contributing effectively to sustainable development. The ITC is a:

- Centre for multilateral transport standards and agreements in Europe and beyond, e.g. regulations for dangerous goods transport and road vehicle construction at the global level
- Gateway for technical assistance and exchange of best practices
- Promoter of multi-country investment planning
- Substantive partner for transport and trade facilitation initiatives
- Historic centre for transport statistics.

For more than six decades, ITC has provided a platform for intergovernmental cooperation to facilitate and develop international transport while improving its safety and environmental performance. The main results of this persevering and important work are reflected in more than 50 international agreements and conventions which provide an international legal framework and technical regulations for the development of international road, rail, inland water and intermodal transport, as well as dangerous goods transport and vehicle construction. Considering the needs of the transport sector and its regulators, UNECE offers a balanced approach to and treatment of facilitation and security issues alike.

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FOREWORD

General

The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) was done at Geneva on 30 September 1957 under the auspices of the United Nations Economic Commission for Europe, and it entered into force on 29 January 1968. The Agreement itself was amended by the Protocol amending article 14 (3) done at New York on 21 August 1975, which entered into force on 19 April 1985.

According to article 2 of the Agreement, dangerous goods barred from carriage by Annex A shall not be accepted for international transport, while international transport of other dangerous goods shall be authorized subject to compliance with:

- the conditions laid down in Annex A for the goods in question, in particular as regards their packaging and labelling; and
- the conditions laid down in Annex B, in particular as regards the construction, equipment and operation of the vehicle carrying the goods in question.

Nevertheless, according to article 4, each Contracting Party shall retain the right to regulate or prohibit, for reasons other than safety during carriage, the entry of dangerous goods into its territory. Contracting Parties also retain the right to arrange, by bilateral or multilateral agreements, that certain dangerous goods which are prohibited from carriage by Annex A be internationally carried, subject to certain conditions, on their territories, or that dangerous goods authorized to be carried internationally according to Annex A be carried on their territories under conditions less stringent than those specified in Annexes A and B.

Annexes A and B have been regularly amended and updated since the entry into force of ADR.

Structure of Annexes A and B

The Working Party on the Transport of Dangerous Goods (WP.15) of the Economic Commission for Europe's Committee on Inland Transport decided, at its fifty-first session (26-30 October 1992), to restructure Annexes A and B, on the basis of a proposal by the International Road Transport Union (TRANS/WP.15/124, paras. 100-108). The main objectives were to make the requirements more accessible and more user-friendly so that they could be applied more easily not only to international road transport operations under ADR, but also to domestic traffic in all European States through national or European Community legislation, and ultimately to ensure a consistent regulatory framework at European level. It was also considered necessary to identify more clearly the duties of the various participants in the transport chain, to group more systematically the requirements concerning these various participants, and to differentiate the legal requirements of ADR from the European or international standards that could be applied to meet such requirements.

The structure is consistent with that of the United Nations *Recommendations on the Transport of Dangerous Goods, Model Regulations*, the *International Maritime Dangerous Goods Code (IMDG Code)* and the *Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)*.

It has been split into nine parts, but still grouped under two annexes to align with the wording of article 2 of the Agreement itself. The layout is as follows:

Annex A: General provisions and provisions concerning dangerous articles and substances

- Part 1 General provisions
- Part 2 Classification
- Part 3 Dangerous goods list, special provisions and exemptions related to limited and excepted quantities
- Part 4 Packing and tank provisions

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- Part 5 Consignment procedures
- Part 6 Requirements for the construction and testing of packagings, intermediate bulk containers (IBCs), large packagings, tanks and bulk containers
- Part 7 Provisions concerning the conditions of carriage, loading, unloading and handling

Annex B: Provisions concerning transport equipment and transport operations

- Part 8 Requirements for vehicle crews, equipment, operation and documentation
- Part 9 Requirements concerning the construction and approval of vehicles

Part 1, which contains general provisions and definitions, is an essential part, since it contains all definitions for terms used throughout the other parts, and it defines precisely the scope and applicability of ADR, including the possibility of exemptions, as well as the applicability of other regulations. It also contains provisions concerning training, derogations and transitional measures, the respective safety obligations of the various participants in a chain of transport of dangerous goods, control measures, safety advisers, restrictions for the passage of vehicles carrying dangerous goods through road tunnels and transport of dangerous goods security.

Central to the use of the restructured ADR is table A of Chapter 3.2 which contains the dangerous goods list in the numerical order of UN numbers. Once the UN number of a specific dangerous substance or article has been determined, the table provides cross-references to specific requirements to be applied for the carriage of that substance or article, and to the chapters or sections where these specific requirements may be found. Nevertheless, it should be borne in mind that the general requirements or class specific requirements of the various Parts have to be applied in addition to specific requirements, as relevant.

An alphabetical index which indicates the UN number assigned to specific dangerous goods has been prepared by the secretariat and added as table B of Chapter 3.2 to facilitate the access to table A when the UN number is unknown. This table B is not an official part of ADR and has been added in the publication for easy reference only.

When goods which are known or suspected to be dangerous cannot be found by name in any of tables A or B, they have to be classified in accordance with Part 2, which contains all relevant procedures and criteria to determine whether such goods are deemed to be dangerous or not and which UN number should be assigned.

Applicable texts

This version ("2013 ADR") takes into account all new amendments adopted by WP.15 in 2010, 2011 and 2012, circulated under the symbols ECE/TRANS/WP.15/213 and -/Corr.1 and ECE/TRANS/WP.15/213/Add.1, which, subject to acceptance by the Contracting Parties in accordance with article 14(3) of the Agreement, should enter into force on 1 January 2013.

Nevertheless, due to the transitional measures provided for in 1.6.1.1 of Annex A, the previous version ("2011 ADR") may continue to be used until 30 June 2013.

Territorial applicability

ADR is an Agreement between States, and there is no overall enforcing authority. In practice, highway checks are carried out by Contracting Parties, and non-compliance may then result in legal action by national authorities against offenders in accordance with their domestic legislation. ADR itself does not prescribe any penalties. At the time of publishing, the Contracting Parties are Albania, Andorra, Austria, Azerbaijan, Belarus, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Kazakhstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Montenegro, Morocco, Netherlands, Norway, Poland, Portugal, the Republic of Moldova, Romania, Russian Federation, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, the former Yugoslav Republic of Macedonia, Tunisia, Turkey, Ukraine and United Kingdom.

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ADR applies to transport operations performed on the territory of at least two of the above-mentioned Contracting Parties. In addition, it should be noted that, in the interest of uniformity and free trading across the European Union (EU), Annexes A and B of ADR have also been adopted by EU Member States as the basis for regulation of the carriage of dangerous goods by road within and between their territories (Directive 2008/68/EC of the European Parliament and of the Council of 24 September 2008 on the inland transport of dangerous goods, as amended). A number of non-EU countries have also adopted Annexes A and B of ADR as the basis for their national legislation.

Additional practical information

Any query concerning the application of ADR should be directed to the relevant competent authority. Additional information may be found on the UNECE Transport Division website on the following page:

<http://www.unece.org/trans/danger/danger.htm>

This website is regularly updated and contains the following information:

- General information on ADR
- Agreement (without annexes)
- Protocol of signature
- Present status of ADR
- Depositary notifications
- Country information (Competent Authorities, notifications)
- Linguistic versions (ADR, instructions in writing)
- Multilateral agreements
- ADR 2013 (files)
- ADR 2011 (files)
- ADR 2011 (amendments)
- Previous versions (files and amendments)
- Publication details and Corrigenda

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EUROPEAN AGREEMENT CONCERNING THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR)

THE CONTRACTING PARTIES,

DESIRING to increase the safety of international transport by road,

HAVE AGREED as follows:

Article 1

For the purpose of this Agreement,

- (a) the term "vehicle" shall mean motor vehicles, articulated vehicles, trailers and semi-trailers, as defined in article 4 of the Convention on Road Traffic of 19 September 1949, other than vehicles belonging to or under the orders of the armed forces of a Contracting Party;
- (b) the term "dangerous goods" shall mean those substances and articles the international carriage by road of which is prohibited by, or authorized only on certain conditions by, Annexes A and B;
- (c) the term "international transport" shall mean any transport operation performed on the territory of at least two Contracting Parties by vehicles defined in (a) above.

Article 2

1. Subject to the provisions of article 4, paragraph 3, dangerous goods barred from carriage by Annex A shall not be accepted for international transport.
2. International transport of other dangerous goods shall be authorized subject to compliance with:
 - (a) the conditions laid down in Annex A for the goods in question, in particular as regards their packaging and labelling, and
 - (b) the conditions laid down in Annex B, in particular as regards the construction, equipment and operation of the vehicle carrying the goods in question, subject to the provisions of article 4, paragraph 2.

Article 3

The Annexes to this Agreement shall form an integral part thereof.

Article 4

1. Each Contracting Party shall retain the right to regulate or prohibit, for reasons other than safety during carriage, the entry of dangerous goods into its territory.
2. Vehicles in service on the territory of a Contracting Party at the time of entry into force of this Agreement or brought into service on such territory within two months after its entry into force shall be allowed, for a period of three years from such entry into force, to perform the international transport of dangerous goods even if their construction and equipment do not entirely conform to the requirements laid down in Annex B for the transport operation in question. Under special clauses of Annex B, however, this period may be reduced.

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3. The Contracting Parties shall retain the right to arrange, by special bilateral or multilateral agreements, that certain of the dangerous goods which under this Agreement are barred from all international transport may, subject to certain conditions, be accepted for international transport on their territories, or that dangerous goods which under this Agreement are acceptable for international transport only on specified conditions may be accepted for international transport on their territories under conditions less stringent than those laid down in the Annexes to this Agreement. The special bilateral or multilateral agreements referred to in this paragraph shall be communicated to the Secretary-General of the United Nations, who shall communicate them to the Contracting Parties which are not signatories to the said agreements.

Article 5

The transport operations to which this Agreement applies shall remain subject to national or international regulations applicable in general to road traffic, international road transport and international trade.

Article 6

1. Countries members of the Economic Commission for Europe and countries admitted to the Commission in a consultative capacity under paragraph 8 of the Commission's terms of reference may become Contracting Parties to this Agreement.

- (a) by signing it;
- (b) by ratifying it after signing it subject to ratification;
- (c) by acceding to it.

2. Such countries as may participate in certain activities of the Economic Commission for Europe in accordance with paragraph 11 of the Commission's terms of reference may become Contracting Parties to this Agreement by acceding to it after its entry into force.

3. The Agreement shall be open for signature until 15 December 1957. Thereafter, it shall be open for accession.

4. Ratification or accession shall be effected by the depositing of an instrument with the Secretary-General of the United Nations.

Article 7

1. This agreement shall enter into force one month after the date on which the number of countries mentioned in article 6, paragraph 1, which have signed it without reservation of ratification or have deposited their instruments of ratification or accession has reached a total of five. However, the Annexes thereto shall not apply until six months after the entry into force of the Agreement itself.

2. For any country ratifying or acceding to this Agreement after five of the countries referred to in article 6, paragraph 1, have signed it without reservation of ratification or have deposited their instruments of ratification or accession, this Agreement shall enter into force one month after the said country has deposited its instrument of ratification or accession and the Annexes thereto shall apply for the said country either on the same date, if they are already in force by that date, or, if they are not in force by that date, on the date on which they apply under the provisions of paragraph 1 of this article.

Article 8

1. Any contracting Party may denounce this Agreement by so notifying the Secretary-General of the United Nations.

2. Denunciation shall take effect twelve months after the date of receipt by the Secretary-General of the notification of denunciation.

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Article 9

1. This Agreement shall cease to have effect if, after its entry into force, the number of Contracting Parties is less than five during twelve consecutive months.
2. In the event of the conclusion of a worldwide agreement for the regulation of the transport of dangerous goods, any provision of this Agreement which is contrary to any provision of the said worldwide agreement shall, from the date on which the latter enters into force, automatically cease to apply to relations between the Parties to this Agreement which become parties to the worldwide agreement, and shall automatically be replaced by the relevant provision of the said worldwide agreement.

Article 10

1. Any country may, at the time of signing this Agreement without reservation of ratification or of depositing its instrument of ratification or accession or at any time thereafter, declare by notification addressed to the Secretary-General of the United Nations that this Agreement shall extend to all or any of the territories for the international relations of which it is responsible. The Agreement and the annexes thereto shall extend to the territory or territories named in the notification one month after it is received by the Secretary-General.
2. Any country which has made a declaration under paragraph 1 of this article extending this Agreement to any territory for whose international relations it is responsible may denounce the Agreement separately in respect of the said territory in accordance with the provisions of article 8.

Article 11

1. Any dispute between two or more Contracting Parties concerning the interpretation or application of this Agreement shall so far as possible be settled by negotiation between them.
2. Any dispute which is not settled by negotiation shall be submitted to arbitration if any one of the Contracting Parties in dispute so requests and shall be referred accordingly to one or more arbitrators selected by agreement between the Parties in dispute. If within three months from the date of the request for arbitration the Parties in dispute are unable to agree on the selection of an arbitrator or arbitrators, any of those Parties may request the Secretary-General of the United Nations to nominate a single arbitrator to whom the dispute shall be referred for decision.
3. The decision of the arbitrator or arbitrators appointed under paragraph 2 of this article shall be binding on the Contracting Parties in dispute.

Article 12

1. Each Contracting Party may, at the time of signing, ratifying, or acceding to, this Agreement, declare that it does not consider itself bound by article 11. Other Contracting Parties shall not be bound by article 11 in respect of any Contracting Party which has entered such a reservation.
2. Any Contracting Party having entered a reservation as provided for in paragraph 1 of this article may at any time withdraw such reservation by notifying the Secretary-General of the United Nations.

Article 13

1. After this Agreement has been in force for three years, any Contracting Party may, by notification to the Secretary-General of the United Nations, request that a conference be convened for the purpose of reviewing the text of the Agreement. The Secretary-General shall notify all Contracting Parties of the request and a review conference shall be convened by the Secretary-General if, within a period of four months following the date of notification by the Secretary-General, not less than one-fourth of the Contracting Parties notify him of their concurrence with the request.

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2. If a conference is convened in accordance with paragraph 1 of this article, the Secretary-General shall notify all the Contracting Parties and invite them to submit within a period of three months such proposals as they may wish the Conference to consider. The Secretary-General shall circulate to all Contracting Parties the provisional agenda for the conference, together with the texts of such proposals, at least three months before the date on which the conference is to meet.

3. The Secretary-General shall invite to any conference convened in accordance with this article all countries referred to in article 6, paragraph 1, and countries which have become Contracting Parties under article 6, paragraph 2.

Article 14¹

1. Independently of the revision procedure provided for in article 13, any Contracting Party may propose one or more amendments to the Annexes to this Agreement. To that end it shall transmit the text thereof to the Secretary-General of the United Nations. The Secretary-General may also propose amendments to the Annexes to this Agreement for the purpose of ensuring concordance between those Annexes and other international agreements concerning the carriage of dangerous goods.

2. The Secretary-General shall transmit any proposal made under paragraph 1 of this article to all Contracting Parties and inform thereof the other countries referred to in article 6, paragraph 1.

3. Any proposed amendment to the Annexes shall be deemed to be accepted unless, within three months from the date on which the Secretary-General circulates it, at least one-third of the Contracting Parties, or five of them if one-third exceeds that figure, have given the Secretary-General written notification of their objection to the proposed amendment. If the amendment is deemed to be accepted, it shall enter into force for all the Contracting Parties, on the expiry of a further period of three months, except in the following cases:

- (a) In cases where similar amendments have been or are likely to be made to the other international agreements referred to in paragraph 1 of this article, the amendment shall enter into force on the expiry of a period the duration of which shall be determined by the Secretary-General in such a way as to allow, wherever possible, the simultaneous entry into force of the amendment and those that have been made or are likely to be made to such other agreements; such period shall not, however, be of less than one month's duration;
- (b) The Contracting Party submitting the proposed amendment may specify in its proposal, for the purpose of entry into force of the amendment, should it be accepted, a period of more than three months' duration.

4. The Secretary-General shall, as soon as possible, notify all Contracting Parties and all the countries referred to in article 6, paragraph 1, of any objection which may be received from the Contracting Parties to a proposed amendment.

5. If the proposed amendment to the Annexes is not deemed to be accepted, but if at least one Contracting Party other than the Contracting Party which proposed the amendment has given the Secretary-General written notification of its agreement to the proposal, a meeting of all the Contracting Parties and all the countries referred to in article 6, paragraph 1, shall be convened by the Secretary-General within three months after the expiry of the period of three months within which, under paragraph 3 of this article, notification must be given of objection to the amendment. The Secretary-General may also invite to such meeting representatives of:

- (a) intergovernmental organizations which are concerned with transport matters;

¹ *Note by the Secretariat: The text of Article 14, paragraph 3 incorporates a modification which entered into force on 19 April 1985 in accordance with a Protocol transmitted to Contracting Parties under cover of Depository Notification C.N.229.1975.TREATIES-8 of 18 September 1975.*

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- (b) international non-governmental organizations whose activities are directly related to the transport of dangerous goods in the territories of the Contracting Parties.

6. Any amendment adopted by more than half the total number of Contracting Parties at a meeting convened in accordance with paragraph 5 of this article shall enter into force for all Contracting Parties in accordance with the procedure agreed at such meeting by the majority of the Contracting Parties attending it.

Article 15

In addition to the notifications provided for in articles 13 and 14, the Secretary-General of the United Nations shall notify the countries referred to in article 6, paragraph 1, and the countries which have become Contracting Parties under article 6, paragraph 2, of

- (a) signatures, ratifications and accessions in accordance with article 6;
- (b) the dates on which this Agreement and the Annexes thereto enter into force in accordance with article 7;
- (c) denunciations in accordance with article 8;
- (d) the termination of the Agreement in accordance with article 9;
- (e) notifications and denunciations received in accordance with article 10;
- (f) declarations and notifications received in accordance with article 12, paragraphs 1 and 2;
- (g) the acceptance and date of entry into force of amendments in accordance with article 14, paragraphs 3 and 6.

Article 16

1. The Protocol of Signature of this Agreement shall have the same force, effect and duration as the Agreement itself, of which it shall be considered to be an integral part.

2. No reservation to this Agreement, other than those entered in the Protocol of Signature and those made in accordance with article 12, shall be permitted.

Article 17

After 15 December 1957, the original of this Agreement shall be deposited with the Secretary-General of the United Nations, who shall transmit certified true copies thereof to each of the countries referred to in article 6, paragraph 1.

IN WITNESS WHEREOF the undersigned, being duly authorized thereto, have signed this Agreement.

DONE at Geneva, this thirtieth day of September one thousand nine hundred and fifty-seven, in a single copy, in the English and French languages for the text of the Agreement proper, and in the French language for the Annexes, each text being equally authentic for the Agreement proper.

The Secretary-General of the United Nations is requested to prepare an authoritative translation of the Annexes in the English language and attach it to the certified true copies referred to in article 17.

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TO THE EUROPEAN AGREEMENT ON THE INTERNATIONAL CARRIAGE OF DANGEROUS GOODS BY ROAD (ADR)

On proceeding to sign the European Agreement on the International Carriage of Dangerous Goods by Road (ADR) the undersigned, duly authorized,

1. **CONSIDERING** that the conditions governing the carriage of dangerous goods by sea to or from the United Kingdom differ basically from those set forth in Annex A to ADR and that it is impossible to modify them so as to conform to the latter in the near future;

HAVING REGARD to the undertaking given by the United Kingdom to submit as an amendment to the said Annex A a special appendix containing special provisions for road-sea carriage of dangerous goods between the Continent and the United Kingdom;

HAVE AGREED that, until the entry into force of such special appendix, dangerous goods carried under ADR to or from the United Kingdom shall comply with the provisions of Annex A to ADR and also with the United Kingdom conditions for the carriage of dangerous goods by sea;

2. **TAKE NOTE OF** a declaration by the representative of France to the effect that the Government of the French Republic reserves the right, notwithstanding the provisions of article 4, paragraph 2, to refuse to allow vehicles in service on the territory of another Contracting Party, whatever the date on which they were put into service, to be used for the carriage of dangerous goods on French territory unless such vehicles comply either with the conditions laid down for such carriage in Annex B or with the conditions laid down for the carriage of the goods in question in the French regulations governing the carriage of dangerous goods by road;

3. **RECOMMEND** that, before submission in accordance with article 14, paragraph 1, or article 13, paragraph 2, proposed amendments to this Agreement or its Annexes shall as far as possible first be discussed at meetings of experts of the Contracting Parties and, if necessary, of the other countries mentioned in article 6, paragraph 1, of the Agreement and of the international organizations mentioned in article 14, paragraph 5, of the Agreement.

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ANNEX A

GENERAL PROVISIONS AND PROVISIONS CONCERNING DANGEROUS SUBSTANCES AND ARTICLES

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PART 1

General provision

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CHAPTER 1.1**SCOPE AND APPLICABILITY****1.1.1 Structure**

Annexes A and B of ADR are grouped into nine parts. Annex A consists of Parts 1 to 7, and Annex B of Parts 8 and 9. Each part is subdivided into chapters and each chapter into sections and sub-sections. Within each part the number of the part is included with the numbers of the chapters, sections and sub-sections, for example Part 4, Chapter 2, Section 1 is numbered "4.2.1".

1.1.2 Scope

1.1.2.1 For the purposes of Article 2 of ADR, Annex A specifies:

- (a) Dangerous goods which are barred from international carriage;
- (b) Dangerous goods which are authorized for international carriage and the conditions attaching to them (including exemptions) particularly with regard to:
 - classification of goods, including classification criteria and relevant test methods;
 - use of packagings (including mixed packing);
 - use of tanks (including filling);
 - consignment procedures (including marking and labelling of packages and placarding and marking of means of transport as well as documentation and information required);
 - provisions concerning the construction, testing and approval of packagings and tanks;
 - use of means of transport (including loading, mixed loading and unloading).

1.1.2.2 Annex A contains certain provisions which, according to Article 2 of ADR, pertain to Annex B or to both Annexes A and B, as follows:

1.1.1	Structure
1.1.2.3	(Scope of Annex B)
1.1.2.4	
1.1.3.1	Exemptions related to the nature of the transport operation
1.1.3.6	Exemptions related to quantities carried per transport unit
1.1.4	Applicability of other regulations
1.1.4.5	Carriage other than by road
Chapter 1.2	Definitions and units of measurements
Chapter 1.3	Training of persons involved in the carriage of dangerous goods
Chapter 1.4	Safety obligations of the participants
Chapter 1.5	Derogations
Chapter 1.6	Transitional measures
Chapter 1.8	Checks and other support measures to ensure compliance with safety requirements
Chapter 1.9	Transport restrictions by the competent authorities

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Chapter 1.10	Security provisions
Chapter 3.1	General
Chapter 3.2	Columns (1), (2), (14), (15) and (19) (application of provisions of Parts 8 and 9 to individual substances or articles).

1.1.2.3 For the purposes of Article 2 of ADR, Annex B specifies the conditions regarding the construction, equipment and operation of vehicles carrying dangerous goods authorized for carriage:

- requirements for vehicle crews, equipment, operation and documentation;
- requirements concerning the construction and approval of vehicles.

1.1.2.4 In Article 1(c) of ADR, the word "vehicles" need not refer to one and the same vehicle. An international transport operation may be performed by several different vehicles provided that the operation takes place on the territory of at least two Contracting Parties to ADR between the consignor and the consignee indicated in the transport document.

1.1.3 Exemptions

1.1.3.1 *Exemptions related to the nature of the transport operation*

The provisions laid down in ADR do not apply to:

- (a) The carriage of dangerous goods by private individuals where the goods in question are packaged for retail sale and are intended for their personal or domestic use or for their leisure or sporting activities provided that measures have been taken to prevent any leakage of contents in normal conditions of carriage. When these goods are flammable liquids carried in refillable receptacles filled by, or for, a private individual, the total quantity shall not exceed 60 litres per receptacle and 240 litres per transport unit. Dangerous goods in IBCs, large packagings or tanks are not considered to be packaged for retail sale;
- (b) The carriage of machinery or equipment not specified in this Annex and which happen to contain dangerous goods in their internal or operational equipment, provided that measures have been taken to prevent any leakage of contents in normal conditions of carriage;
- (c) The carriage undertaken by enterprises which is ancillary to their main activity, such as deliveries to or returns from building or civil engineering sites, or in relation to surveying, repairs and maintenance, in quantities of not more than 450 litres per packaging and within the maximum quantities specified in 1.1.3.6. Measures shall be taken to prevent any leakage of contents in normal conditions of carriage. These exemptions do not apply to Class 7.

Carriage undertaken by such enterprises for their supply or external or internal distribution does not fall within the scope of this exemption;

- (d) The carriage undertaken by the competent authorities for the emergency response or under their supervision, insofar as such carriage is necessary in relation to the emergency response, in particular carriage undertaken:
 - by breakdown vehicles carrying vehicles which have been involved in accidents or have broken down and contain dangerous goods; or

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- to contain and recover the dangerous goods involved in an incident or accident and move them to the nearest appropriate safe place;
- (e) Emergency transport intended to save human lives or protect the environment provided that all measures are taken to ensure that such transport is carried out in complete safety;
- (f) The carriage of uncleaned empty static storage vessels which have contained gases of Class 2, groups A, O or F, substances of Class 3 or Class 9 belonging to packing group II or III or pesticides of Class 6.1 belonging to packing group II or III, subject to the following conditions:
 - All openings with the exception of pressure relief devices (when fitted) are hermetically closed;
 - Measures have been taken to prevent any leakage of contents in normal conditions of carriage; and
 - The load is fixed in cradles or crates or other handling devices or to the vehicle or container in such a way that they will not become loose or shift during normal conditions of carriage.

This exemption does not apply to static storage vessels which have contained desensitized explosives or substances the carriage of which is prohibited by ADR.

NOTE: For radioactive material, see 1.7.1.4.

1.1.3.2 Exemptions related to the carriage of gases

The provisions laid down in ADR do not apply to the carriage of:

- (a) Gases contained in the tanks of a vehicle, performing a transport operation and destined for its propulsion or for the operation of any of its equipment (e.g. refrigerating equipment);
- (b) Gases contained in the fuel tanks of vehicles transported. The fuel cock between gas tank and engine shall be closed and the electric contact open;
- (c) Gases of Groups A and O (according to 2.2.2.1), if the pressure of the gas in the receptacle or tank at a temperature of 20 °C does not exceed 200 kPa (2 bar) and if the gas is not a liquefied or a refrigerated liquefied gas. This includes every kind of receptacle or tank, e.g. also parts of machinery and apparatus;
- (d) Gases contained in the equipment used for the operation of the vehicle (e.g. fire extinguishers), including in spare parts (e.g. inflated pneumatic tyres); this exemption also applies to inflated pneumatic tyres carried as a load;
- (e) Gases contained in the special equipment of vehicles and necessary for the operation of this special equipment during transport (cooling systems, fish-tanks, heaters, etc.) as well as spare receptacles for such equipment or uncleaned empty exchange receptacles, transported in the same transport unit;
- (f) Gases contained in foodstuffs (except UN 1950), including carbonated beverages;
- (g) Gases contained in balls intended for use in sports; and

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- (h) Gases contained in light bulbs provided they are packaged so that the projectile effects of any rupture of the bulb will be contained within the package.

1.1.3.3 *Exemptions related to the carriage of liquid fuels*

The provisions laid down in ADR do not apply to the carriage of:

- (a) Fuel contained in the tanks of a vehicle performing a transport operation and destined for its propulsion or for the operation of any of its equipment.

The fuel may be carried in fixed fuel tanks, directly connected to the vehicle's engine and/or auxiliary equipment, which comply with the pertinent legal provisions, or may be carried in portable fuel containers (such as jerricans).

The total capacity of the fixed tanks shall not exceed 1500 litres per transport unit and the capacity of a tank fitted to a trailer shall not exceed 500 litres. A maximum of 60 litres per transport unit may be carried in portable fuel containers. These restrictions shall not apply to vehicles operated by the emergency services;

- (b) Fuel contained in the tanks of vehicles or of other means of conveyance (such as boats) which are carried as a load, where it is destined for their propulsion or the operation of any of their equipment. Any fuel cocks between the engine or equipment and the fuel tank shall be closed during carriage unless it is essential for the equipment to remain operational. Where appropriate, the vehicles or other means of conveyance shall be loaded upright and secured against falling.

1.1.3.4 *Exemptions related to special provisions or to dangerous goods packed in limited or excepted quantities*

NOTE: For radioactive material, see 1.7.1.4.

1.1.3.4.1 Certain special provisions of Chapter 3.3 exempt partially or totally the carriage of specific dangerous goods from the requirements of ADR. The exemption applies when the special provision is referred to in Column (6) of Table A of Chapter 3.2 against the dangerous goods entry concerned.

1.1.3.4.2 Certain dangerous goods may be subject to exemptions provided that the conditions of Chapter 3.4 are met.

1.1.3.4.3 Certain dangerous goods may be subject to exemptions provided that the conditions of Chapter 3.5 are met.

1.1.3.5 *Exemptions related to empty uncleaned packagings*

Empty uncleaned packagings (including IBCs and large packagings) which have contained substances of Classes 2, 3, 4.1, 5.1, 6.1, 8 and 9 are not subject to the conditions of ADR if adequate measures have been taken to nullify any hazard. Hazards are nullified if adequate measures have been taken to nullify all hazards of Classes 1 to 9.

1.1.3.6 *Exemptions related to quantities carried per transport unit*

1.1.3.6.1 For the purposes of this sub-section, dangerous goods are assigned to transport categories 0, 1, 2, 3, or 4, as indicated in Column (15) of Table A of Chapter 3.2. Empty uncleaned packagings having contained substances assigned to transport category "0" are also assigned to transport category "0". Empty uncleaned packagings having contained substances assigned to a transport category other than "0" are assigned to transport category "4".

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1.1.3.6.2 Where the quantity of dangerous goods carried on a transport unit does not exceed the values indicated in column (3) of the table in 1.1.3.6.3 for a given transport category (when the dangerous goods carried in the transport unit belong to the same category) or the value calculated in accordance with 1.1.3.6.4 (when the dangerous goods carried in the transport unit belong to different transport categories), they may be carried in packages in one transport unit without application of the following provisions:

- Chapter 1.10 except for Class 1 explosives of UN Nos. 0029, 0030, 0059, 0065, 0073, 0104, 0237, 0255, 0267, 0288, 0289, 0290, 0360, 0361, 0364, 0365, 0366, 0439, 0440, 0441, 0455, 0456 and 0500 and except for Class 7 excepted packages of UN Nos. 2910 and 2911 if the activity level exceeds the A₂ value;
- Chapter 5.3;
- Section 5.4.3;
- Chapter 7.2, except for V5 and V8 of 7.2.4;
- CVI of 7.5.11;
- Part 8 except for 8.1.2.1 (a),
8.1.4.2 to 8.1.4.5,
8.2.3,
8.3.3,
8.3.4,
8.3.5,
Chapter 8.4,
S1(3) and (6),
S2(1),
S4,
S14 to S21 and
S24 of Chapter 8.5;
- Part 9.

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1.1.3.6.3 Where the dangerous goods carried in the transport unit belong to the same category, the maximum total quantity per transport unit is indicated in column (3) of the table below.

Transport category (1)	Substances or articles packing group or classification code/group or UN No. (2)	Maximum total quantity per transport unit (3)
0	Class 1: 1.1A/1.1L/1.2L/1.3L and UN No. 0190 Class 3: UN No. 3343 Class 4.2: Substances belonging to packing group I Class 4.3: UN Nos. 1183, 1242, 1295, 1340, 1390, 1403, 1928, 2813, 2965, 2968, 2988, 3129, 3130, 3131, 3134, 3148, 3396, 3398 and 3399 Class 5.1: UN No. 2426 Class 6.1: UN Nos. 1051, 1600, 1613, 1614, 2312, 3250 and 3294 Class 6.2: UN Nos. 2814 and 2900 Class 7: UN Nos. 2912 to 2919, 2977, 2978 and 3321 to 3333 Class 8: UN No. 2215 (MALEIC ANHYDRIDE, MOLTEN) Class 9: UN Nos. 2315, 3151, 3152 and 3432 and apparatus containing such substances or mixtures and empty uncleaned packagings, except those classified under UN No. 2908, having contained substances classified in this transport category.	0
1	Substances and articles belonging to packing group I and not classified in transport category 0 and substances and articles of the following classes: Class 1: 1.1B to 1.1J ^a /1.2B to 1.2J/1.3C/1.3G/1.3H/1.3J/1.5D ^a Class 2: groups T, TC ^a , TO, TF, TOC ^a and TFC aerosols: groups C, CO, FC, T, TF, TC, TO, TFC and TOC chemicals under pressure: UN Nos. 3502, 3503, 3504 and 3505 Class 4.1: UN Nos. 3221 to 3224 and 3231 to 3240 Class 5.2: UN Nos. 3101 to 3104 and 3111 to 3120	20
2	Substances or articles belonging to packing group II and not classified in transport categories 0, 1 or 4 and substances of the following classes: Class 1: 1.4B to 1.4G and 1.6N Class 2: group F aerosols: group F chemicals under pressure: UN No. 3501 Class 4.1: UN Nos. 3225 to 3230 Class 5.2: UN Nos. 3105 to 3110 Class 6.1: substances and articles belonging to packing group III Class 9: UN No. 3245	333
3	Substances and articles belonging to packing group III and not classified in transport categories 0, 2 or 4 and substances and articles of the following classes: Class 2: groups A and O aerosols: groups A and O chemicals under pressure: UN No. 3500 Class 3: UN No. 3473 Class 4.3: UN No. 3476 Class 8: UN Nos. 2794, 2795, 2800, 3028 and 3477 Class 9: UN Nos. 2990 and 3072	1 000
4	Class 1: 1.4S Class 4.1: UN Nos. 1331, 1345, 1944, 1945, 2254 and 2623 Class 4.2: UN Nos. 1361 and 1362 packing group III Class 7: UN Nos. 2908 to 2911 Class 9: UN Nos. 3268 and 3499 and empty, uncleaned packagings having contained dangerous goods, except for those classified in transport category 0	unlimited

^a For UN Nos. 0081, 0082, 0084, 0241, 0331, 0332, 0482, 1005 and 1017, the total maximum quantity per transport unit shall be 50 kg.

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In the above table, "maximum total quantity per transport unit" means:

- For articles, gross mass in kilograms (for articles of Class 1, net mass in kilograms of the explosive substance; for dangerous goods in machinery and equipment specified in this Annex, the total quantity of dangerous goods contained therein in kilograms or litres as appropriate);
- For solids, liquefied gases, refrigerated liquefied gases and dissolved gases, net mass in kilograms;
- For liquids and compressed gases, nominal capacity of receptacles (see definition in 1.2.1) in litres.

1.1.3.6.4 Where dangerous goods of different transport categories are carried in the same transport unit, the sum of:

- The quantity of substances and articles of transport category 1 multiplied by "50";
- The quantity of substances and articles of transport category 1 referred to in Note a to the table in 1.1.3.6.3 multiplied by "20";
- The quantity of substances and articles of transport category 2 multiplied by "3"; and
- The quantity of substances and articles of transport category 3;

shall not exceed "1 000".

1.1.3.6.5 For the purposes of this sub-section, dangerous goods exempted in accordance with 1.1.3.2 to 1.1.3.5 shall not be taken into account.

1.1.3.7 *Exemptions related to the carriage of lithium batteries*

The provisions laid down in ADR do not apply to:

- (a) Lithium batteries installed in a vehicle, performing a transport operation and destined for its propulsion or for the operation of any of its equipment;
- (b) Lithium batteries contained in equipment for the operation of this equipment used or intended for use during carriage (e.g. a laptop).

1.1.3.8 *(Reserved)*

1.1.3.9 **Exemptions related to dangerous goods used as a coolant or conditioner during carriage**

When used in vehicles or containers for cooling or conditioning purposes, dangerous goods that are only asphyxiant (which dilute or replace the oxygen normally in the atmosphere) are only subject to the provisions of section 5.5.3.

1.1.4 **Applicability of other regulations**

1.1.4.1 *(Reserved)*

1.1.4.2 *Carriage in a transport chain including maritime or air carriage*

1.1.4.2.1 Packages, containers, portable tanks and tank-containers, which do not entirely meet the requirements for packing, mixed packing, marking, labelling of packages or placarding and orange plate marking, of ADR, but are in conformity with the requirements of the IMDG

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Code or the ICAO Technical Instructions shall be accepted for carriage in a transport chain including maritime or air carriage subject to the following conditions:

- (a) If the packages are not marked and labelled in accordance with ADR, they shall bear markings and danger labels in accordance with the requirements of the IMDG Code or the ICAO Technical Instructions;
- (b) The requirements of the IMDG Code or the ICAO Technical Instructions shall be applicable to mixed packing within a package;
- (c) For carriage in a transport chain including maritime carriage, if the containers, portable tanks or tank-containers are not marked and placarded in accordance with Chapter 5.3 of this Annex, they shall be marked and placarded in accordance with Chapter 5.3 of the IMDG Code. In such case, only 5.3.2.1.1 of this Annex is applicable to the marking of the vehicle itself. For empty, uncleaned portable tanks and tank-containers, this requirement shall apply up to and including the subsequent transfer to a cleaning station.

This derogation does not apply in the case of goods classified as dangerous goods in classes 1 to 9 of ADR and considered as non-dangerous goods according to the applicable requirements of the IMDG Code or the ICAO Technical Instructions.

1.1.4.2.2 Transport units composed of a vehicle or vehicles other than those carrying containers, portable tanks or tank containers as provided for in 1.1.4.2.1 (c), which are not placarded in accordance with the provisions of 5.3.1 of ADR but which are marked and placarded in accordance with Chapter 5.3 of the IMDG Code, shall be accepted for carriage in a transport chain including maritime transport provided that the orange-coloured plate marking provisions of 5.3.2 of ADR are complied with.

1.1.4.2.3 For carriage in a transport chain including maritime or air carriage, the information required under 5.4.1 and 5.4.2 and under any special provision of Chapter 3.3 may be substituted by the transport document and information required by the IMDG Code or the ICAO Technical Instructions respectively provided that any additional information required by ADR is also included.

NOTE: For carriage in accordance with 1.1.4.2.1, see also 5.4.1.1.7. For carriage in containers, see also 5.4.2.

1.1.4.3 *Use of IMO type portable tanks approved for maritime transport*

IMO type portable tanks (types 1, 2, 5 and 7) which do not meet the requirements of Chapters 6.7 or 6.8, but which were built and approved before 1 January 2003 in accordance with the provisions of the IMDG Code (Amdt. 29-98) may continue to be used provided that they meet the applicable periodic inspection and test provisions of the IMDG Code¹. In addition, they shall meet the provisions corresponding to the instructions set out in columns (10) and (11) of Table A in Chapter 3.2 and the provisions of Chapter 4.2 of ADR. See also 4.2.0.1 of the IMDG Code.

1.1.4.4 *(Reserved)*

¹ The International Maritime Organization (IMO) has issued "Guidance on the Continued Use of Existing IMO Type Portable Tanks and Road Tank Vehicles for the Transport of Dangerous Goods" as circular DSC.1/Circ.12 and Corrigenda. The text of this guidance can be found on the IMO website at: www.imo.org.

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1.1.4.5 *Carriage other than by road*

1.1.4.5.1 If the vehicle carrying out a transport operation subject to the requirements of ADR is conveyed over a section of the journey otherwise than by road haulage, then any national or international regulations which, on the said section, govern the carriage of dangerous goods by the mode of transport used for conveying the road vehicle shall alone be applicable to the said section of the journey.

1.1.4.5.2 In the cases referred to in 1.1.4.5.1 above, the involved ADR Contracting Parties may agree to apply the requirements of ADR to the section of a journey where a vehicle is conveyed otherwise than by road haulage, supplemented, if they consider it necessary, by additional requirements, unless such agreements between the involved ADR Contracting Parties would contravene clauses of the international conventions governing the carriage of dangerous goods by the mode of transport used for conveying the road vehicle on the said section of the journey, e.g. the International Convention for the Safety of Life at Sea (SOLAS), to which these ADR Contracting Parties would also be contracting parties.

These agreements shall be notified by the Contracting Party which has taken the initiative thereof to the Secretariat of the United Nations Economic Commission for Europe which shall bring them to the attention of the Contracting Parties.

1.1.4.5.3 In cases where a transport operation subject to the provisions of ADR is likewise subject over the whole or a part of the road journey to the provisions of an international convention which regulates the carriage of dangerous goods by a mode of transport other than road carriage by virtue of clauses extending the applicability of that convention to certain motor-vehicle services, then the provisions of that international convention shall apply over the journey in question concurrently with those of ADR which are not incompatible with them; the other clauses of ADR shall not apply over the journey in question.

1.1.5 **Application of standards**

Where the application of a standard is required and there is any conflict between the standard and the provisions of ADR, the provisions of ADR take precedence.

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CHAPTER 1.2

DEFINITIONS AND UNITS OF MEASUREMENT

1.2.1 Definitions

NOTE: *This section contains all general or specific definitions.*

For the purposes of ADR:

A

"ADN" means the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways;

"Aerosol or aerosol dispenser" means any non-refillable receptacle meeting the requirements of 6.2.6, made of metal, glass or plastics and containing a gas, compressed, liquefied or dissolved under pressure, with or without a liquid, paste or powder, and fitted with a release device allowing the contents to be ejected as solid or liquid particles in suspension in a gas, as a foam, paste or powder or in a liquid state or in a gaseous state;

"Animal material" means animal carcasses, animal body parts, or animal foodstuffs;

"Applicant" means, in the case of conformity assessment, the manufacturer or its authorised representative in a country Contracting Party. In the case of periodic inspections, intermediate inspections and exceptional checks, *applicant* means the testing facility, the operator or their authorised representative in a country Contracting Party;

NOTE: *Exceptionally a third party (for instance a tank-container operator in accordance with the definition of 1.2.1) may apply for the conformity assessment.*

"Approval"

Multilateral approval, for the carriage of Class 7 material, means approval by the relevant competent authority of the country of origin of the design or shipment, as applicable, and by the competent authority of each country through or into which the consignment is to be carried;

Unilateral approval, for the carriage of Class 7 material, means an approval of a design which is required to be given by the competent authority of the country of origin of the design only. If the country of origin is not a Contracting Party to ADR, the approval shall require validation by the competent authority of the first Contracting Party to ADR reached by the consignment (see 6.4.22.6);

"ASTM" means the American Society for Testing and Materials (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959, United States of America);

B

"Bag" means a flexible packaging made of paper, plastics film, textiles, woven material or other suitable material;

"Battery-vehicle" means a vehicle containing elements which are linked to each other by a manifold and permanently fixed to this vehicle. The following elements are considered to be elements of a battery-vehicle: cylinders, tubes, bundles of cylinders (also known as frames),

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pressure drums as well as tanks destined for the carriage of gases as defined in 2.2.2.1.1 with a capacity of more than 450 litres;

"*Body*" (for all categories of IBC other than composite IBCs) means the receptacle proper, including openings and closures, but does not include service equipment;

"*Box*" means a packaging with complete rectangular or polygonal faces, made of metal, wood, plywood, reconstituted wood, fibreboard, plastics or other suitable material. Small holes for purposes of ease of handling or opening or to meet classification requirements, are permitted as long as they do not compromise the integrity of the packaging during carriage;

"*Bulk container*" means a containment system (including any liner or coating) intended for the carriage of solid substances which are in direct contact with the containment system. Packagings, intermediate bulk containers (IBCs), large packagings and tanks are not included.

A bulk container is:

- of a permanent character and accordingly strong enough to be suitable for repeated use;
- specially designed to facilitate the carriage of goods by one or more means of transport without intermediate reloading;
- fitted with devices permitting its ready handling;
- of a capacity of not less than 1.0 m³;

Examples of bulk containers are containers, offshore bulk containers, skips, bulk bins, swap bodies, trough-shaped containers, roller containers, load compartments of vehicles;

"*Bundle of cylinders*" means an assembly of cylinders that are fastened together and which are interconnected by a manifold and carried as a unit. The total water capacity shall not exceed 3 000 litres except that bundles intended for the carriage of toxic gases of Class 2 (groups starting with letter T according to 2.2.2.1.3) shall be limited to 1 000 litres water capacity;

C

"*Calculation pressure*" means a theoretical pressure at least equal to the test pressure which, according to the degree of danger exhibited by the substance being carried, may to a greater or lesser degree exceed the working pressure. It is used solely to determine the thickness of the walls of the shell, independently of any external or internal reinforcing device (see also "*Discharge pressure*", "*Filling pressure*", "*Maximum working pressure (gauge pressure)*" and "*Test pressure*");

NOTE: For portable tanks, see Chapter 6.7.

"*Capacity of shell or shell compartment*" for tanks, means the total inner volume of the shell or shell compartment expressed in litres or cubic metres. When it is impossible to completely fill the shell or the shell compartment because of its shape or construction, this reduced capacity shall be used for the determination of the degree of filling and for the marking of the tank;

"*Cargo transport unit*" means a vehicle, a container, a tank-container, portable tank or a MEGC;

NOTE: This definition applies only for the application of special provision 302 of Chapter 3.3 and of 5.5.2.

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"Carriage" means the change of place of dangerous goods, including stops made necessary by transport conditions and including any period spent by the dangerous goods in vehicles, tanks and containers made necessary by traffic conditions before, during and after the change of place.

This definition also covers the intermediate temporary storage of dangerous goods in order to change the mode or means of transport (trans-shipment). This shall apply provided that transport documents showing the place of dispatch and the place of reception are presented on request and provided that packages and tanks are not opened during intermediate storage, except to be checked by the competent authorities;

"Carriage in bulk" means the carriage of unpackaged solids or articles in vehicles or containers. The term does not apply to packaged goods nor to substances carried in tanks;

"Carrier" means the enterprise which carries out the transport operation with or without a transport contract;

"CGA" means the Compressed Gas Association (CGA, 4221 Walney Road, 5th Floor, Chantilly VA 20151-2923, United States of America);

"CIM" means the Uniform Rules Concerning the Contract of International Carriage of Goods by Rail (Appendix B to the Convention concerning International Carriage by Rail (COTIF)), as amended;

"Closed container", see *"Container"*;

"Closed vehicle" means a vehicle having a body capable of being closed;

"Closure" means a device which closes an opening in a receptacle;

"CMR" means the Convention on the Contract for the International Carriage of Goods by Road (Geneva, 19 May 1956), as amended;

"Collective entry" means an entry for a defined group of substances or articles (see 2.1.1.2, B, C and D);

"Combination packaging" means a combination of packagings for carriage purposes, consisting of one or more inner packagings secured in an outer packing in accordance with 4.1.1.5;

NOTE: *The "inners" of "combination packagings" are always termed "inner packagings" and not "inner receptacles". A glass bottle is an example of such an "inner packaging".*

"Combustion heater" means a device directly using liquid or gaseous fuel and not using the waste heat from the engine used for propulsion of the vehicle;

"Competent authority" means the authority or authorities or any other body or bodies designated as such in each State and in each specific case in accordance with domestic law;

"Compliance assurance" (radioactive material) means a systematic programme of measures applied by a competent authority which is aimed at ensuring that the requirements of ADR are met in practice;

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"Composite IBC with plastics inner receptacle" means an IBC comprising structural equipment in the form of a rigid outer casing encasing a plastics inner receptacle together with any service or other structural equipment. It is so constructed that the inner receptacle and outer casing once assembled form, and are used as, an integrated single unit to be filled, stored, transported or emptied as such;

NOTE: *"Plastics material", when used in connection with inner receptacles for composite IBCs, is taken to include other polymeric materials such as rubber.*

"Composite packaging (plastics material)" is a packaging consisting of an inner plastics receptacle and an outer packaging (made of metal, fibreboard, plywood, etc.). Once assembled such a packaging remains thereafter an inseparable unit; it is filled, stored, despatched and emptied as such;

NOTE: *See NOTE under "Composite packagings (glass, porcelain or stoneware)".*

"Composite packaging (glass, porcelain or stoneware)" is a packaging consisting of an inner glass, porcelain or stoneware receptacle and an outer packaging (made of metal, wood, fibreboard, plastics material, expanded plastics material, etc.). Once assembled, such a packaging remains thereafter an inseparable unit; it is filled, stored, despatched and emptied as such;

NOTE: *The "inners" of "composite packagings" are normally termed "inner receptacles". For example, the "inner" of a 6HA1 (composite packaging, plastics material) is such an "inner receptacle" since it is normally not designed to perform a containment function without its "outer packaging" and is not therefore an "inner packaging".*

"Confinement system", for the carriage of Class 7 material, means the assembly of fissile material and packaging components specified by the designer and agreed to by the competent authority as intended to preserve criticality safety;

"Conformity assessment" means the process of verifying the conformity of a product according to the provisions of sections 1.8.6 and 1.8.7 related to type approval, supervision of manufacture and initial inspection and testing;

"Consignee" means the consignee according to the contract for carriage. If the consignee designates a third party in accordance with the provisions applicable to the contract for carriage, this person shall be deemed to be the consignee within the meaning of ADR. If the transport operation takes place without a contract for carriage, the enterprise which takes charge of the dangerous goods on arrival shall be deemed to be the consignee;

"Consignment" means any package or packages, or load of dangerous goods, presented by a consignor for carriage;

"Consignor" means the enterprise which consigns dangerous goods either on its own behalf or for a third party. If the transport operation is carried out under a contract for carriage, consignor means the consignor according to the contract for carriage;

"Container" means an article of transport equipment (lift van or other similar structure):

- of a permanent character and accordingly strong enough to be suitable for repeated use;
- specially designed to facilitate the carriage of goods, by one or more means of transport, without breakage of load;

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- fitted with devices permitting its ready stowage and handling, particularly when being transloaded from one means of transport to another;
- so designed as to be easy to fill and empty;
- having an internal volume of not less than 1 m³, except for containers for the carriage of radioactive material.

In addition:

"Small container" means a container which has either any overall outer dimension (length, width or height) less than 1.5 m, or an internal volume of not more than 3 m³;

"Large container" means

- (a) A container which does not meet the definition of a small container;
- (b) In the meaning of the CSC, a container of a size such that the area enclosed by the four outer bottom corners is either
 - (i) at least 14 m² (150 square feet); or
 - (ii) at least 7 m² (75 square feet) if fitted with top corner fittings;

"Closed container" means a totally enclosed container having a rigid roof, rigid side walls, rigid end walls and a floor. The term includes containers with an opening roof where the roof can be closed during transport;

"Open container" means an open top container or a platform based container;

"Sheeted container" means an open container equipped with a sheet to protect the goods loaded;

A *"swap body"* is a container which, in accordance with EN 283:1991 has the following characteristics:

- from the point of view of mechanical strength, it is only built for carriage on a wagon or a vehicle on land or by roll-on roll-off ship;
- it cannot be stacked;
- it can be removed from vehicles by means of equipment on board the vehicle and on its own supports, and can be reloaded;

NOTE: The term *"container"* does not cover conventional packagings, IBCs, tank-containers or vehicles. Nevertheless, a container may be used as a packaging for the carriage of radioactive material.

"Containment system", for the carriage of Class 7 material, means the assembly of components of the packaging specified by the designer as intended to retain the radioactive material during carriage;

"Control temperature" means the maximum temperature at which the organic peroxide or the self-reactive substance can be safely carried;

"Conveyance" means, for carriage by road or by rail, a vehicle or a wagon;

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"*Criticality safety index (CSI) assigned to a package, overpack or container containing fissile material*", for the carriage of Class 7 material, means a number which is used to provide control over the accumulation of packages, overpacks or containers containing fissile material;

"*CSC*" means the International Convention for Safe Containers (Geneva, 1972) as amended and published by the International Maritime Organization (IMO), London;

"*Crate*" means an outer packaging with incomplete surfaces;

"*Critical temperature*" means the temperature above which the substance cannot exist in the liquid state;

"*Cryogenic receptacle*" means a transportable thermally insulated pressure receptacle for refrigerated liquefied gases of a water capacity of not more than 1 000 litres (see also "*Open cryogenic receptacle*");

"*Cylinder*" means a transportable pressure receptacle of a water capacity not exceeding 150 litres (see also "*Bundle of cylinders*");

D

"*Dangerous goods*" means those substances and articles the carriage of which is prohibited by ADR, or authorized only under the conditions prescribed therein;

"*Dangerous reaction*" means:

- (a) Combustion or evolution of considerable heat;
- (b) Evolution of flammable, asphyxiant, oxidizing or toxic gases;
- (c) The formation of corrosive substances;
- (d) The formation of unstable substances; or
- (e) Dangerous rise in pressure (for tanks only);

"*Demountable tank*" means a tank, other than a fixed tank, a portable tank, a tank-container or an element of a battery-vehicle or a MEGC which has a capacity of more than 450 litres, is not designed for the carriage of goods without breakage of load, and normally can only be handled when it is empty;

"*Design*", for the carriage of Class 7 material, means the description of special form radioactive material, low dispersible radioactive material, package or packaging which enables such an item to be fully identified. The description may include specifications, engineering drawings, reports demonstrating compliance with regulatory requirements, and other relevant documentation;

"*Discharge pressure*" means the maximum pressure actually built up in the tank when it is being discharged under pressure (see also "*Calculation pressure*", "*Filling pressure*", "*Maximum working pressure (gauge pressure)*" and "*Test pressure*");

"*Drum*" means a flat-ended or convex-ended cylindrical packaging made out of metal, fibreboard, plastics, plywood or other suitable materials. This definition also includes packagings of other shapes, e.g. round, taper-necked packagings or pail-shaped packagings. Wooden barrels and jerricans are not covered by this definition;

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E

"*EC Directive*" means provisions decided by the competent institutions of the European Community and which are binding, as to the result to be achieved, upon each Member State to which it is addressed, but shall leave to the national authorities the choice of form and methods;

"*ECE Regulation*" means a regulation annexed to the Agreement concerning the adoption of uniform technical prescriptions for wheeled vehicles equipment and parts which can be fitted and or used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions (1958 Agreement, as amended);

"*Emergency temperature*" means the temperature at which emergency procedures shall be implemented in the event of loss of temperature control;

"*EN*" (standard) means a European standard published by the European Committee for Standardization (CEN) (CEN, Avenue Marnix 17, B-1000 Brussels);

"*Enterprise*" means any natural person, any legal person, whether profit-making or not, any association or group of persons without legal personality, whether profit-making or not, or any official body, whether it has legal personality itself or is dependent upon an authority that has such personality;

"*Exclusive use*", for the carriage of Class 7 material, means the sole use, by a single consignor, of a vehicle or of a large container, in respect of which all initial, intermediate and final loading and unloading is carried out in accordance with the directions of the consignor or consignee;

F

"*Fibreboard IBC*" means a fibreboard body with or without separate top and bottom caps, if necessary an inner liner (but no inner packagings), and appropriate service and structural equipment;

"*Filler*" means any enterprise which loads dangerous goods into a tank (tank-vehicle, demountable tank, portable tank or tank-container) and/or into a vehicle, large container or small container for carriage in bulk, or into a battery-vehicle or MEGC;

"*Filling pressure*" means the maximum pressure actually built up in the tank when it is being filled under pressure (see also "*Calculation pressure*", "*Discharge pressure*", "*Maximum working pressure (gauge pressure)*" and "*Test pressure*");

"*Filling ratio*" means the ratio of the mass of gas to the mass of water at 15 °C that would fill completely a pressure receptacle fitted ready for use;

"*Fixed tank*" means a tank having a capacity of more than 1 000 litres which is permanently attached to a vehicle (which then becomes a tank-vehicle) or is an integral part of the frame of such vehicle;

"*Flammable component*" (for aerosols) means flammable liquids, flammable solids or flammable gases and gas mixtures as defined in Notes 1 to 3 of sub-section 31.1.3 of Part III of the Manual of Tests and Criteria. This designation does not cover pyrophoric, self-heating or water-reactive substances. The chemical heat of combustion shall be determined by one of the following methods ASTM D 240, ISO/FDIS 13943:1999 (E/F) 86.1 to 86.3 or NFPA 30B;

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"*Flash-point*" means the lowest temperature of a liquid at which its vapours form a flammable mixture with air;

"*Flexible IBC*" means a body constituted of film, woven fabric or any other flexible material or combinations thereof, and if necessary, an inner coating or liner, together with any appropriate service equipment and handling devices;

"*Fuel cell*" means an electrochemical device that converts the chemical energy of a fuel to electrical energy, heat and reaction products;

"*Fuel cell engine*" means a device used to power equipment and which consists of a fuel cell and its fuel supply, whether integrated with or separate from the fuel cell, and includes all appurtenances necessary to fulfil its function;

"*Full load*" means any load originating from one consignor for which the use of a vehicle or of a large container is exclusively reserved and all operations for the loading and unloading of which are carried out in conformity with the instructions of the consignor or of the consignee;

NOTE: *The corresponding term for Class 7 is "exclusive use".*

G

"*Gas*" means a substance which:

- (a) At 50 °C has a vapour pressure greater than 300 kPa (3 bar); or
- (b) Is completely gaseous at 20 °C under standard pressure of 101.3 kPa;

"*Gas cartridge*", see "*Small receptacle containing gas*";

"*GHS*" means the fourth revised edition of the Globally Harmonized System of Classification and Labelling of Chemicals, published by the United Nations as document ST/SG/AC.10/30/Rev.4;

H

"*Handling device*" (for flexible IBCs) means any sling, loop, eye or frame attached to the body of the IBC or formed from the continuation of the IBC body material;

"*Hermetically closed tank*" means a tank intended for the carriage of liquid substances with a calculation pressure of at least 4 bar or intended for the carriage of solid substances (powdery or granular) regardless of its calculation pressure, the openings of which are hermetically closed and which:

- is not equipped with safety valves, bursting discs, other similar safety devices or vacuum valves; or
- is not equipped with safety valves, bursting discs or other similar safety devices, but is equipped with vacuum valves, in accordance with the requirements of 6.8.2.2.3; or
- is equipped with safety valves preceded by a bursting disc according to 6.8.2.2.10, but is not equipped with vacuum valves; or
- is equipped with safety valves preceded by a bursting disc according to 6.8.2.2.10 and vacuum valves, in accordance with the requirements of 6.8.2.2.3;

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I

"IAEA" means the International Atomic Energy Agency (IAEA), (IAEA, P.O. Box 100 – A - 1400 Vienna);

"IBC", see "*Intermediate bulk container*";

"ICAO" means the International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada);

"*ICAO Technical Instructions*" means the Technical Instructions for the Safe Transport of Dangerous Goods by Air, which complement Annex 18 to the Chicago Convention on International Civil Aviation (Chicago 1944), published by the International Civil Aviation Organization (ICAO) in Montreal;

"*IMDG Code*" means the International Maritime Dangerous Goods Code, for the implementation of Chapter VII, Part A, of the International Convention for the Safety of Life at Sea, 1974 (SOLAS Convention), published by the International Maritime Organization (IMO), London;

"IMO" means the International Maritime Organization (IMO, 4 Albert Embankment, London SE1 7SR, United Kingdom);

"*Inner packaging*" means a packaging for which an outer packaging is required for carriage;

"*Inner receptacle*" means a receptacle which requires an outer packaging in order to perform its containment function;

"*Inspection body*" means an independent inspection and testing body approved by the competent authority;

"*Intermediate bulk container*" (*IBC*) means a rigid, or flexible portable packaging, other than those specified in Chapter 6.1, that:

- (a) Has a capacity of:
 - (i) not more than 3 m³ for solids and liquids of packing groups II and III;
 - (ii) not more than 1.5 m³ for solids of packing group I when packed in flexible, rigid plastics, composite, fibreboard and wooden IBCs;
 - (iii) not more than 3 m³ for solids of packing group I when packed in metal IBCs;
 - (iv) not more than 3 m³ for radioactive material of Class 7;
- (b) Is designed for mechanical handling;
- (c) Is resistant to the stresses produced in handling and transport as determined by the tests specified in Chapter 6.5;

(see also "*Composite IBC with plastics inner receptacle*", "*Fibreboard IBC*", "*Flexible IBC*", "*Metal IBC*", "*Rigid plastics IBC*" and "*Wooden IBC*").

NOTE 1: *Portable tanks or tank-containers that meet the requirements of Chapter 6.7 or 6.8 respectively are not considered to be intermediate bulk containers (IBCs).*

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NOTE 2: *Intermediate bulk containers (IBCs) which meet the requirements of Chapter 6.5 are not considered to be containers for the purposes of ADR.*

"Remanufactured IBC" means a metal, rigid plastics or composite IBC that:

- (a) Is produced as a UN type from a non-UN type; or
- (b) Is converted from one UN design type to another UN design type.

Remanufactured IBCs are subject to the same requirements of ADR that apply to new IBCs of the same type (see also design type definition in 6.5.6.1.1);

"Repaired IBC" means a metal, rigid plastics or composite IBC that, as a result of impact or for any other cause (e.g. corrosion, embrittlement or other evidence of reduced strength as compared to the design type) is restored so as to conform to the design type and to be able to withstand the design type tests. For the purposes of ADR, the replacement of the rigid inner receptacle of a composite IBC with a receptacle conforming to the original design type from the same manufacturer is considered repair. However, routine maintenance of rigid IBCs is not considered repair. The bodies of rigid plastics IBCs and the inner receptacles of composite IBCs are not repairable. Flexible IBCs are not repairable unless approved by the competent authority;

"Routine maintenance of flexible IBCs" means the routine performance on plastics or textile flexible IBCs of operations, such as:

- (a) Cleaning; or
- (b) Replacement of non-integral components, such as non-integral liners and closure ties, with components conforming to the original manufacturer's specification;

provided that these operations do not adversely affect the containment function of the flexible IBC or alter the design type.

"Routine maintenance of rigid IBCs" means the routine performance on metal, rigid plastics or composite IBCs of operations such as:

- (a) Cleaning;
- (b) Removal and reinstallation or replacement of body closures (including associated gaskets), or of service equipment, conforming to the original manufacturer's specifications, provided that the leaktightness of the IBC is verified; or
- (c) Restoration of structural equipment not directly performing a dangerous goods containment or discharge pressure retention function so as to conform to the design type (e.g. the straightening of legs or lifting attachments) provided that the containment function of the IBC is not affected;

"Intermediate packaging" means a packaging placed between inner packagings or articles, and an outer packaging;

"ISO" (standard) means an international standard published by the International Organization for Standardization (ISO) (ISO - 1, rue de Varembe. CH-1204 Geneva 20);

J

"Jerrican" means a metal or plastics packaging of rectangular or polygonal cross-section with one or more orifices;

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L

"Large container", see "Container";

"Large packaging" means a packaging consisting of an outer packaging which contains articles or inner packagings and which

- (a) Is designed for mechanical handling;
- (b) Exceeds 400 kg net mass or 450 litres capacity but has a volume of not more than 3 m³;

"Leakproofness test" means a test to determine the leakproofness of a tank, a packaging or an IBC and of the equipment and closure devices;

NOTE: For portable tanks, see Chapter 6.7.

"Light-gauge metal packaging" means a packaging of circular, elliptical, rectangular or polygonal cross-section (also conical) and taper-necked and pail-shaped packaging made of metal, having a wall thickness of less than 0.5 mm (e.g. tinsplate), flat or convex bottomed and with one or more orifices, which is not covered by the definitions for drums or jerricans;

"Liner" means a tube or bag inserted into a packaging, including large packagings or IBCs, but not forming an integral part of it, including the closures of its openings;

"Liquid" means a substance which at 50 °C has a vapour pressure of not more than 300 kPa (3 bar), which is not completely gaseous at 20 °C and 101.3 kPa, and which

- (a) Has a melting point or initial melting point of 20 °C or less at a pressure of 101.3 kPa; or
- (b) Is liquid according to the ASTM D 4359-90 test method; or
- (c) Is not pasty according to the criteria applicable to the test for determining fluidity (penetrometer test) described in 2.3.4;

NOTE: "Carriage in the liquid state", for the purpose of tank requirements, means:

- Carriage of liquids according to the above definition; or
- Solids handed over for carriage in the molten state.

"Liquefied Petroleum Gas (LPG)" means a low pressure liquefied gas composed of one or more light hydrocarbons which are assigned to UN Nos. 1011, 1075, 1965, 1969 or 1978 only and which consists mainly of propane, propene, butane, butane isomers, butene with traces of other hydrocarbon gases;

NOTE 1: Flammable gases assigned to other UN numbers shall not be regarded as LPG.

NOTE 2: For UN No. 1075 see NOTE 2 under 2F, UN No. 1965, in the table for Liquefied gases in 2.2.2.3.

"Loader" means any enterprise which:

- (a) Loads packaged dangerous goods, small containers or portable tanks into or onto a vehicle or a container; or
- (b) Loads a container, bulk-container, MEGC, tank-container or portable tank onto a vehicle.

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M

"*Manual of Tests and Criteria*" means the fifth revised edition of the Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, published by the United Nations (ST/SG/AC.10/11/Rev.5 as amended by document ST/SG/AC.10/11/Rev.5/Amend.1);

"*Mass of package*" means gross mass of the package unless otherwise stated. The mass of containers and tanks used for the carriage of goods is not included in the gross mass;

"*Maximum capacity*" means the maximum inner volume of receptacles or packagings including intermediate bulk containers (IBCs) and large packagings expressed in cubic metres or litres;

"*Maximum net mass*" means the maximum net mass of contents in a single packaging or maximum combined mass of inner packagings and the contents thereof expressed in kilograms;

"*Maximum normal operating pressure*", for the carriage of Class 7 material, means the maximum pressure above atmospheric pressure at mean sea-level that would develop in the containment system in a period of one year under the conditions of temperature and solar radiation corresponding to environmental conditions in the absence of venting, external cooling by an ancillary system, or operational controls during carriage;

"*Maximum permissible gross mass*"

- (a) (for IBCs) means the mass of the IBC and any service or structural equipment together with the maximum net mass;
- (b) (for tanks) means the tare of the tank and the heaviest load authorized for carriage;

NOTE: For portable tanks, see Chapter 6.7.

"*Maximum working pressure (gauge pressure)*" means the highest of the following three pressures:

- (a) The highest effective pressure allowed in the tank during filling (maximum filling pressure allowed);
- (b) The highest effective pressure allowed in the tank during discharge (maximum discharge pressure allowed); and
- (c) The effective gauge pressure to which the tank is subjected by its contents (including such extraneous gases as it may contain) at the maximum working temperature.

Unless the special requirements prescribed in Chapter 4.3 provide otherwise, the numerical value of this working pressure (gauge pressure) shall not be lower than the vapour pressure (absolute pressure) of the filling substance at 50 °C.

For tanks equipped with safety valves (with or without bursting disc) other than tanks for the carriage of compressed, liquefied or dissolved gases of Class 2, the maximum working pressure (gauge pressure) shall however be equal to the prescribed opening pressure of such safety valves.

(See also "*Calculation pressure*", "*Discharge pressure*", "*Filling pressure*" and "*Test pressure*");

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NOTE 1: For portable tanks, see Chapter 6.7.

NOTE 2: For closed cryogenic receptacles, see NOTE to 6.2.1.3.6.5.

"MEGC", see "Multiple-element gas container";

"Member of a vehicle crew" means a driver or any other person accompanying the driver for safety, security, training or operational reasons;

"MEMU", see "Mobile explosives manufacturing unit";

"Metal hydride storage system" means a single complete hydrogen storage system, including a receptacle, metal hydride, pressure relief device, shut-off valve, service equipment and internal components used for the carriage of hydrogen only;

"Metal IBC" means a metal body together with appropriate service and structural equipment;

"Mild steel" means a steel having a minimum tensile strength between 360 N/mm² and 440 N/mm²;

NOTE: For portable tanks, see Chapter 6.7.

"Mobile explosives manufacturing unit" (MEMU) means a unit, or a vehicle mounted with a unit, for manufacturing and charging explosives from dangerous goods that are not explosives. The unit consists of various tanks and bulk containers and process equipment as well as pumps and related equipment. The MEMU may have special compartments for packaged explosives;

NOTE: Even though the definition of MEMU includes the expression "manufacturing and charging explosives" the requirements for MEMUs apply only to carriage and not to manufacturing and charging of explosives.

"Multiple-element gas container" (MEGC) means a unit containing elements which are linked to each other by a manifold and mounted on a frame. The following elements are considered to be elements of a multiple-element gas container: cylinders, tubes, pressure drums and bundles of cylinders as well as tanks for the carriage of gases as defined in 2.2.2.1.1 having a capacity of more than 450 litres;

NOTE: For UN MEGCs, see Chapter 6.7.

N

"Net explosive mass (NEM)" means the total mass of the explosive substances, without the packagings, casings, etc. (Net explosive quantity (NEQ), net explosive contents (NEC), net explosive weight (NEW) or net mass of explosive contents are often used to convey the same meaning;

"Nominal capacity of the receptacle" means the nominal volume of the dangerous substance contained in the receptacle expressed in litres. For compressed gas cylinders the nominal capacity shall be the water capacity of the cylinder;

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"*N.O.S. entry (not otherwise specified entry)*" means a collective entry to which substances, mixtures, solutions or articles may be assigned if they:

- (a) Are not mentioned by name in Table A of Chapter 3.2; and
- (b) Exhibit chemical, physical and/or dangerous properties corresponding to the Class, classification code, packing group and the name and description of the n.o.s. entry;

O

"*Offshore bulk container*" means a bulk container specially designed for repeated use for carriage to, from and between offshore facilities. An offshore bulk container is designed and constructed in accordance with the guidelines for the approval of offshore containers handled in open seas specified by the International Maritime Organization (IMO) in document MSC/Circ.860;

"*Open container*", see "*Container*";

"*Open cryogenic receptacle*" means a transportable thermally insulated receptacle for refrigerated liquefied gases maintained at atmospheric pressure by continuous venting of the refrigerated liquefied gas;

"*Open vehicle*" means a vehicle the platform of which has no superstructure or is merely provided with side boards and a tailboard;

"*Outer packaging*" means the outer protection of the composite or combination packaging together with any absorbent materials, cushioning and any other components necessary to contain and protect inner receptacles or inner packagings;

"*Overpack*" means an enclosure used (by a single consignor in the case of Class 7) to contain one or more packages, consolidated into a single unit easier to handle and stow during carriage;

Examples of overpacks:

- (a) A loading tray such as a pallet, on which several packages are placed or stacked and secured by a plastics strip, shrink or stretch wrapping or other appropriate means; or
- (b) An outer protective packaging such as a box or a crate;

P

"*Package*" means the complete product of the packing operation, consisting of the packaging or large packaging or IBC and its contents prepared for dispatch. The term includes receptacles for gases as defined in this section as well as articles which, because of their size, mass or configuration may be carried unpackaged or carried in cradles, crates or handling devices. Except for the carriage of radioactive material, the term does not apply to goods which are carried in bulk, nor to substances carried in tanks;

NOTE: For radioactive material, see 2.2.7.2, 4.1.9.1.1 and Chapter 6.4.

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"Packaging" means one or more receptacles and any other components or materials necessary for the receptacles to perform their containment and other safety functions (see also *"Combination packaging"*, *"Composite packaging (plastics material)"*, *"Composite packaging (glass, porcelain or stoneware)"*, *"Inner packaging"*, *"Intermediate bulk container (IBC)"*, *"Intermediate packaging"*, *"Large packaging"*, *"Light-gauge metal packaging"*, *"Outer packaging"*, *"Reconditioned packaging"*, *"Remanufactured packaging"*, *"Reused packaging"*, *"Salvage packaging"* and *"Sift-proof packaging"*);

"Packer" means any enterprise which puts dangerous goods into packagings, including large packagings and intermediate bulk containers (IBCs) and, where necessary, prepares packages for carriage;

"Packing group" means a group to which, for packing purposes, certain substances may be assigned in accordance with their degree of danger. The packing groups have the following meanings which are explained more fully in Part 2:

- Packing group I: Substances presenting high danger;
- Packing group II: Substances presenting medium danger; and
- Packing group III: Substances presenting low danger;

NOTE: *Certain articles containing dangerous goods are assigned to a packing group.*

"Portable tank" means a multimodal tank having, when used for the carriage of gases as defined in 2.2.2.1.1, a capacity of more than 450 litres in accordance with the definitions in Chapter 6.7 or the IMDG Code and indicated by a portable tank instruction (T-Code) in Column (10) of Table A of Chapter 3.2;

"Portable tank operator", see *"Tank-container/portable tank operator"*;

"Pressure drum" means a welded transportable pressure receptacle of a water capacity exceeding 150 litres and of not more than 1 000 litres, (e.g. cylindrical receptacles equipped with rolling hoops, spheres on skids);

"Pressure receptacle" means a collective term that includes cylinders, tubes, pressure drums, closed cryogenic receptacles, metal hydride storage systems, bundles of cylinders and salvage pressure receptacles;

"Pressurized gas cartridge", see *"Aerosol or aerosol dispenser"*;

"Protected IBC" (for metal IBCs) means an IBC provided with additional protection against impact, the protection taking the form of, for example, a multi-layer (sandwich) or double-wall construction, or a frame with a metal lattice-work casing;

Q

"Quality assurance" means a systematic programme of controls and inspections applied by any organization or body which is aimed at providing confidence that the safety prescriptions in ADR are met in practice;

R

"Radiation level", for the carriage of Class 7 material, means the corresponding dose rate expressed in millisieverts per hour;

"Radioactive contents", for the carriage of Class 7 material, mean the radioactive material together with any contaminated or activated solids, liquids, and gases within the packaging;

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"Receptacle" (Class 1) includes boxes, bottles, cans, drums, jars and tubes, including any means of closure used in the inner or intermediate packaging;

"Receptacle" means a containment vessel for receiving and holding substances or articles, including any means of closing. This definition does not apply to shells (see also *"Cryogenic receptacle"*, *"Inner receptacle"*, *"Pressure receptacle"*, *"Rigid inner receptacle"* and *"Gas cartridge"*);

"Reconditioned packaging" means in particular

- (a) Metal drums that are:
 - (i) cleaned to original materials of construction, with all former contents, internal and external corrosion, and external coatings and labels removed;
 - (ii) restored to original shape and contour, with chimes (if any) straightened and sealed and all non-integral gaskets replaced; and
 - (iii) inspected after cleaning but before painting, with rejection of packagings with visible pitting, significant reduction in the material thickness, metal fatigue, damaged threads or closures or other significant defects;
- (b) Plastics drums and jerricans that:
 - (i) are cleaned to original materials of construction, with all former contents, external coatings and labels removed;
 - (ii) have all non-integral gaskets replaced; and
 - (iii) are inspected after cleaning with rejection of packagings with visible damage such as tears, creases or cracks, or damaged threads or closures or other significant defects;

"Recycled plastics material" means material recovered from used industrial packagings that has been cleaned and prepared for processing into new packagings;

"Reel" (Class 1) means a device made of plastics, wood, fibreboard, metal or other suitable material comprising a central spindle with, or without, side walls at each end of the spindle. Articles and substances can be wound onto the spindle and may be retained by side walls;

"Reference steel" means a steel with a tensile strength of 370 N/mm² and an elongation at fracture of 27%;

"Remanufactured IBC", see *"Intermediate Bulk Container (IBC)"*;

"Remanufactured large packaging" means a metal or rigid plastics large packaging that:

- (a) Is produced as a UN type from a non-UN type; or
- (b) Is converted from one UN design type to another UN design type.

Remanufactured large packagings are subject to the same requirements of ADR that apply to new large packagings of the same type (see also design type definition in 6.6.5.1.2);

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"Remanufactured packaging" means in particular

- (a) Metal drums that:
 - (i) are produced as a UN type complying with the requirements of Chapter 6.1 from a non-UN type;
 - (ii) are converted from one UN type complying with the requirements of Chapter 6.1 to another UN type; or
 - (iii) undergo the replacement of integral structural components (such as non-removable heads);
- (b) Plastics drums that:
 - (i) are converted from one UN type to another UN type (e.g. 1H1 to 1H2); or
 - (ii) undergo the replacement of integral structural components.

Remanufactured drums are subject to the requirements of Chapter 6.1 which apply to new drums of the same type;

"Repaired IBC", see *"Intermediate Bulk Container (IBC)"*;

"Reused large packaging" means a large packaging to be refilled which has been examined and found free of defects affecting the ability to withstand the performance tests; the term includes those which are refilled with the same or similar compatible contents and are carried within distribution chains controlled by the consignor of the product;

"Reused packaging" means a packaging which has been examined and found free of defects affecting the ability to withstand the performance tests. The term includes those which are refilled with the same or similar compatible contents and are carried within distribution chains controlled by the consignor of the product;

"RID" means Regulations concerning the International Carriage of Dangerous Goods by Rail (Appendix C of COTIF (Convention concerning international carriage by rail));

"Rigid inner receptacle" (for composite IBCs) means a receptacle which retains its general shape when empty without its closures in place and without benefit of the outer casing. Any inner receptacle that is not "rigid" is considered to be "flexible";

"Rigid plastics IBC" means a rigid plastics body, which may have structural equipment together with appropriate service equipment;

"Routine maintenance of flexible IBCs", see *"Intermediate Bulk Container (IBC)"*;

"Routine maintenance of rigid IBCs", see *"Intermediate Bulk Container (IBC)"*;

S

"Safety valve" means a spring-loaded device which is activated automatically by pressure the purpose of which is to protect the tank against unacceptable excess internal pressure;

"SADT" see *"Self-accelerating decomposition temperature"*;

"Salvage packaging" means a special packaging into which damaged, defective, leaking or non-conforming dangerous goods packages, or dangerous goods that have spilled or leaked are placed for purposes of carriage for recovery or disposal;

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"*Salvage pressure receptacle*" means a pressure receptacle with a water capacity not exceeding 1 000 litres into which are placed damaged, defective, leaking or non-conforming pressure receptacle(s) for the purpose of carriage e.g. for recovery or disposal;

"*Self-accelerating decomposition temperature*" (SADT), means the lowest temperature at which self-accelerating decomposition may occur with substance in the packaging as used during carriage. Provisions for determining the SADT and the effects of heating under confinement are contained in Part II of the Manual of Tests and Criteria;

"*Service equipment*"

- (a) Of the tank means filling and emptying, venting, safety, heating and heat insulating devices and measuring instruments;
- (b) Of the elements of a battery-vehicle or of a MEGC means filling and emptying devices, including the manifold, safety devices and measuring instruments;
- (c) Of an IBC means the filling and discharge devices and any pressure-relief or venting, safety, heating and heat insulating devices and measuring instruments;

NOTE: For portable tanks, see Chapter 6.7.

"*Settled pressure*" means the pressure of the contents of a pressure receptacle in thermal and diffusive equilibrium;

"*Sheeted container*", see "*Container*";

"*Sheeted vehicle*" means an open vehicle provided with a sheet to protect the load;

"*Shell*" means the sheathing containing the substance (including the openings and their closures);

NOTE 1: This definition does not apply to receptacles.

NOTE 2: For portable tanks, see Chapter 6.7.

"*Sift-proof packaging*" means a packaging impermeable to dry contents, including fine solid material produced during carriage;

"*Small container*", see "*Container*";

"*Small receptacle containing gas (gas cartridge)*" means a non-refillable receptacle meeting the relevant requirements of 6.2.6 containing, under pressure, a gas or a mixture of gases. It may be fitted with a valve;

"*Solid*" means:

- (a) A substance with a melting point or initial melting point of more than 20 °C at a pressure of 101.3 kPa; or
- (b) A substance which is not liquid according to the ASTM D 4359-90 test method or which is pasty according to the criteria applicable to the test for determining fluidity (penetrometer test) described in 2.3.4;

"*Structural equipment*"

- (a) For tanks of a tank-vehicle or demountable tank, means the external or internal reinforcing, fastening, protective or stabilizing members of the shell;

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- (b) For tanks of a tank-container, means the external or internal reinforcing, fastening, protective or stabilizing members of the shell;
- (c) For elements of a battery-vehicle or an MEGC means the external or internal reinforcing, fastening, protective or stabilizing members of the shell or receptacle;
- (d) For IBCs other than flexible IBCs means the reinforcing, fastening, handling, protective or stabilizing members of the body (including the base pallet for composite IBCs with plastics inner receptacle);

NOTE: For portable tanks, see Chapter 6.7.

"Swap body", see "Container";

T

"Tank" means a shell, including its service and structural equipment. When used alone, the term tank means a tank-container, portable tank, demountable tank or fixed tank as defined in this Part, including tanks forming elements of battery-vehicles or MEGCs (see also "Demountable tank", "Fixed tank", "Portable tank" and "Multiple-element gas container");

NOTE: For portable tanks, see 6.7.4.1.

"Tank-container" means an article of transport equipment meeting the definition of a container, and comprising a shell and items of equipment, including the equipment to facilitate movement of the tank-container without significant change of attitude, used for the carriage of gases, liquid, powdery or granular substances and, when used for the carriage of gases as defined in 2.2.2.1.1, having a capacity of more than 0.45 m³ (450 litres);

NOTE: IBCs which meet the requirements of Chapter 6.5 are not considered to be tank-containers.

"Tank-container/portable tank operator" means any enterprise in whose name the tank-container/portable tank is registered;

"Tank record" means a file containing all the important technical information concerning a tank, a battery-vehicle or a MEGC, such as certificates referred to in 6.8.2.3, 6.8.2.4 and 6.8.3.4;

"Tank swap body" is considered to be a tank-container;

"Tank-vehicle" means a vehicle built to carry liquids, gases or powdery or granular substances and comprising one or more fixed tanks. In addition to the vehicle proper, or the units of running gear used in its stead, a tank-vehicle comprises one or more shells, their items of equipment and the fittings for attaching them to the vehicle or to the running-gear units;

"Technical name" means a recognized chemical name, if relevant a biological name, or other name currently used in scientific and technical handbooks, journals and texts (see 3.1.2.8.1.1);

"Test pressure" means the required pressure applied during a pressure test for initial or periodic inspection (see also "Calculation pressure", "Discharge pressure", "Filling pressure" and "Maximum working pressure (gauge pressure)");

NOTE: For portable tanks, see Chapter 6.7.

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"Through or into", for the carriage of Class 7 material, means through or into the countries in which a consignment is carried but specifically excludes countries "over" which a consignment is carried by air provided that there are no scheduled stops in those countries;

"Transport index (TI) assigned to a package, overpack or container, or to unpackaged LSA-I or SCO-I", for the carriage of Class 7 material, means a number which is used to provide control over radiation exposure;

"Transport unit" means a motor vehicle without an attached trailer, or a combination consisting of a motor vehicle and an attached trailer;

"Tray" (Class 1) means a sheet of metal, plastics, fibreboard or other suitable material which is placed in the inner, intermediate or outer packaging and achieves a close-fit in such packaging. The surface of the tray may be shaped so that packagings or articles can be inserted, held secure and separated from each other;

"Tube" (Class 2) means a seamless transportable pressure receptacle of a water capacity exceeding 150 litres and of not more than 3 000 litres;

U

"UIC" means the International Union of Railways (UIC, 16 rue Jean Rey, F-75015 Paris, France);

"UNECE" means the United Nations Economic Commission for Europe (UNECE, Palais des Nations, 8-14 avenue de la Paix, CH-1211 Geneva 10, Switzerland);

"Undertaking", see *"Enterprise"*;

"Unloader" means any enterprise which:

- (a) Removes a container, bulk-container, MEGC, tank-container or portable tank from a vehicle; or
- (b) Unloads packaged dangerous goods, small containers or portable tanks out of or from a vehicle or a container; or
- (c) Discharges dangerous goods from a tank (tank-vehicle, demountable tank, portable tank or tank-container) or from a battery-vehicle, MEMU or MEGC or from a vehicle, large container or small container for carriage in bulk or a bulk-container;

"UN Model Regulations" means the Model Regulations annexed to the seventeenth revised edition of the Recommendations on the Transport of Dangerous Goods published by the United Nations (ST/SG/AC.10/1/Rev.17);

"UN number" means the four-figure identification number of the substance or article taken from the UN Model Regulations;

V

"Vacuum-operated waste tank" means a fixed tank, demountable tank, tank-container or tank swap body primarily used for the carriage of dangerous wastes, with special constructional features and/or equipment to facilitate the loading and unloading of wastes as specified in Chapter 6.10. A tank which fully complies with the requirements of Chapter 6.7 or 6.8 is not considered to be a vacuum-operated waste tank;

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"Vacuum valve" means a spring-loaded device which is activated automatically by pressure the purpose of which is to protect the tank against unacceptable negative internal pressure;

"Vehicle" see *"Battery-vehicle"*, *"Closed vehicle"*, *"Open vehicle"*, *"Sheeted vehicle"* and *"Tank-vehicle"*;

W

"Wastes" means substances, solutions, mixtures or articles for which no direct use is envisaged but which are transported for reprocessing, dumping, elimination by incineration or other methods of disposal;

"Wooden barrel" means a packaging made of natural wood, of round cross-section, having convex walls, consisting of staves and heads and fitted with hoops;

"Wooden IBC" means a rigid or collapsible wooden body, together with an inner liner (but no inner packaging) and appropriate service and structural equipment;

"Working pressure" means the settled pressure of a compressed gas at a reference temperature of 15 °C in a full pressure receptacle;

NOTE: For tanks, see *"Maximum working pressure"*.

"Woven plastics" (for flexible IBCs) means a material made from stretch tapes or monofilaments of suitable plastics material.

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1.2.2 Units of measurement1.2.2.1 The following units of measurement ^a are applicable in ADR:

Measurement of	SI Unit ^b	Acceptable alternative unit	Relationship between units
Length	m (metre)	-	-
Area	m ² (square metre)	-	-
Volume	m ³ (cubic metre)	l ^c (litre)	1 l = 10 ⁻³ m ³
Time	s (second)	min (minute)	1 min = 60 s
		h (hour)	1 h = 3 600 s
		d (day)	1 d = 86 400 s
Mass	kg (kilogram)	g (gram)	1 g = 10 ⁻³ kg
		t (ton)	1 t = 10 ³ kg
Mass density	kg/m ³	kg/l	1 kg/l = 10 ³ kg/m ³
Temperature	K (kelvin)	°C (degree Celsius)	0 °C = 273.15 K
Temperature difference	K (kelvin)	°C (degree Celsius)	1 °C = 1 K
Force	N (newton)	-	1 N = 1 kg.m/s ²
Pressure	Pa (pascal)	-	1 Pa = 1 N/m ²
		bar (bar)	1 bar = 10 ⁵ Pa
Stress	N/m ²	N/mm ²	1 N/mm ² = 1 MPa
Work		kWh (kilowatt hours)	1 kWh = 3.6 MJ
Energy	J (joule)		1 J = 1 N.m = 1 W.s
Quantity of heat		eV (electronvolt)	1 eV = 0.1602 H 10 ⁻¹⁸ J
Power	W (watt)	-	1 W = 1 J/s = 1 N.m/s
Kinematic viscosity	m ² /s	mm ² /s	1 mm ² /s = 10 ⁻⁶ m ² /s
Dynamic viscosity	Pa.s	mPa.s	1 mPa.s = 10 ⁻³ Pa.s
Activity	Bq (becquerel)		
Dose equivalent	Sv (sievert)		

^a The following round figures are applicable for the conversion of the units hitherto used into SI Units.Force

1 kg = 9.807 N

1 N = 0.102 kg

Stress

1 kg/mm² = 9.807 N/mm²

1 N/mm² = 0.102 kg/mm²

Pressure

1 Pa = 1 N/m² = 10⁻⁵ bar = 1.02 × 10⁻⁵ kg/cm² = 0.75 × 10⁻² torr

1 bar = 10⁵ Pa = 1.02 kg/cm² = 750 torr

1 kg/cm² = 9.807 × 10⁴ Pa = 0.9807 bar = 736 torr

1 torr = 1.33 × 10² Pa = 1.33 × 10⁻³ bar = 1.36 × 10⁻³ kg/cm²

Energy, Work, Quantity of heat

1 J = 1 N.m = 0.278 × 10⁻⁶ kWh = 0.102 kgm = 0.239 × 10⁻³ kcal

1 kWh = 3.6 × 10⁶ J = 367 × 10³ kgm = 860 kcal

1 kgm = 9.807 J = 2.72 × 10⁻⁶ kWh = 2.34 × 10⁻³ kcal

1 kcal = 4.19 × 10³ J = 1.16 × 10⁻³ kWh = 427 kgm

Power

1 W = 0.102 kgm/s = 0.86 kcal/h

1 kgm/s = 9.807 W = 8.43 kcal/h

1 kcal/h = 1.16 W = 0.119 kgm/s

Kinematic viscosity

1 m²/s = 10⁴ St (Stokes)

1 St = 10⁻⁴ m²/s

Dynamic viscosity

1 Pa.s = 1 N.s/m² = 10 P (poise) = 0.102 kg.s/m²

1 P = 0.1 Pa.s = 0.1 N.s/m² = 1.02 × 10⁻² kg.s/m²

1 kg.s/m² = 9.807 Pa.s = 9.807 N.s/m² = 98.07 P

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^b *The International System of Units (SI) is the result of decisions taken at the General Conference on Weights and Measures (Address: Pavillon de Breteuil, Parc de St-Cloud, F-92 310 Sèvres).*

^c *The abbreviation "L" for litre may also be used in place of the abbreviation "l" when a typewriter cannot distinguish between figure "1" and letter "l".*

The decimal multiples and sub-multiples of a unit may be formed by prefixes or symbols, having the following meanings, placed before the name or symbol of the unit:

<u>Factor</u>			<u>Prefix</u>	<u>Symbol</u>
1 000 000 000 000 000 000	= 10 ¹⁸	quintillion	exa	E
1 000 000 000 000 000	= 10 ¹⁵	quadrillion	peta	P
1 000 000 000 000	= 10 ¹²	trillion	tera	T
1 000 000 000	= 10 ⁹	billion	giga	G
1 000 000	= 10 ⁶	million	mega	M
1 000	= 10 ³	thousand	kilo	k
100	= 10 ²	hundred	hecto	h
10	= 10 ¹	ten	deca	da
0.1	= 10 ⁻¹	tenth	deci	d
0.01	= 10 ⁻²	hundredth	centi	c
0.001	= 10 ⁻³	thousandth	milli	m
0.000 001	= 10 ⁻⁶	millionth	micro	μ
0.000 000 001	= 10 ⁻⁹	billionth	nano	n
0.000 000 000 001	= 10 ⁻¹²	trillionth	pico	p
0.000 000 000 000 001	= 10 ⁻¹⁵	quadrillionth	femto	f
0.000 000 000 000 000 001	= 10 ⁻¹⁸	quintillionth	atto	a

NOTE: 10⁹ billion is United Nations usage in English. By analogy, so is 10⁹ = 1 billionth.

1.2.2.2 Unless expressly stated otherwise, the sign "%" in ADR represents:

- In the case of mixtures of solids or of liquids, and also in the case of solutions and of solids wetted by a liquid, a percentage mass based on the total mass of the mixture, the solution or the wetted solid;
- In the case of mixtures of compressed gases, when filled by pressure, the proportion of the volume indicated as a percentage of the total volume of the gaseous mixture, or, when filled by mass, the proportion of the mass indicated as a percentage of the total mass of the mixture;
- In the case of mixtures of liquefied gases and dissolved gases, the proportion of the mass indicated as a percentage of the total mass of the mixture.

1.2.2.3 Pressures of all kinds relating to receptacles (such as test pressure, internal pressure, safety valve opening pressure) are always indicated in gauge pressure (pressure in excess of atmospheric pressure); however, the vapour pressure of substances is always expressed in absolute pressure.

1.2.2.4 Where ADR specifies a degree of filling for receptacles, this is always related to a reference temperature of the substances of 15 °C, unless some other temperature is indicated.

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CHAPTER 1.3

TRAINING OF PERSONS INVOLVED IN THE CARRIAGE OF DANGEROUS GOODS

1.3.1 Scope and applicability

Persons employed by the participants referred to in Chapter 1.4, whose duties concern the carriage of dangerous goods, shall be trained in the requirements governing the carriage of such goods appropriate to their responsibilities and duties. Employees shall be trained in accordance with 1.3.2 before assuming responsibilities and shall only perform functions, for which required training has not yet been provided, under the direct supervision of a trained person. Training requirements specific to security of dangerous goods in Chapter 1.10 shall also be addressed.

NOTE 1: With regard to the training for the safety adviser, see 1.8.3 instead of this section.

NOTE 2: With regard to the training of the vehicle crew, see Chapter 8.2 instead of this section.

NOTE 3: For training with regard to Class 7, see also 1.7.2.5.

1.3.2 Nature of the training

The training shall take the following form, appropriate to the responsibility and duties of the individual concerned.

1.3.2.1 General awareness training

Personnel shall be familiar with the general requirements of the provisions for the carriage of dangerous goods.

1.3.2.2 Function-specific training

Personnel shall be trained, commensurate directly with their duties and responsibilities in the requirements of the regulations concerning the carriage of dangerous goods.

Where the carriage of dangerous goods involves a multimodal transport operation, the personnel shall be aware of the requirements concerning other transport modes.

1.3.2.3 Safety training

Commensurate with the degree of risk of injury or exposure arising from an incident involving the carriage of dangerous goods, including loading and unloading, personnel shall be trained in the hazards and dangers presented by dangerous goods.

The training provided shall aim to make personnel aware of the safe handling and emergency response procedures.

1.3.2.4

The training shall be periodically supplemented with refresher training to take account of changes in regulations.

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1.3.3 Documentation

Records of training received according to this Chapter shall be kept by the employer and made available to the employee or competent authority, upon request. Records shall be kept by the employer for a period of time established by the competent authority. Records of training shall be verified upon commencing a new employment.

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CHAPTER 1.4

SAFETY OBLIGATIONS OF THE PARTICIPANTS

1.4.1 General safety measures

1.4.1.1 The participants in the carriage of dangerous goods shall take appropriate measures according to the nature and the extent of foreseeable dangers, so as to avoid damage or injury and, if necessary, to minimize their effects. They shall, in all events, comply with the requirements of ADR in their respective fields.

1.4.1.2 When there is an immediate risk that public safety may be jeopardized, the participants shall immediately notify the emergency services and shall make available to them the information they require to take action.

1.4.1.3 ADR may specify certain of the obligations falling to the various participants.

If a Contracting Party considers that no lessening of safety is involved, it may in its domestic legislation transfer the obligations falling to a specific participant to one or several other participants, provided that the obligations of 1.4.2 and 1.4.3 are met. These derogations shall be communicated by the Contracting Party to the Secretariat of the United Nations Economic Commission for Europe which will bring them to the attention of the Contracting Parties.

The requirements of 1.2.1, 1.4.2 and 1.4.3 concerning the definitions of participants and their respective obligations shall not affect the provisions of domestic law concerning the legal consequences (criminal nature, liability, etc.) stemming from the fact that the participant in question is e.g. a legal entity, a self-employed worker, an employer or an employee.

1.4.2 Obligations of the main participants

NOTE 1: Several participants to which safety obligations are assigned in this section may be one and the same enterprise. Also, the activities and the corresponding safety obligations of a participant can be assumed by several enterprises.

NOTE 2: For radioactive material, see also 1.7.6.

1.4.2.1 Consignor

1.4.2.1.1 The consignor of dangerous goods is required to hand over for carriage only consignments which conform to the requirements of ADR. In the context of 1.4.1, he shall in particular:

- (a) Ascertain that the dangerous goods are classified and authorized for carriage in accordance with ADR;
- (b) Furnish the carrier with information and data in a traceable form and, if necessary, the required transport documents and accompanying documents (authorizations, approvals, notifications, certificates, etc.), taking into account in particular the requirements of Chapter 5.4 and of the tables in Part 3;
- (c) Use only packagings, large packagings, intermediate bulk containers (IBCs) and tanks (tank-vehicles, demountable tanks, battery-vehicles, MEGCs, portable tanks and tank-containers) approved for and suited to the carriage of the substances concerned and bearing the markings prescribed by ADR;

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- (d) Comply with the requirements on the means of dispatch and on forwarding restrictions;
- (e) Ensure that even empty uncleaned and not degassed tanks (tank-vehicles, demountable tanks, battery-vehicles, MEGCs, portable tanks and tank-containers) or empty uncleaned vehicles and large and small bulk containers are appropriately marked and labelled and that empty uncleaned tanks are closed and present the same degree of leakproofness as if they were full.

1.4.2.1.2 If the consignor uses the services of other participants (packer, loader, filler, etc.), he shall take appropriate measures to ensure that the consignment meets the requirements of ADR. He may, however, in the case of 1.4.2.1.1 (a), (b), (c) and (e), rely on the information and data made available to him by other participants.

1.4.2.1.3 When the consignor acts on behalf of a third party, the latter shall inform the consignor in writing that dangerous goods are involved and make available to him all the information and documents he needs to perform his obligations.

1.4.2.2 *Carrier*

1.4.2.2.1 In the context of 1.4.1, where appropriate, the carrier shall in particular:

- (a) Ascertain that the dangerous goods to be carried are authorized for carriage in accordance with ADR;
- (b) Ascertain that all information prescribed in ADR related to the dangerous goods to be carried has been provided by the consignor before carriage, that the prescribed documentation is on board the transport unit or if electronic data processing (EDP) or if electronic data interchange (EDI) techniques are used instead of paper documentation, that data is available during transport in a manner at least equivalent to that of paper documentation;
- (c) Ascertain visually that the vehicles and loads have no obvious defects, leakages or cracks, missing equipment, etc.;
- (d) Ascertain that the deadline for the next test for tank-vehicles, battery-vehicles, demountable tanks, portable tanks, tank-containers and MEGCs has not expired;

NOTE: Tanks, battery-vehicles and MEGCs may however be carried after the expiry of this deadline under the conditions of 4.1.6.10 (in the case of battery-vehicles and MEGCs containing pressure receptacles as elements), 4.2.4.4, 4.3.2.4.4, 6.7.2.19.6, 6.7.3.15.6 or 6.7.4.14.6.

- (e) verify that the vehicles are not overloaded;
- (f) ascertain that the danger labels and markings prescribed for the vehicles have been affixed;
- (g) ascertain that the equipment prescribed in the written instructions for the driver is on board the vehicle.

Where appropriate, this shall be done on the basis of the transport documents and accompanying documents, by a visual inspection of the vehicle or the containers and, where appropriate, the load.

1.4.2.2.2 The carrier may, however, in the case of 1.4.2.2.1 (a), (b), (e) and (f), rely on information and data made available to him by other participants.

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1.4.2.2.3 If the carrier observes an infringement of the requirements of ADR, in accordance with 1.4.2.2.1, he shall not forward the consignment until the matter has been rectified.

1.4.2.2.4 If, during the journey, an infringement which could jeopardize the safety of the operation is observed, the consignment shall be halted as soon as possible bearing in mind the requirements of traffic safety, of the safe immobilisation of the consignment, and of public safety. The transport operation may only be continued once the consignment complies with applicable regulations. The competent authority(ies) concerned by the rest of the journey may grant an authorization to pursue the transport operation.

In case the required compliance cannot be achieved and no authorization is granted for the rest of the journey, the competent authority(ies) shall provide the carrier with the necessary administrative assistance. The same shall apply in case the carrier informs this/these competent authority(ies) that the dangerous nature of the goods carried was not communicated to him by the consignor and that he wishes, by virtue of the law applicable in particular to the contract of carriage, to unload, destroy or render the goods harmless.

1.4.2.2.5 *(Reserved)*

1.4.2.3 *Consignee*

1.4.2.3.1 The consignee has the obligation not to defer acceptance of the goods without compelling reasons and to verify, after unloading, that the requirements of ADR concerning him have been complied with.

1.4.2.3.2 If, in the case of a container, this verification brings to light an infringement of the requirements of ADR, the consignee shall return the container to the carrier only after the infringement has been remedied.

1.4.2.3.3 If the consignee makes use of the services of other participants (unloader, cleaner, decontamination facility, etc.) he shall take appropriate measures to ensure that the requirements of 1.4.2.3.1 and 1.4.2.3.2 of ADR have been complied with.

1.4.3 **Obligations of the other participants**

A non-exhaustive list of the other participants and their respective obligations is given below. The obligations of the other participants flow from section 1.4.1 above insofar as they know or should have known that their duties are performed as part of a transport operation subject to ADR.

1.4.3.1 *Loader*

1.4.3.1.1 In the context of 1.4.1, the loader has the following obligations in particular:

- (a) He shall hand the dangerous goods over to the carrier only if they are authorized for carriage in accordance with ADR;
- (b) He shall, when handing over for carriage packed dangerous goods or uncleaned empty packagings, check whether the packaging is damaged. He shall not hand over a package the packaging of which is damaged, especially if it is not leakproof, and there are leakages or the possibility of leakages of the dangerous substance, until the damage has been repaired; this obligation also applies to empty uncleaned packagings;
- (c) He shall, when loading dangerous goods in a vehicle, or a large or small container, comply with the special requirements concerning loading and handling;

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- (d) He shall, after loading dangerous goods into a container comply with the requirements concerning danger markings conforming to Chapter 5.3;
- (e) He shall, when loading packages, comply with the prohibitions on mixed loading taking into account dangerous goods already in the vehicle or large container and requirements concerning the separation of foodstuffs, other articles of consumption or animal feedstuffs.

1.4.3.1.2 The loader may, however, in the case of 1.4.3.1.1 (a), (d) and (e), rely on information and data made available to him by other participants.

1.4.3.2 Packer

In the context of 1.4.1, the packer shall comply with in particular:

- (a) The requirements concerning packing conditions, or mixed packing conditions; and
- (b) When he prepares packages for carriage, the requirements concerning marking and labelling of the packages.

1.4.3.3 Filler

In the context of 1.4.1, the filler has the following obligations in particular:

- (a) He shall ascertain prior to the filling of tanks that both they and their equipment are technically in a satisfactory condition;
- (b) He shall ascertain that the date of the next test for tank-vehicles, battery-vehicles, demountable tanks, portable tanks, tank-containers and MEGCs has not expired;
- (c) He shall only fill tanks with the dangerous goods authorized for carriage in those tanks;
- (d) He shall, in filling the tank, comply with the requirements concerning dangerous goods in adjoining compartments;
- (e) He shall, during the filling of the tank, observe the maximum permissible degree of filling or the maximum permissible mass of contents per litre of capacity for the substance being filled;
- (f) He shall, after filling the tank, ensure that all closures are in a closed position and that there is no leakage;
- (g) He shall ensure that no dangerous residue of the filling substance adheres to the outside of the tanks filled by him;
- (h) He shall, in preparing the dangerous goods for carriage, ensure that the orange plates, labels or placards as well as marks for elevated temperature substances and environmentally hazardous substances prescribed are affixed on the tanks, on the vehicles and on the large and small containers for carriage in bulk in accordance with the requirements;
- (i) *(Reserved)*;
- (j) He shall, when filling vehicles or containers with dangerous goods in bulk, ascertain that the relevant provisions of Chapter 7.3 are complied with.

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1.4.3.4 *Tank-container/portable tank operator*

In the context of 1.4.1, the tank-container/portable tank operator shall in particular:

- (a) Ensure compliance with the requirements for construction, equipment, tests and marking;
- (b) Ensure that the maintenance of shells and their equipment is carried out in such a way as to ensure that, under normal operating conditions, the tank-container/portable tank satisfies the requirements of ADR until the next inspection;
- (c) Have an exceptional check made when the safety of the shell or its equipment is liable to be impaired by a repair, an alteration or an accident.

1.4.3.5 and 1.4.3.6 *(Reserved)*

1.4.3.7 *Unloader*

NOTE: *In this sub-section, unloading covers removal, unloading and discharging as indicated in the definition of unloader in 1.2.1.*

1.4.3.7.1 In the context of 1.4.1, the unloader shall in particular:

- (a) Ascertain that the correct goods are unloaded by comparing the relevant information on the transport document with the information on the package, container, tank, MEMU, MEGC or vehicle;
- (b) Before and during unloading, check whether the packagings, the tank, the vehicle or container have been damaged to an extent which would endanger the unloading operation. If this is the case, ascertain that unloading is not carried out until appropriate measures have been taken;
- (c) Comply with all relevant requirements concerning unloading;
- (d) Immediately following the unloading of the tank, vehicle or container:
 - (i) Remove any dangerous residues which have adhered to the outside of the tank, vehicle or container during the process of unloading; and
 - (ii) Ensure the closure of valves and inspection openings;
- (e) Ensure that the prescribed cleaning and decontamination of the vehicles or containers is carried out; and
- (f) Ensure that the containers once completely unloaded, cleaned and decontaminated, no longer display danger markings conforming to Chapter 5.3.

1.4.3.7.2 If the unloader makes use of the services of other participants (cleaner, decontamination facility, etc.) he shall take appropriate measures to ensure that the requirements of ADR have been complied with.

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CHAPTER 1.5

DEROGATIONS

1.5.1 Temporary derogations

- 1.5.1.1 In accordance with Article 4, paragraph 3 of ADR, the competent authorities of the Contracting Parties may agree directly among themselves to authorize certain transport operations in their territories by temporary derogation from the requirements of ADR, provided that safety is not compromised thereby. The authority which has taken the initiative with respect to the temporary derogation shall notify such derogations to the Secretariat of the United Nations Economic Commission for Europe which shall bring them to the attention of the Contracting Parties¹.

NOTE: "Special arrangement" in accordance with 1.7.4 is not considered to be a temporary derogation in accordance with this section.

- 1.5.1.2 The period of validity of the temporary derogation shall not be more than five years from the date of its entry into force. The temporary derogation shall automatically cease as from the date of the entry into force of a relevant amendment to ADR.
- 1.5.1.3 Transport operations on the basis of temporary derogations shall constitute transport operations in the sense of ADR.

1.5.2 (Reserved)

¹ *Note by the Secretariat: The special agreements concluded under this Chapter may be consulted on the web site of the Secretariat of the United Nations Economic Commission for Europe (<http://www.unece.org/trans/danger/danger.htm>).*

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CHAPTER 1.6

TRANSITIONAL MEASURES

1.6.1 General

1.6.1.1 Unless otherwise provided, the substances and articles of ADR may be carried until 30 June 2013 in accordance with the requirements of ADR applicable up to 31 December 2012.

1.6.1.2 *(Deleted)*

1.6.1.3 Substances and articles of Class 1, belonging to the armed forces of a Contracting Party, that were packaged prior to 1 January 1990 in accordance with the requirements of ADR in effect at that time may be carried after 31 December 1989 provided the packagings maintain their integrity and are declared in the transport document as military goods packaged prior to 1 January 1990. The other requirements applicable as from 1 January 1990 for this class shall be complied with.

1.6.1.4 Substances and articles of Class 1 that were packaged between 1 January 1990 and 31 December 1996 in accordance with the requirements of ADR in effect at that time may be carried after 31 December 1996, provided the packagings maintain their integrity and are declared in the transport document as goods of Class 1 packaged between 1 January 1990 and 31 December 1996.

1.6.1.5 *(Reserved)*

1.6.1.6 Intermediate bulk containers (IBCs) manufactured before 1 January 2003 in accordance with the requirements of marginal 3612 (1) applicable up to 30 June 2001 and which do not conform to the requirements of 6.5.2.1.1 regarding the height of letters, numerals and symbols applicable as from 1 July 2001 may continue to be used.

1.6.1.7 Type approvals for drums, jerricans and composite packagings made of high or medium molecular mass polyethylene issued before 1 July 2005 in accordance with the requirements of 6.1.5.2.6 in force up to 31 December 2004, but which are not in accordance with the requirements of 4.1.1.21, continue to be valid until 31 December 2009. Any such packagings manufactured and marked on the basis of these type approvals may be used until the end of their period of use determined in 4.1.1.15.

1.6.1.8 Existing orange-coloured plates which meet the requirements of sub-section 5.3.2.2 applicable up to 31 December 2004 may continue to be used provided that the requirements of 5.3.2.2.1 and 5.3.2.2.2 that the plate, numbers and letters shall remain affixed irrespective of the orientation of the vehicle are met.

1.6.1.9 *(Deleted)*

1.6.1.10 Lithium cells and batteries manufactured before 1 July 2003 which had been tested in accordance with the requirements applicable until 31 December 2002 but which had not been tested in accordance with the requirements applicable as from 1 January 2003, and appliances containing such lithium cells or batteries, may continue to be carried up to 30 June 2013 if all the other applicable requirements are fulfilled.

1.6.1.11 Type approvals for drums, jerricans and composite packagings made of high or medium molecular mass polyethylene, and for high molecular mass polyethylene IBCs, issued before 1 July 2007 in accordance with the requirements of 6.1.6.1 (a) in force up to 31 December 2006, but which are not in accordance with the requirements of 6.1.6.1 (a) applicable as from 1 January 2007, continue to be valid.

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1.6.1.12 and 1.6.1.13 (Deleted)

1.6.1.14 IBCs manufactured before 1 January 2011 and conforming to a design type which has not passed the vibration test of 6.5.6.13 or which was not required to meet the criteria of 6.5.6.9.5 (d) at the time it was subjected to the drop test, may still be used.

1.6.1.15 IBCs manufactured, remanufactured or repaired before 1 January 2011 need not be marked with the maximum permitted stacking load in accordance with 6.5.2.2.2. Such IBCs, not marked in accordance with 6.5.2.2.2, may still be used after 31 December 2010 but must be marked in accordance with 6.5.2.2.2 if they are remanufactured or repaired after that date.

1.6.1.16 Animal material affected by pathogens included in Category B, other than those which would be assigned to Category A if they were in culture (see 2.2.62.1.12.2), may be carried in accordance with provisions determined by the competent authority until 31 December 2014¹.

1.6.1.17 and 1.6.1.18 (Deleted)

1.6.1.19 The provisions of 2.2.9.1.10.3 and 2.2.9.1.10.4 concerning the classification of environmentally hazardous substances applicable until 31 December 2010 may be applied until 31 December 2013.

1.6.1.20 Notwithstanding the requirements of Chapter 3.4 applicable as from 1 January 2011, dangerous goods packed in limited quantities, other than those which are assigned figure "0" in column (7a) of Table A of Chapter 3.2, may continue to be carried until 30 June 2015 in accordance with the provisions of Chapter 3.4 in force up to 31 December 2010. However, in such a case, the provisions of 3.4.12 to 3.4.15 in force as from 1 January 2011 may be applied as from 1 January 2011. For the purposes of the application of the last sentence of 3.4.13 (b), if the container carried is marked with the mark required in paragraph 3.4.12 applicable until 31 December 2010, the transport unit may be marked with the mark required in paragraph 3.4.15 applicable as from 1 January 2011.

1.6.1.21 Training certificates for drivers conforming to the model applicable until 31 December 2010 issued by Contracting Parties until 31 December 2012, instead of those conforming to the requirements of 8.2.2.8.5, may continue in use to the end of their five year validity.

1.6.1.22 Inner receptacles of composite IBCs manufactured before 1 July 2011 and marked in accordance with the requirements of 6.5.2.2.4 in force up to 31 December 2010 may still be used.

1.6.1.23 Fire extinguishers constructed before 1 July 2011 in accordance with the requirements of 8.1.4.3 applicable until 31 December 2010 may continue to be used.

1.6.1.24 Lithium cells and batteries manufactured before 1 January 2014 which had been tested in accordance with the requirements applicable until 31 December 2012 but which had not been tested in accordance with the requirements applicable as from 1 January 2013, and appliances containing such lithium cells or batteries, may continue to be carried if all the other applicable requirements are fulfilled.

1.6.1.25 Packages and overpacks marked with a UN number in accordance with the provisions of ADR applicable up to 31 December 2012 and which do not conform to the requirements of 5.2.1.1 regarding the size of the UN number and of the letters "UN" applicable as from

¹ Regulations for dead infected animals are contained e.g. in Regulation (EC) No. 1774/2002 of the European Parliament and of the Council of 3 October 2002 laying down health rules concerning animal by-products not intended for human consumption (Official Journal of the European Communities, No. L 273 of 10.10.2002, p. 1).

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1 January 2013 may continue to be used until 31 December 2013, and, for cylinders of 60 litres water capacity or less, until the next periodic inspection but no later than 30 June 2018.

- 1.6.1.26 Large packagings manufactured or remanufactured before 1 January 2014 and which do not conform to the requirements of 6.6.3.1 regarding the height of letters, numerals and symbols applicable as from 1 January 2013 may continue to be used. Those manufactured or remanufactured before 1 January 2015 need not be marked with the maximum permitted stacking load in accordance with 6.6.3.3. Such large packagings not marked in accordance with 6.6.3.3 may still be used after 31 December 2014 but must be marked in accordance with 6.6.3.3 if they are remanufactured after that date.
- 1.6.1.27 Means of containment integral to equipment or machinery containing liquid fuels of UN Nos. 1202, 1203, 1223, 1268, 1863 and 3475 constructed before 1 July 2013, which do not conform to the requirements of paragraph (a) of special provision 363 of Chapter 3.3 applicable as from 1 January 2013, may still be used.

1.6.2 Pressure receptacles and receptacles for Class 2

- 1.6.2.1 Receptacles built before 1 January 1997 and which do not conform to the requirements of ADR applicable as from 1 January 1997, but the carriage of which was permitted under the requirements of ADR applicable up to 31 December 1996, may continue to be transported after that date if the periodic test requirements in packing instructions P200 and P203 are complied with.
- 1.6.2.2 *(Deleted)*
- 1.6.2.3 Receptacles intended for the carriage of Class 2 substances constructed before 1 January 2003, may continue to bear, after 1 January 2003, the markings conforming to the requirements applicable until 31 December 2002.
- 1.6.2.4 Pressure receptacles designed and constructed in accordance with technical codes no longer recognized according to 6.2.5 may still be used.
- 1.6.2.5 Pressure receptacles and their closures designed and constructed in accordance with standards applicable at the time of their construction (see 6.2.4) according to the provisions of ADR which were applicable at that time may still be used unless restricted by a specific transitional measure.
- 1.6.2.6 Pressure receptacles for substances other than those of Class 2, built before 1 July 2009 in accordance with the requirements of 4.1.4.4 in force up to 31 December 2008, but which do not conform to the requirements of 4.1.3.6 applicable as from 1 January 2009, may continue to be used provided that the requirements of 4.1.4.4 in force up to 31 December 2008 are complied with.
- 1.6.2.7 and 1.6.2.8 *(Deleted)*
- 1.6.2.9 The provisions of packing instruction P200 (10), special packing provision v of 4.1.4.1 applicable until 31 December 2010 may be applied by Contracting Parties to ADR to cylinders constructed before 1 January 2015.
- 1.6.2.10 Refillable welded steel cylinders for the carriage of gases of UN Nos. 1011, 1075, 1965, 1969 or 1978, granted 15 year intervals for periodic inspection in accordance with packing instruction P200 (10), special packing provision v of 4.1.4.1 as applicable until 31 December 2010 by the competent authority of the country (countries) of carriage, may continue to be periodically inspected according to those provisions.

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- 1.6.2.11 Gas cartridges constructed and prepared for carriage before 1 January 2013 for which the requirements of 1.8.6, 1.8.7 or 1.8.8 for the conformity assessment of gas cartridges have not been applied may still be carried after this date, provided all the other applicable provisions of ADR are met.
- 1.6.2.12 Salvage pressure receptacles may continue to be constructed and approved according to national regulations up to 31 December 2013. Salvage pressure receptacles constructed and approved in accordance with national regulations before 1 January 2014 may continue to be used with the approval of the competent authorities of the countries of use.

1.6.3 Fixed tanks (tank-vehicles), demountable tanks and battery-vehicles

- 1.6.3.1 Fixed tanks (tank-vehicles), demountable tanks and battery-vehicles built before the entry into force of the requirements applicable as from 1 October 1978 may be kept in service if the equipment of the shell meets the requirements of Chapter 6.8. The thickness of the shell wall, except in the case of shells intended for the carriage of refrigerated liquefied gases of Class 2, shall be appropriate to a calculation pressure of not less than 0.4 MPa (4 bar) (gauge pressure) in the case of mild steel or of not less than 200 kPa (2 bar) (gauge pressure) in the case of aluminium and aluminium alloys. For other than circular cross-sections of tanks, the diameter to be used as a basis for calculation shall be that of a circle whose area is equal to that of the actual cross-section of the tank.
- 1.6.3.2 The periodic tests for fixed tanks (tank-vehicles), demountable tanks and battery-vehicles kept in service under these transitional requirements shall be conducted in accordance with the requirements of 6.8.2.4 and 6.8.3.4 and with the pertinent special requirements for the various classes. Unless the earlier requirements prescribed a higher test pressure, a test pressure of 200 kPa (2 bar) (gauge pressure) shall suffice for aluminium shells and aluminium alloy shells.
- 1.6.3.3 Fixed tanks (tank-vehicles), demountable tanks and battery-vehicles which meet the transitional requirements in 1.6.3.1 and 1.6.3.2 may be used until 30 September 1993 for the carriage of the dangerous goods for which they have been approved. This transitional period shall not apply to fixed tanks (tank-vehicles), demountable tanks and battery-vehicles intended for the carriage of substances of Class 2, or to fixed tanks (tank-vehicles), demountable tanks and battery-vehicles whose wall thickness and items of equipment meet the requirements of Chapter 6.8.
- 1.6.3.4 (a) Fixed tanks (tank-vehicles), demountable tanks and battery-vehicles constructed before 1 May 1985 in accordance with the requirements of ADR in force between 1 October 1978 and 30 April 1985 but not conforming to the requirements applicable as from 1 May 1985 may continue to be used after that date;
- (b) Fixed tanks (tank-vehicles), demountable tanks and battery-vehicles, constructed between 1 May 1985 and the entry into force of the requirements applicable as from 1 January 1988 which do not conform to those requirements but were constructed according to the requirements of ADR in force until that date, may continue to be used after that date.
- 1.6.3.5 Fixed tanks (tank-vehicles), demountable tanks and battery-vehicles, constructed before 1 January 1993 in accordance with the requirements in force up to 31 December 1992 but which do not conform to the requirements applicable as from 1 January 1993 may still be used.
- 1.6.3.6 (a) Fixed tanks (tank-vehicles), demountable tanks and battery-vehicles constructed between 1 January 1978 and 31 December 1984, if used after 31 December 2004, shall conform to the requirements of marginal 211 127 (5), applicable as from 1 January 1990, concerning shell thickness and protection against damage;

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- (b) Fixed tanks (tank-vehicles), demountable tanks and battery-vehicles constructed between 1 January 1985 and 31 December 1989, if used after 31 December 2010, shall conform to the requirements of marginal 211 127 (5), applicable as from 1 January 1990, concerning shell thickness and protection against damage.
- 1.6.3.7 Fixed tanks (tank-vehicles), demountable tanks and battery-vehicles constructed before 1 January 1999 in accordance with the requirements in force up to 31 December 1998 but which do not, however, conform to the requirements applicable as from 1 January 1999 may still be used.
- 1.6.3.8 When, because of amendments to ADR, some proper shipping names of gases have been modified, it is not necessary to modify the names on the plate or on the shell itself (see 6.8.3.5.2 or 6.8.3.5.3), provided that the names of the gases on the fixed tanks (tank-vehicles), demountable tanks and battery-vehicles or on the plates (see 6.8.3.5.6 (b) or (c)) are adapted at the first periodic test thereafter.
- 1.6.3.9 and 1.6.3.10 *(Reserved)*
- 1.6.3.11 Fixed tanks (tank-vehicles) and demountable tanks constructed before 1 January 1997 in accordance with the requirements in force up to 31 December 1996 but which do not, however, conform to the requirements of marginals 211 332 and 211 333 applicable as from 1 January 1997, may still be used.
- 1.6.3.12 *(Reserved)*
- 1.6.3.13 *(Deleted)*
- 1.6.3.14 *(Reserved)*
- 1.6.3.15 *(Deleted)*
- 1.6.3.16 For fixed tanks (tank-vehicles), demountable tanks and battery-vehicles constructed before 1 January 2007 which do not conform to the requirements of 4.3.2, 6.8.2.3, 6.8.2.4 and 6.8.3.4 concerning the tank record, the retention of files for the tank record shall start at the latest at the next periodic inspection.
- 1.6.3.17 Fixed tanks (tank-vehicles) and demountable tanks intended for the carriage of substances of Class 3, packing group I having a vapour pressure of not more than 175 kPa (1.75 bar) (absolute) at 50 °C, constructed before 1 July 2007 in accordance with the requirements applicable up to 31 December 2006, to which tank code L1.5BN had been assigned in accordance with the requirements applicable up to 31 December 2006, may continue to be used for the carriage of the substances mentioned above, until 31 December 2018.
- 1.6.3.18 Fixed tanks (tank-vehicles), demountable tanks and battery-vehicles constructed before 1 January 2003 in accordance with the requirements in force up to 30 June 2001, but which do not, however, conform to the requirements applicable as from 1 July 2001, may still be used provided that the assignment to the relevant tank code has been carried out.
- 1.6.3.19 Fixed tanks (tank-vehicles) and demountable tanks constructed before 1 January 2003 in accordance with the requirements of 6.8.2.1.21 in force up to 31 December 2002 but which do not, however, conform to the requirements applicable as from 1 January 2003 may still be used.
- 1.6.3.20 Fixed tanks (tank-vehicles) and demountable tanks constructed before 1 July 2003 in accordance with the requirements in force up to 31 December 2002 but which do not, however, conform to the requirements of 6.8.2.1.7 applicable as from 1 January 2003 and

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special provision TE15 of 6.8.4 (b) applicable from 1 January 2003 to 31 December 2006 may still be used.

1.6.3.21 *(Deleted)*

1.6.3.22 to 1.6.3.24 *(Reserved)*

1.6.3.25 *(Deleted)*

1.6.3.26 Fixed tanks (tank-vehicles) and demountable tanks constructed before 1 January 2007 in accordance with the requirements in force up to 31 December 2006 but which do not, however, conform to the requirements applicable as from 1 January 2007 regarding the marking of the external design pressure in accordance with 6.8.2.5.1, may still be used.

1.6.3.27 to 1.6.3.29 *(Reserved)*

1.6.3.30 Vacuum-operated waste fixed tanks (tank-vehicles) and demountable tanks constructed before 1 July 2005 in accordance with the requirements applicable up to 31 December 2004 but which do not conform to the requirements of 6.10.3.9 applicable as from 1 January 2005, may still be used.

1.6.3.31 Fixed tanks (tank-vehicles), demountable tanks and tanks forming elements of battery-vehicles designed and constructed in accordance with a technical code which was recognized at the time of their construction according to the provisions of 6.8.2.7 which were applicable at that time may still be used.

1.6.3.32 Fixed tanks (tank vehicles) and demountable tanks constructed before 1 July 2007 in accordance with the requirements in force up to 31 December 2006, equipped with manhole cover assemblies in accordance with the provisions of standard EN 13317:2002 referred to in the table of paragraph 6.8.2.6, applicable until 31 December 2006, including those of the figure and table B.2 of annex B of the said standard which are no longer accepted as from 1 January 2007, or the material of which does not meet the requirements of EN 13094:2004, paragraph 5.2, may still be used.

1.6.3.33 When the shell of a fixed tank (tank-vehicle) or demountable tank was already divided by partitions or surge plates into sections of not more than 7 500 litres capacity before 1 January 2009, the capacity of the shell need not be supplemented with the symbol "S" in the particulars required by 6.8.2.5.1 until the next periodic inspection according to 6.8.2.4.2 is performed.

1.6.3.34 Notwithstanding the provisions of 4.3.2.2.4, fixed tanks (tank-vehicles) and demountable tanks intended for the carriage of liquefied gases or refrigerated liquefied gases, which meet the applicable construction requirements of ADR but which were divided, before 1 July 2009, by partitions or surge plates into sections of more than 7 500 litres capacity may still be filled to more than 20% and less than 80% of their capacity.

1.6.3.35 *(Deleted)*

1.6.3.36 Fixed tanks (tank-vehicles) intended for the carriage of liquefied non-toxic flammable gases constructed before 1 July 2011 and which are equipped with non-return valves instead of internal stop-valves and which do not conform to the requirements of 6.8.3.2.3, may still be used.

1.6.3.37 *(Deleted)*

1.6.3.38 Fixed tanks (tank-vehicles), demountable tanks and battery-vehicles designed and constructed in accordance with standards applicable at the time of their construction (see

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6.8.2.6 and 6.8.3.6) according to the provisions of ADR which were applicable at that time may still be used unless restricted by a specific transitional measure.

- 1.6.3.39 Fixed tanks (tank-vehicles) and demountable tanks constructed before 1 July 2011 in accordance with the requirements of 6.8.2.2.3 in force up to 31 December 2010 but which do not, however, conform to the requirements of 6.8.2.2.3, third paragraph, concerning the position of the flame trap or flame arrester may still be used.
- 1.6.3.40 For toxic by inhalation substances of UN Nos. 1092, 1238, 1239, 1244, 1251, 1510, 1580, 1810, 1834, 1838, 2474, 2486, 2668, 3381, 3383, 3385, 3387 and 3389, the tank code specified in column (12) of Table A of Chapter 3.2 applicable up to 31 December 2010 may continue to be applied until 31 December 2016 for fixed tanks (tank-vehicles) and demountable tanks constructed before 1 July 2011.
- 1.6.3.41 Fixed tanks (tank-vehicles) and demountable tanks constructed before 1 July 2013 in accordance with the requirements in force up to 31 December 2012, but which do not, however, meet the marking provisions of 6.8.2.5.2 or 6.8.3.5.6 applicable as from 1 January 2013, may continue to be marked in accordance with the requirements applicable up to 31 December 2012 until the next periodic inspection after 1 July 2013.
- 1.6.3.42 For UN No. 2381, the tank code specified in column (12) of Table A of Chapter 3.2 applicable up to 31 December 2012 may continue to be applied until 31 December 2018 for fixed tanks (tank-vehicles) and demountable tanks constructed before 1 July 2013.
- 1.6.3.43 Fixed tanks (tank-vehicles) and demountable tanks constructed before 1 January 2012 in accordance with the requirements in force up to 31 December 2012, but which do not however conform to the requirements of 6.8.2.6 relating to standards EN 14432:2006 and EN 14433:2006 applicable as from 1 January 2011, may still be used.

1.6.3.44 to 1.6.3.49 *(Reserved)*

1.6.3.50 *Fibre-reinforced plastics (FRP) tanks*

FRP tanks which have been constructed before 1 July 2002 in conformity with a design type approved before 1 July 2001 in accordance with the requirements of Appendix B.1c which were in force until 30 June 2001 may continue to be used until the end of their lifetime provided that all the requirements in force up to 30 June 2001 have been and continue to be complied with.

However, as from 1 July 2001, no new design type may be approved in accordance with the requirements in force until 30 June 2001.

1.6.4 Tank-containers, portable tanks and MEGCs

- 1.6.4.1 Tank-containers constructed before 1 January 1988 in accordance with the requirements in force up to 31 December 1987 but which do not, however, conform to the requirements applicable as from 1 January 1988, may still be used.
- 1.6.4.2 Tank-containers constructed before 1 January 1993 in accordance with the requirements in force up to 31 December 1992 but which do not, however, conform to the requirements applicable as from 1 January 1993, may still be used.
- 1.6.4.3 Tank-containers constructed before 1 January 1999 in accordance with the requirements in force up to 31 December 1998 but which do not, however, conform to the requirements applicable as from 1 January 1999, may still be used.

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- 1.6.4.4 *(Reserved)*
- 1.6.4.5 When, because of amendments to ADR, some proper shipping names of gases have been modified, it is not necessary to modify the names on the plate or on the shell itself (see 6.8.3.5.2 or 6.8.3.5.3), provided that the names of the gases on the tank-containers and MEGCs or on the plates [see 6.8.3.5.6 (b) or (c)] are adapted at the first periodic test thereafter.
- 1.6.4.6 Tank-containers constructed before 1 January 2007 in accordance with the requirements in force up to 31 December 2006 but which do not, however, conform to the requirements applicable as from 1 January 2007 regarding the marking of the external design pressure in accordance with 6.8.2.5.1, may still be used.
- 1.6.4.7 Tank-containers constructed before 1 January 1997 in accordance with the requirements in force up to 31 December 1996 but which do not, however, conform to the requirements of marginals 212 332 and 212 333 applicable as from 1 January 1997, may still be used.
- 1.6.4.8 *(Reserved)*
- 1.6.4.9 Tank-containers and MEGCs designed and constructed in accordance with a technical code which was recognized at the time of their construction according to the provisions of 6.8.2.7 which were applicable at that time may still be used.
- 1.6.4.10 *(Deleted)*
- 1.6.4.11 *(Reserved)*
- 1.6.4.12 Tank-containers and MEGCs constructed before 1 January 2003 in accordance with the requirements applicable up to 30 June 2001, but which do not, however, conform to the requirements applicable as from 1 July 2001, may still be used.
- However, they shall be marked with the relevant tank code and if applicable the relevant alphanumeric codes of special provisions TC and TE in accordance with 6.8.4.
- 1.6.4.13 Tank-containers constructed before 1 July 2003 in accordance with the requirements in force up to 31 December 2002 but which do not, however, conform to the requirements of 6.8.2.1.7 applicable as from 1 January 2003 and special provision TE15 of 6.8.4 (b) applicable from 1 January 2003 to 31 December 2006 may still be used.
- 1.6.4.14 *(Reserved)*
- 1.6.4.15 The type of the test ("P" or "L") required by 6.8.2.5.1 need not be added to the tank plate until the first test after 1 January 2007 is performed.
- 1.6.4.16 *(Deleted)*
- 1.6.4.17 *(Deleted)*
- 1.6.4.18 For tank-containers and MEGCs constructed before 1 January 2007 which do not conform to the requirements of 4.3.2, 6.8.2.3, 6.8.2.4 and 6.8.3.4 concerning the tank record, the retention of files for the tank record shall start at the latest at the next periodic inspection.
- 1.6.4.19 Tank-containers intended for the carriage of substances of Class 3, packing group I having a vapour pressure of not more than 175 kPa (1.75 bar) (absolute) at 50 °C, constructed before 1 July 2007 in accordance with the requirements applicable up to 31 December 2006, to which tank code L1.5BN had been assigned in accordance with the requirements applicable up to 31 December 2006, may continue to be used for the carriage of the substances mentioned above until 31 December 2016.

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- 1.6.4.20 Vacuum-operated waste tank-containers constructed before 1 July 2005 in accordance with the requirements applicable up to 31 December 2004 but which do not conform to the requirements of 6.10.3.9 applicable as from 1 January 2005, may still be used.
- 1.6.4.21 to 1.6.4.29 *(Reserved)*
- 1.6.4.30 Portable tanks and UN MEGCs which do not meet the design requirements applicable as from 1 January 2007 but which have been constructed according to a design approval certificate which has been issued before 1 January 2008 may continue to be used.
- 1.6.4.31 For substances where TP35 is assigned in column (11) of Table A of Chapter 3.2, portable tank instruction T14 prescribed in ADR applicable up to 31 December 2008 may continue to be applied until 31 December 2014.
- 1.6.4.32 When the shell of a tank-container was already divided by partitions or surge plates into sections of not more than 7 500 litres capacity before 1 January 2009, the capacity of the shell need not be supplemented with the symbol "S" in the particulars required by 6.8.2.5.1 until the next periodic inspection according to 6.8.2.4.2 is performed.
- 1.6.4.33 Notwithstanding the provisions of 4.3.2.2.4, tank-containers intended for the carriage of liquefied gases or refrigerated liquefied gases, which meet the applicable construction requirements of ADR but which were divided, before 1 July 2009, by partitions or surge plates into sections of more than 7 500 litres capacity may still be filled to more than 20% and less than 80% of their capacity.
- 1.6.4.34 and 1.6.4.35 *(Deleted)*
- 1.6.4.36 For substances where TP37 is assigned in column (11) of Table A of Chapter 3.2, the portable tank instruction prescribed in ADR applicable up to 31 December 2010 may continue to be applied until 31 December 2016.
- 1.6.4.37 Portable tanks and MEGCs manufactured before 1 January 2012, that conform to the marking requirements of 6.7.2.20.1, 6.7.3.16.1, 6.7.4.15.1 or 6.7.5.13.1 applicable up to 31 December 2010, as relevant, may continue to be used if they comply with all other relevant requirements of ADR applicable as from 1 January 2011 including, when applicable, the requirement of 6.7.2.20.1 (g) for marking the symbol "S" on the plate when the shell or the compartment is divided by surge plates into sections of not more than 7 500 litres capacity. When the shell, or the compartment, was already divided by surge plates into sections of not more than 7 500 litres capacity before 1 January 2012, the capacity of the shell, or respectively of the compartment, need not be supplemented with the symbol "S" until the next periodic inspection or test according to 6.7.2.19.5 is performed.
- 1.6.4.38 Portable tanks manufactured before 1 January 2014 need not be marked with the portable tank instruction as required in 6.7.2.20.2, 6.7.3.16.2 and 6.7.4.15.2 until the next periodic inspection and test.
- 1.6.4.39 Tank-containers and MEGCs designed and constructed in accordance with standards applicable at the time of their construction (see 6.8.2.6 and 6.8.3.6) according to the provisions of ADR which were applicable at that time may still be used unless restricted by a specific transitional measure.
- 1.6.4.40 Tank-containers constructed before 1 July 2011 in accordance with the requirements of 6.8.2.2.3 in force up to 31 December 2010 but which do not, however, conform to the requirements of 6.8.2.2.3, third paragraph, concerning the position of the flame trap or flame arrester may still be used.

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- 1.6.4.41 For toxic by inhalation substances of UN Nos. 1092, 1238, 1239, 1244, 1251, 1510, 1580, 1810, 1834, 1838, 2474, 2486, 2668, 3381, 3383, 3385, 3387 and 3389, the tank code specified in column (12) of Table A of Chapter 3.2 applicable up to 31 December 2010 may continue to be applied until 31 December 2016 for tank-containers constructed before 1 July 2011.
- 1.6.4.42 Tank-containers constructed before 1 July 2013 in accordance with the requirements in force up to 31 December 2012, but which do not, however, meet the marking provisions of 6.8.2.5.2 or 6.8.3.5.6 applicable as from 1 January 2013, may continue to be marked in accordance with the requirements applicable up to 31 December 2012 until the next periodic inspection after 1 July 2013.
- 1.6.4.43 Portable tanks and MECGs manufactured before 1 January 2014 need not comply with the requirements of 6.7.2.13.1 (f), 6.7.3.9.1 (e), 6.7.4.8.1 (e) and 6.7.5.6.1 (d) concerning the marking of the pressure relief devices.
- 1.6.4.44 For substances where TP38 or TP39 is assigned in column (11) of Table A of Chapter 3.2, the portable tank instruction prescribed in ADR applicable up to 31 December 2012 may continue to be applied until 31 December 2018.
- 1.6.4.45 For UN No. 2381, the tank code specified in column (12) of Table A of Chapter 3.2 applicable up to 31 December 2012 may continue to be applied until 31 December 2018 for tank-containers constructed before 1 July 2013.
- 1.6.4.46 Tank-containers constructed before 1 January 2012 in accordance with the requirements in force up to 31 December 2012, but which do not however conform to the requirements of 6.8.2.6 relating to standards EN 14432:2006 and EN 14433:2006 applicable as from 1 January 2011, may still be used.

1.6.5 Vehicles

1.6.5.1 and 1.6.5.2 *(Reserved)*

1.6.5.3 *(Deleted)*

1.6.5.4 As regards the construction of EX/II, EX/III, FL, OX and AT vehicles, the requirements of Part 9 in force up to 31 December 2012 may be applied until 31 March 2014.

1.6.5.5 Vehicles registered or entering into service before 1 January 2003 the electric equipment of which does not comply with the requirements of 9.2.2, 9.3.7 or 9.7.8 but complies with the requirements applicable until 30 June 2001 may still be used.

1.6.5.6 *(Deleted)*

1.6.5.7 Complete or completed vehicles which have been type-approved before 31 December 2002 according to ECE Regulation No. 105² as amended by the 01 series of amendments or the corresponding provisions of Directive 98/91/EC³ and which do not comply with the requirements of Chapter 9.2 but comply with the requirements applicable to the construction of base vehicles (marginals 220 100 to 220 540 of Appendix B.2) applicable until 30 June

² ECE Regulation No. 105 (Uniform provisions concerning the approval of vehicles intended for the carriage of dangerous goods with regard to their specific constructional features).

³ Directive 98/91/EC of the European Parliament and of the Council of 14 December 1998 relating to motor vehicles and their trailers intended for the transport of dangerous goods by road and amending Directive 70/156/EEC relating to the type approval of motor vehicles and their trailers (Official Journal of the European Communities No. L 011 of 16 January 1999, pp. 0025-0036).

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2001 may continue to be approved and used provided they are first registered or they entered into service before 1 July 2003.

- 1.6.5.8 EX/II and EX/III vehicles which have been first approved before 1 July 2005 and which comply with the requirements of Part 9 in force up to 31 December 2004 but which do not however conform to the requirements applicable as from 1 January 2005 may still be used.
- 1.6.5.9 Tank-vehicles with fixed tanks with a capacity of more than 3 m³ intended for the carriage of dangerous goods in the liquid or molten state tested with a pressure of less than 4 bar, which do not comply with the requirements of 9.7.5.2, first registered (or which entered into service if the registration is not mandatory) before 1 July 2004, may still be used.
- 1.6.5.10 Certificates of approval which conform to the model shown in 9.1.3.5 applicable up to 31 December 2006 and those which conform to the model shown in 9.1.3.5 applicable from 1 January 2007 to 31 December 2008 may continue to be used.
- 1.6.5.11 MEMUs which have been constructed and approved before 1 July 2009 in accordance with the provisions of national law but which do not, however, conform to the construction and approval requirements applicable as from 1 January 2009 may be used with the approval of the competent authorities in the countries of use.
- 1.6.5.12 EX/III and FL vehicles registered or entering into service before 1 April 2012, the electrical connections of which do not comply with the requirements of 9.2.2.6.3, but comply with the requirements applicable until 31 December 2010, may still be used.
- 1.6.5.13 Trailers first registered (or which entered into service if registration was not mandatory) before 1 July 1995 equipped with anti-lock braking system in conformity with ECE Regulation No. 13, 06 series of amendments but which do not comply with the technical requirements for category A anti-lock braking system may still be used.
- 1.6.5.14 MEMUs which have been approved before 1 July 2013 in accordance with the provisions of ADR in force up to 31 December 2012, but which do not conform to the requirements of 6.12.3.1.2 or 6.12.3.2.2 applicable as from 1 January 2013, may still be used.

1.6.6 Class 7

1.6.6.1 *Packages not requiring competent authority approval of design under the 1985 and 1985 (as amended 1990) editions of IAEA Safety Series No. 6*

Excepted packages, Industrial packages Type IP-1, Type IP-2 and Type IP-3 and Type A packages that did not require approval of design by the competent authority and which meet the requirements of the 1985 or 1985 (as amended 1990) Editions of IAEA Regulations for the Safe Transport of Radioactive Material (IAEA Safety Series No. 6) may continue to be used subject to the mandatory programme of quality assurance in accordance with the requirements of 1.7.3 and the activity limits and material restrictions of 2.2.7.2.2, 2.2.7.2.4.1, 2.2.7.2.4.4, 2.2.7.2.4.5, 2.2.7.2.4.6, special provision 336 of Chapter 3.3 and 4.1.9.3.

Any packaging modified, unless to improve safety, or manufactured after 31 December 2003, shall meet the requirements of ADR. Packages prepared for carriage not later than 31 December 2003 under the 1985 or 1985 (as amended 1990) Editions of IAEA Safety Series No. 6 may continue in transport. Packages prepared for carriage after this date shall meet the requirements of ADR.

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1.6.6.2 *Packages approved under the 1973, 1973 (as amended), 1985 and 1985 (as amended 1990) editions of IAEA Safety Series No. 6*

1.6.6.2.1 Packagings manufactured to a package design approved by the competent authority under the provisions of the 1973 or 1973 (as amended) Editions of IAEA Safety Series No. 6 may continue to be used, subject to: multilateral approval of package design, the mandatory programme of quality assurance in accordance with the applicable requirements of 1.7.3 and the activity limits and material restrictions of 2.2.7.2.2, 2.2.7.2.4.1, 2.2.7.2.4.4, 2.2.7.2.4.5, 2.2.7.2.4.6, special provision 337 of Chapter 3.3 and 4.1.9.3. No new manufacture of such packaging shall be permitted to commence. Changes in the design of the packaging or in the nature or quantity of the authorized radioactive contents which, as determined by the competent authority, would significantly affect safety shall require that the requirements of ADR be met. A serial number according to the provision of 5.2.1.7.5 shall be assigned to and marked on the outside of each packaging.

1.6.6.2.2 Packagings manufactured to a package design approved by the competent authority under the provisions of the 1985 or 1985 (as amended 1990) Editions of IAEA Safety Series No. 6 may continue to be used, subject to: the multilateral approval of package design; the mandatory programme of quality assurance in accordance with the requirements of 1.7.3 and the activity limits and material restrictions of 2.2.7.2.2, 2.2.7.2.4.1, 2.2.7.2.4.4, 2.2.7.2.4.5, 2.2.7.2.4.6, special provision 337 of Chapter 3.3 and 4.1.9.3. Changes in the design of the packaging or in the nature or quantity of the authorized radioactive contents which, as determined by the competent authority, would significantly affect safety shall require that the requirements of these Regulations be met. All packagings for which manufacture begins after 31 December 2006 shall meet the requirements of ADR.

1.6.6.3 *Special form radioactive material approved under the 1973, 1973 (as amended), 1985 and 1985 (as amended 1990) Editions of IAEA Safety Series No. 6*

Special form radioactive material manufactured to a design which had received unilateral approval by the competent authority under the 1973, 1973 (as amended), 1985 or 1985 (as amended 1990) Editions of IAEA Safety Series No. 6 may continue to be used when in compliance with the mandatory programme of quality assurance in accordance with the applicable requirements of 1.7.3. All special form radioactive material manufactured after 31 December 2003 shall meet the requirements of ADR.

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CHAPTER 1.7

GENERAL PROVISIONS CONCERNING CLASS 7

1.7.1 Scope and application

NOTE 1: *In the event of accidents or incidents during the carriage of radioactive material, emergency provisions, as established by relevant national and/or international organizations, shall be observed to protect persons, property and the environment. Appropriate guidelines for such provisions are contained in "Planning and Preparing for Emergency Response to Transport Accidents Involving Radioactive Material", Safety Standard Series No. TS-G-1.2 (ST-3), IAEA, Vienna (2002).*

NOTE 2: *Emergency procedures shall take into account the formation of other dangerous substances that may result from the reaction between the contents of a consignment and the environment in the event of an accident.*

1.7.1.1 ADR establishes standards of safety which provide an acceptable level of control of the radiation, criticality and thermal hazards to persons, property and the environment that are associated with the carriage of radioactive material. These standards are based on the IAEA Regulations for the Safe Transport of Radioactive Material, 2009 edition, Safety Standards Series No. TS-R-1, IAEA, Vienna (2009). Explanatory material can be found in "Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material (2005 Edition)", Safety Standard Series No. TS-G-1.1 (Rev.1), IAEA, Vienna (2008).

1.7.1.2 The objective of ADR is to establish requirements that shall be satisfied to ensure safety and to protect persons, property and the environment from the effects of radiation in the carriage of radioactive material. This protection is achieved by requiring:

- (a) Containment of the radioactive contents;
- (b) Control of external radiation levels;
- (c) Prevention of criticality; and
- (d) Prevention of damage caused by heat.

These requirements are satisfied firstly by applying a graded approach to contents limits for packages and vehicles and to performance standards applied to package designs depending upon the hazard of the radioactive contents. Secondly, they are satisfied by imposing requirements on the design and operation of packages and on the maintenance of packagings, including a consideration of the nature of the radioactive contents. Finally, they are satisfied by requiring administrative controls including, where appropriate, approval by competent authorities.

1.7.1.3 ADR applies to the carriage of radioactive material by road including carriage which is incidental to the use of the radioactive material. Carriage comprises all operations and conditions associated with and involved in the movement of radioactive material; these include the design, manufacture, maintenance and repair of packaging, and the preparation, consigning, loading, carriage including in-transit storage, unloading and receipt at the final destination of loads of radioactive material and packages. A graded approach is applied to the performance standards in ADR that are characterized by three general severity levels:

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- (a) Routine conditions of carriage (incident free);
- (b) Normal conditions of carriage (minor mishaps);
- (c) Accident conditions of carriage.

1.7.1.4 The provisions laid down in ADR do not apply to the carriage of:

- (a) Radioactive material that is an integral part of the means of transport;
- (b) Radioactive material moved within an establishment which is subject to appropriate safety regulations in force in the establishment and where the movement does not involve public roads or railways;
- (c) Radioactive material implanted or incorporated into a person or live animal for diagnosis or treatment;
- (d) Radioactive material in consumer products which have received regulatory approval, following their sale to the end user;
- (e) Natural material and ores containing naturally occurring radionuclides which are either in their natural state, or have only been processed for purposes other than for extraction of the radionuclides, and which are not intended to be processed for use of these radionuclides provided the activity concentration of the material does not exceed 10 times the values specified in 2.2.7.2.2.1 (b), or calculated in accordance with 2.2.7.2.2.2 to 2.2.7.2.2.6;
- (f) Non-radioactive solid objects with radioactive substances present on any surfaces in quantities not in excess of the limit set out in the definition for "contamination" in 2.2.7.1.2.

1.7.1.5 *Specific provisions for the carriage of excepted packages*

1.7.1.5.1 Excepted packages which may contain radioactive material in limited quantities, instruments, manufactured articles and empty packagings as specified in 2.2.7.2.4.1 shall be subject only to the following provisions of Parts 5 to 7:

- (a) The applicable provisions specified in 5.1.2, 5.1.3.2, 5.1.4, 5.1.5.4, 5.2.1.9 and 7.5.11 CV33 (5.2);
- (b) The requirements for excepted packages specified in 6.4.4; and
- (c) If the excepted package contains fissile material, one of the fissile exceptions provided by 2.2.7.2.3.5 shall apply and the requirement of 6.4.7.2 shall be met.

1.7.1.5.2 Excepted packages are subject to the relevant provisions of all other parts of ADR.

1.7.2 Radiation protection programme

1.7.2.1 The carriage of radioactive material shall be subject to a Radiation protection programme which shall consist of systematic arrangements aimed at providing adequate consideration of radiation protection measures.

1.7.2.2 Doses to persons shall be below the relevant dose limits. Protection and safety shall be optimized in order that the magnitude of individual doses, the number of persons exposed, and the likelihood of incurring exposure shall be kept as low as reasonably achievable,

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economic and social factors being taken into account within the restriction that the doses to individuals be subject to dose constraints. A structured and systematic approach shall be adopted and shall include consideration of the interfaces between carriage and other activities.

1.7.2.3 The nature and extent of the measures to be employed in the programme shall be related to the magnitude and likelihood of radiation exposures. The programme shall incorporate the requirements in 1.7.2.2, 1.7.2.4, 1.7.2.5 and 7.5.11 CV33 (1.1). Programme documents shall be available, on request, for inspection by the relevant competent authority.

1.7.2.4 For occupational exposures arising from transport activities, where it is assessed that the effective dose:

- (a) Is likely to be between 1 mSv and 6 mSv in a year, a dose assessment programme via work place monitoring or individual monitoring shall be conducted;
- (b) Is likely to exceed 6 mSv in a year, individual monitoring shall be conducted.

When individual monitoring or work place monitoring is conducted, appropriate records shall be kept.

NOTE: For occupational exposures arising from transport activities, where it is assessed that the effective dose is most unlikely to exceed 1 mSv in a year, no special work patterns, detailed monitoring, dose assessment programmes or individual record keeping need be required.

1.7.2.5 Workers (see 7.5.11, CV33 Note 3) shall be appropriately trained in radiation protection including the precautions to be observed in order to restrict their occupational exposure and the exposure of other persons who might be affected by their actions.

1.7.3 Quality assurance

Quality assurance programmes based on international, national or other standards acceptable to the competent authority shall be established and implemented for the design, manufacture, testing, documentation, use, maintenance and inspection of all special form radioactive material, low dispersible radioactive material and packages and for carriage and in-transit storage operations to ensure compliance with the relevant provisions of ADR. Certification that the design specification has been fully implemented shall be available to the competent authority. The manufacturer, consignor or user shall be prepared to provide facilities for competent authority inspection during manufacture and use and to demonstrate to any cognizant competent authority that:

- (a) The manufacturing methods and materials used are in accordance with the approved design specifications; and
- (b) All packagings are periodically inspected and, as necessary, repaired and maintained in good condition so that they continue to comply with all relevant requirements and specifications, even after repeated use.

Where competent authority approval is required, such approval shall take into account and be contingent upon the adequacy of the quality assurance programme.

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1.7.4 Special arrangement

1.7.4.1 Special arrangement shall mean those provisions, approved by the competent authority, under which consignments which do not satisfy all the requirements of ADR applicable to radioactive material may be transported.

NOTE: Special arrangement is not considered to be a temporary derogation in accordance with 1.5.1.

1.7.4.2 Consignments for which conformity with any provision applicable to Class 7 is impracticable shall not be transported except under special arrangement. Provided the competent authority is satisfied that conformity with the Class 7 provisions of ADR is impracticable and that the requisite standards of safety established by ADR have been demonstrated through alternative means the competent authority may approve special arrangement transport operations for single or a planned series of multiple consignments. The overall level of safety in carriage shall be at least equivalent to that which would be provided if all the applicable requirements had been met. For international consignments of this type, multilateral approval shall be required.

1.7.5 Radioactive material possessing other dangerous properties

In addition to the radioactive and fissile properties, any subsidiary risk of the contents of the package, such as explosiveness, flammability, pyrophoricity, chemical toxicity and corrosiveness, shall also be taken into account in the documentation, packing, labelling, marking, placarding, stowage, segregation and carriage, in order to be in compliance with all relevant provisions for dangerous goods of ADR.

1.7.6 Non-compliance

1.7.6.1 In the event of a non-compliance with any limit in ADR applicable to radiation level or contamination,

- (a) The consignor shall be informed of the non-compliance by:
 - (i) the carrier if the non-compliance is identified during carriage; or
 - (ii) the consignee if the non-compliance is identified at receipt;
- (b) The carrier, consignor or consignee, as appropriate shall:
 - (i) take immediate steps to mitigate the consequences of the non-compliance;
 - (ii) investigate the non-compliance and its causes, circumstances and consequences;
 - (iii) take appropriate action to remedy the causes and circumstances that led to the non-compliance and to prevent a recurrence of similar circumstances that led to the non-compliance; and
 - (iv) communicate to the competent authority(ies) on the causes of the non-compliance and on corrective or preventive actions taken or to be taken; and
- (c) The communication of the non-compliance to the consignor and competent authority(ies), respectively, shall be made as soon as practicable and it shall be immediate whenever an emergency exposure situation has developed or is developing.

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CHAPTER 1.8

CHECKS AND OTHER SUPPORT MEASURES TO ENSURE COMPLIANCE WITH SAFETY REQUIREMENTS

1.8.1 Administrative controls of dangerous goods

1.8.1.1 The competent authorities of the Contracting Parties may, on their national territory, at any time, conduct spot checks to verify whether the requirements concerning the carriage of dangerous goods have been met including, in accordance with 1.10.1.5, those concerning security measures.

These checks shall, however, be made without endangering persons, property or the environment and without major disruption of road services.

1.8.1.2 Participants in the carriage of dangerous goods (Chapter 1.4) shall, without delay, in the context of their respective obligations, provide the competent authorities and their agents with the necessary information for carrying out the checks.

1.8.1.3 The competent authorities may also, for the purposes of carrying out checks on the premises of the enterprises participating in the carriage of dangerous goods (Chapter 1.4), make inspections, consult the necessary documents and remove samples of dangerous goods or packagings for examination, provided that safety is not jeopardized thereby. The participants in the carriage of dangerous goods (Chapter 1.4) shall also make the vehicles or parts of vehicles and the equipment and installations accessible for the purpose of checking where this is possible and reasonable. They may, if they deem necessary, designate a person from the enterprise to accompany the representative of the competent authority.

1.8.1.4 If the competent authorities observe that the requirements of ADR have not been met, they may prohibit a consignment or interrupt a transport operation until the defects observed are rectified, or they may prescribe other appropriate measures. Immobilization may take place on the spot or at another place selected by the authorities for safety reasons. These measures shall not cause a major disruption in road services.

1.8.2 Mutual administrative support

1.8.2.1 The Contracting Parties shall agree on mutual administrative support for the implementation of ADR.

1.8.2.2 When a Contracting Party has reasons to observe that the safety of the carriage of dangerous goods on its territory is compromised as a result of very serious or repeated infringements by an enterprise which has its headquarters on the territory of another Contracting Party, it shall notify the competent authorities of this Contracting Party of such infringements. The competent authorities of the Contracting Party on the territory of which the very serious or repeated infringements were observed may request the competent authorities of the Contracting Party on the territory of which the enterprise has its headquarters to take appropriate measures against the offender(s). The transmission of data referring to persons shall not be permitted unless it is necessary for the prosecution of very serious or repeated infringements.

1.8.2.3 The authorities notified shall communicate to the competent authorities of the Contracting Party on the territory of which the infringements were observed, the measures which have, if necessary, been taken with respect to the enterprise.

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1.8.3 Safety adviser

1.8.3.1 Each undertaking, the activities of which include the carriage, or the related packing, loading, filling or unloading, of dangerous goods by road shall appoint one or more safety advisers for the carriage of dangerous goods, responsible for helping to prevent the risks inherent in such activities with regard to persons, property and the environment.

1.8.3.2 The competent authorities of the Contracting Parties may provide that these requirements shall not apply to undertakings:

- (a) The activities of which concern quantities in each transport unit smaller than those referred to in 1.1.3.6, 1.7.1.4 and in Chapters 3.3, 3.4 and 3.5; or
- (b) The main or secondary activities of which are not the carriage or the related loading or unloading of dangerous goods but which occasionally engage in the national carriage or the related loading or unloading of dangerous goods posing little danger or risk of pollution.

1.8.3.3 The main task of the adviser shall be, under the responsibility of the head of the undertaking, to seek by all appropriate means and by all appropriate action, within the limits of the relevant activities of that undertaking, to facilitate the conduct of those activities in accordance with the requirements applicable and in the safest possible way.

With regard to the undertaking's activities, the adviser has the following duties in particular:

- monitoring compliance with the requirements governing the carriage of dangerous goods;
- advising his undertaking on the carriage of dangerous goods;
- preparing an annual report to the management of his undertaking or a local public authority, as appropriate, on the undertaking's activities in the carriage of dangerous goods. Such annual reports shall be preserved for five years and made available to the national authorities at their request.

The adviser's duties also include monitoring the following practices and procedures relating to the relevant activities of the undertaking:

- the procedures for compliance with the requirements governing the identification of dangerous goods being transported;
- the undertaking's practice in taking account, when purchasing means of transport, of any special requirements in connection with the dangerous goods being transported;
- the procedures for checking the equipment used in connection with the carriage, loading or unloading of dangerous goods;
- the proper training of the undertaking's employees, including on the changes to the regulations, and the maintenance of records of such training;
- the implementation of proper emergency procedures in the event of any accident or incident that may affect safety during the carriage, loading or unloading of dangerous goods;
- investigating and, where appropriate, preparing reports on serious accidents, incidents or serious infringements recorded during the carriage, loading or unloading of dangerous goods;

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- the implementation of appropriate measures to avoid the recurrence of accidents, incidents or serious infringements;
- the account taken of the legal prescriptions and special requirements associated with the carriage of dangerous goods in the choice and use of sub-contractors or third parties;
- verification that employees involved in the carriage, loading or unloading of dangerous goods have detailed operational procedures and instructions;
- the introduction of measures to increase awareness of the risks inherent in the carriage, loading and unloading of dangerous goods;
- the implementation of verification procedures to ensure the presence on board the means of transport of the documents and safety equipment which must accompany transport and the compliance of such documents and equipment with the regulations;
- the implementation of verification procedures to ensure compliance with the requirements governing loading and unloading;
- the existence of the security plan indicated in 1.10.3.2.

1.8.3.4 The adviser may also be the head of the undertaking, a person with other duties in the undertaking, or a person not directly employed by that undertaking, provided that that person is capable of performing the duties of adviser.

1.8.3.5 Each undertaking concerned shall, on request, inform the competent authority or the body designated for that purpose by each Contracting Party of the identity of its adviser.

1.8.3.6 Whenever an accident affects persons, property or the environment or results in damage to property or the environment during carriage, loading or unloading carried out by the undertaking concerned, the adviser shall, after collecting all the relevant information, prepare an accident report to the management of the undertaking or to a local public authority, as appropriate. That report shall not replace any report by the management of the undertaking which might be required under any other international or national legislation.

1.8.3.7 An adviser shall hold a vocational training certificate, valid for transport by road. That certificate shall be issued by the competent authority or the body designated for that purpose by each Contracting Party.

1.8.3.8 To obtain a certificate, a candidate shall undergo training and pass an examination approved by the competent authority of the Contracting Party.

1.8.3.9 The main aims of the training shall be to provide candidates with sufficient knowledge of the risks inherent in the carriage of dangerous goods, of the laws, regulations and administrative provisions applicable to the modes of transport concerned and of the duties listed in 1.8.3.3.

1.8.3.10 The examination shall be organized by the competent authority or by an examining body designated by the competent authority. The examining body shall not be a training provider.

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The examining body shall be designated in writing. This approval may be of limited duration and shall be based on the following criteria:

- competence of the examining body;
- specifications of the form of the examinations the examining body is proposing;
- measures intended to ensure that examinations are impartial;
- independence of the body from all natural or legal persons employing safety advisers.

1.8.3.11

The aim of the examination is to ascertain whether candidates possess the necessary level of knowledge to carry out the duties incumbent upon a safety adviser as listed in 1.8.3.3, for the purpose of obtaining the certificate prescribed in sub-section 1.8.3.7, and it shall cover at least the following subjects:

- (a) Knowledge of the types of consequences which may be caused by an accident involving dangerous goods and knowledge of the main causes of accidents;
- (b) Requirements under national law, international conventions and agreements, with regard to the following in particular:
 - classification of dangerous goods (procedure for classifying solutions and mixtures, structure of the list of substances, classes of dangerous goods and principles for their classification, nature of dangerous goods transported, physical, chemical and toxicological properties of dangerous goods);
 - general packing provisions, provisions for tanks and tank-containers (types, code, marking, construction, initial and periodic inspection and testing);
 - marking and labelling, placarding and orange plates marking (marking and labelling of packages, placing and removal of placards and orange plates);
 - particulars in transport documents (information required);
 - method of consignment and restrictions on dispatch (full load, carriage in bulk, carriage in intermediate bulk containers, carriage in containers, carriage in fixed or demountable tanks);
 - transport of passengers;
 - prohibitions and precautions relating to mixed loading;
 - segregation of goods;
 - limitation of the quantities carried and quantities exemptions;
 - handling and stowage (loading and unloading - filling ratios -, stowage and segregation);
 - cleaning and/or degassing before loading and after unloading;
 - crews, vocational training;
 - vehicle documents (transport documents, instructions in writing, vehicle approval certificate, driver training certificate, copies of any derogations, other documents);

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- instructions in writing (implementation of the instructions and crew protection equipment);
- supervision requirements (parking);
- traffic regulations and restrictions;
- operational discharges or accidental leaks of pollutants;
- requirements relating to transport equipment.

1.8.3.12 Examinations

1.8.3.12.1 The examination shall consist of a written test which may be supplemented by an oral examination.

1.8.3.12.2 The use in the written test of documentation other than international or national regulations is not permitted.

1.8.3.12.3 Electronic media may be used only if provided by the examining body. There shall be no means of a candidate introducing further data to the electronic media provided; the candidate may only answer the questions posed.

1.8.3.12.4 The written test shall consist of two parts:

- (a) Candidates shall receive a questionnaire. It shall include at least 20 open questions covering at least the subjects mentioned in the list in 1.8.3.11. However, multiple choice questions may be used. In this case, two multiple choice questions count as one open question. Amongst these subjects particular attention shall be paid to the following subjects:
- general preventive and safety measures;
 - classification of dangerous goods;
 - general packing provisions, including tanks, tank-containers, tank-vehicles, etc.;
 - danger markings and labels;
 - information in transport document;
 - handling and stowage;
 - crew, vocational training;
 - vehicle documents and transport certificates;
 - instructions in writing;
 - requirements concerning transport equipment;
- (b) Candidates shall undertake a case study in keeping with the duties of the adviser referred to in 1.8.3.3, in order to demonstrate that they have the necessary qualifications to fulfil the task of adviser.

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1.8.3.13 The Contracting Parties may decide that candidates who intend working for undertakings specializing in the carriage of certain types of dangerous goods need only be questioned on the substances relating to their activities. These types of goods are:

- Class 1;
- Class 2;
- Class 7;
- Classes 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 6.2, 8 and 9;
- UN Nos. 1202, 1203, 1223, 3475, and aviation fuel classified under UN Nos. 1268 or 1863.

The certificate prescribed in 1.8.3.7 shall clearly indicate that it is only valid for one type of the dangerous goods referred to in this sub-section and on which the adviser has been questioned under the conditions defined in 1.8.3.12.

Certificates of training as safety advisers issued before 1 January 2009 for UN Nos. 1202, 1203 and 1223 are also valid for UN No. 3475 and aviation fuel classified under UN Nos. 1268 or 1863.

1.8.3.14 The competent authority or the examining body shall keep a running list of the questions that have been included in the examination.

1.8.3.15 The certificate prescribed in 1.8.3.7 shall take the form laid down in 1.8.3.18 and shall be recognized by all Contracting Parties.

1.8.3.16 *Validity and renewal of certificates*

1.8.3.16.1 The certificate shall be valid for five years. The period of the validity of a certificate shall be extended from the date of its expiry for five years at a time where, during the year before its expiry, its holder has passed an examination. The examination shall be approved by the competent authority.

1.8.3.16.2 The aim of the examination is to ascertain that the holder has the necessary knowledge to carry out the duties set out in 1.8.3.3. The knowledge required is set out in 1.8.3.11 (b) and shall include the amendments to the regulations introduced since the award of the last certificate. The examination shall be held and supervised on the same basis as in 1.8.3.10 and 1.8.3.12 to 1.8.3.14. However, holders need not undertake the case study specified in 1.8.3.12.4 (b).

1.8.3.17 *(Deleted)*

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1.8.3.18 *Form of certificate***Certificate of training as safety adviser for the transport of dangerous goods**

Certificate No:

Distinguishing sign of the State issuing the certificate:

Surname:

Forename(s):

Date and place of birth:

Nationality:

Signature of holder:

Valid until for undertakings which transport dangerous goods and for undertakings which carry out related loading or unloading:

 by road by rail by inland waterway

Issued by:

Date: Signature:

Extended until: By:

Date: Signature:

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1.8.4 List of competent authorities and bodies designated by them

The Contracting Parties shall communicate to the Secretariat of the United Nations Economic Commission for Europe the addresses of the authorities and bodies designated by them which are competent in accordance with national law to implement ADR, referring in each case to the relevant requirement of ADR and giving the addresses to which the relevant applications should be made.

The Secretariat of the United Nations Economic Commission for Europe shall establish a list on the basis of the information received and shall keep it up-to-date. It shall communicate this list and the amendments thereto to the Contracting Parties.

1.8.5 Notifications of occurrences involving dangerous goods

1.8.5.1 If a serious accident or incident takes place during loading, filling, carriage or unloading of dangerous goods on the territory of a Contracting Party, the loader, filler, carrier or consignee, respectively, shall ascertain that a report conforming to the model prescribed in 1.8.5.4 is made to the competent authority of the Contracting Party concerned at the latest one month after the occurrence.

1.8.5.2 The Contracting Party shall in turn, if necessary, make a report to the Secretariat of the United Nations Economic Commission for Europe with a view to informing the other Contracting Parties.

1.8.5.3 An occurrence subject to report in accordance with 1.8.5.1 has occurred if dangerous goods were released or if there was an imminent risk of loss of product, if personal injury, material or environmental damage occurred, or if the authorities were involved and one or more of the following criteria has/have been met:

Personal injury means an occurrence in which death or injury directly relating to the dangerous goods carried has occurred, and where the injury

- (a) Requires intensive medical treatment;
- (b) Requires a stay in hospital of at least one day; or
- (c) Results in the inability to work for at least three consecutive days.

Loss of product means the release of dangerous goods

- (a) Of transport category 0 or 1 in quantities of 50 kg / 50 l or more;
- (b) Of transport category 2 in quantities of 333 kg / 333 l or more; or
- (c) Of transport category 3 or 4 in quantities of 1 000 kg / 1 000 l or more.

The loss of product criterion also applies if there was an imminent risk of loss of product in the above-mentioned quantities. As a rule, this has to be assumed if, owing to structural damage, the means of containment is no longer suitable for further carriage or if, for any other reason, a sufficient level of safety is no longer ensured (e.g. owing to distortion of tanks or containers, overturning of a tank or fire in the immediate vicinity).

If dangerous goods of Class 6.2 are involved, the obligation to report applies without quantity limitation.

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In occurrences involving Class 7 material, the criteria for loss of product are:

- (a) Any release of radioactive material from the packages;
- (b) Exposure leading to a breach of the limits set out in the regulations for protection of workers and members of the public against ionizing radiation (Schedule II of IAEA Safety Series No. 115 – "International Basic Safety Standards for Protection Against Ionizing Radiation and for Safety of Radiation Sources"); or
- (c) Where there is reason to believe that there has been a significant degradation in any package safety function (containment, shielding, thermal protection or criticality) that may have rendered the package unsuitable for continued carriage without additional safety measures.

NOTE: See the requirements of 7.5.11 CV33 (6) for undeliverable consignments.

Material damage or environmental damage means the release of dangerous goods, irrespective of the quantity, where the estimated amount of damage exceeds 50,000 Euros. Damage to any directly involved means of carriage containing dangerous goods and to the modal infrastructure shall not be taken into account for this purpose.

Involvement of authorities means the direct involvement of the authorities or emergency services during the occurrence involving dangerous goods and the evacuation of persons or closure of public traffic routes (roads/railways) for at least three hours owing to the danger posed by the dangerous goods.

If necessary, the competent authority may request further relevant information.

1.8.5.4 *Model for report on occurrences during the carriage of dangerous goods*

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**Report on occurrences during the carriage of dangerous goods
in accordance with RID/ADR section 1.8.5**

Carrier/Railway infrastructure operator:
Address:
Contact name: Telephone: Fax:

(The competent authority shall remove this cover sheet before forwarding the report)

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1. Mode	
<input type="checkbox"/> Rail Wagon number (optional)	<input type="checkbox"/> Road Vehicle registration (optional)
2. Date and location of occurrence	
Year: Month: Day: Time:	
<u>Rail</u> <input type="checkbox"/> Station <input type="checkbox"/> Shunting/marshalling yard <input type="checkbox"/> Loading/unloading/transshipment site Location / Country: or <input type="checkbox"/> Open line: Description of line: Kilometres:	<u>Road</u> <input type="checkbox"/> Built-up area <input type="checkbox"/> Loading/unloading/transshipment site <input type="checkbox"/> Open road Location / Country:
3. Topography	
<input type="checkbox"/> Gradient/incline <input type="checkbox"/> Tunnel <input type="checkbox"/> Bridge/Underpass <input type="checkbox"/> Crossing	
4. Particular weather conditions	
<input type="checkbox"/> Rain <input type="checkbox"/> Snow <input type="checkbox"/> Ice <input type="checkbox"/> Fog <input type="checkbox"/> Thunderstorm <input type="checkbox"/> Storm Temperature: °C	
5. Description of occurrence	
<input type="checkbox"/> Derailment/Leaving the road <input type="checkbox"/> Collision <input type="checkbox"/> Overturning/Rolling over <input type="checkbox"/> Fire <input type="checkbox"/> Explosion <input type="checkbox"/> Loss <input type="checkbox"/> Technical fault	
Additional description of occurrence:	

1.8.6 Administrative controls for application of the conformity assessments, periodic inspections, intermediate inspections and exceptional checks described in 1.8.7**1.8.6.1 Approval of inspection bodies**

The competent authority may approve inspection bodies for conformity assessments, periodic inspections, intermediate inspections, exceptional checks and surveillance of the in-house inspection service as specified in 1.8.7.

1.8.6.2 Operational obligations for the competent authority, its delegate or inspection body

1.8.6.2.1 The competent authority, its delegate or inspection body shall carry out conformity assessments, periodic inspections, intermediate inspections and exceptional checks in a proportionate manner, avoiding unnecessary burdens. The competent authority, its delegate or inspection body shall perform its activities taking into consideration the size, the sector and the structure of the undertakings involved, the relative complexity of the technology and the serial character of production.

1.8.6.2.2 Nevertheless the competent authority, its delegate or inspection body shall respect the degree of rigour and the level of protection required for the compliance of the transportable pressure equipment by the provisions of parts 4 and 6 as applicable.

1.8.6.2.3 Where a competent authority, its delegate or inspection body finds out that requirements laid down in parts 4 or 6 have not been met by the manufacturer, it shall require the manufacturer to take appropriate corrective measures and it shall not issue any type approval certificate or certificate of conformity.

1.8.6.3 Information obligation

Contracting Parties to ADR shall publish their national procedures for the assessment, appointment and monitoring of inspection bodies and of any changes to that information.

1.8.6.4 Delegation of inspection tasks

NOTE: *In-house inspection services according to 1.8.7.6 are not covered by 1.8.6.4.*

1.8.6.4.1 Where an inspection body uses the services of any other entity (e.g. subcontractor, subsidiary), to carry out specific tasks connected with the conformity assessment, periodic inspection, intermediate inspection or exceptional checks, this entity shall be included in the accreditation of the inspection body, or it shall be accredited separately. The inspection body shall ensure that this entity meets the requirements set out for the tasks given to it with the same level of competence and safety as laid down for inspection bodies (see 1.8.6.8) and the inspection body shall monitor it. The inspection body shall inform the competent authority about the above mentioned arrangements.

1.8.6.4.2 The inspection body shall take full responsibility for the tasks performed by such entities wherever the tasks are performed by them.

1.8.6.4.3 The inspection body shall not delegate the whole task of conformity assessment, periodic inspection, intermediate inspection or exceptional checks. In any case, the assessment and the issue of certificates shall be carried out by the inspection body itself.

1.8.6.4.4 Activities shall not be delegated without the agreement of the applicant.

1.8.6.4.5 The inspection body shall keep at the disposal of the competent authority the relevant documents concerning the assessment of the qualifications and the work carried out by the above mentioned entities.

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1.8.6.5 *Information obligations for inspection bodies*

Any inspection body shall inform the competent authority, which had approved it, of the following:

- (a) Except when the provisions of 1.8.7.2.4 apply, any refusal, restriction, suspension or withdrawal of type approval certificates;
- (b) Any circumstance(s) affecting the scope of and conditions for the approval as granted by the competent authority;
- (c) Any request for information on conformity assessment activities performed which they have received from competent authorities monitoring compliance according to 1.8.1 or 1.8.6.6;
- (d) On request, conformity assessment activities performed within the scope of their approval and any other activity performed, including delegation of tasks.

1.8.6.6 The competent authority shall ensure the monitoring of the inspection bodies and shall revoke or restrict the approval given, if it notes that an approved body is no longer in compliance with the approval and the requirements of 1.8.6.8 or does not follow the procedures specified in the provisions of ADR.

1.8.6.7 If the approval of the inspection body is revoked or restricted or if the inspection body ceased activity, the competent authority shall take the appropriate steps to ensure that the files are either processed by another inspection body or kept available.

1.8.6.8 The inspection body shall:

- (a) Have a staff with an organizational structure, capable, trained, competent and skilled, to satisfactorily perform its technical functions;
- (b) Have access to suitable and adequate facilities and equipment;
- (c) Operate in an impartial manner and be free from any influence which could prevent it from doing so;
- (d) Ensure commercial confidentiality of the commercial and proprietary activities of the manufacturer and other bodies;
- (e) Maintain clear demarcation between actual inspection body functions and unrelated functions;
- (f) Have a documented quality system;
- (g) Ensure that the tests and inspections specified in the relevant standard and in ADR are performed; and
- (h) Maintain an effective and appropriate report and record system in accordance with 1.8.7 and 1.8.8.

The inspection body shall additionally be accredited according to the standard EN ISO/IEC 17020:2004, as specified in 6.2.2.10, 6.2.3.6 and TA4 and TT9 of 6.8.4.

An inspection body starting a new activity may be approved temporarily. Before temporary designation, the competent authority shall ensure that the inspection body meets the

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requirements of the standard EN ISO/IEC 17020:2004. The inspection body shall be accredited in its first year of activity to be able to continue this new activity.

1.8.7 Procedures for conformity assessment and periodic inspection

NOTE: In this section, "relevant body" means a body assigned in 6.2.2.10 when certifying UN pressure receptacles, in 6.2.3.6 when approving non-UN pressure receptacles and in special provisions TA4 and TT9 of 6.8.4.

1.8.7.1 General provisions

1.8.7.1.1 The procedures in section 1.8.7 shall be applied according to 6.2.3.6 when approving non-UN pressure receptacles and according to TA4 and TT9 of 6.8.4 when approving tanks, battery-vehicles and MEGCs.

The procedures in section 1.8.7 may be applied according to the table in 6.2.2.10 when certifying UN pressure receptacles.

1.8.7.1.2 Each application for

- (a) The type approval in accordance with 1.8.7.2 or;
- (b) The supervision of manufacture in accordance with 1.8.7.3 and the initial inspection and test in accordance with 1.8.7.4; or
- (c) The periodic inspection, intermediate inspection and exceptional checks in accordance with 1.8.7.5

shall be lodged by the applicant with a single competent authority, its delegate or an approved inspection body of his choice.

1.8.7.1.3 The application shall include:

- (a) The name and address of the applicant;
- (b) For conformity assessment where the applicant is not the manufacturer, the name and address of the manufacturer;
- (c) A written declaration that the same application has not been lodged with any other competent authority, its delegate or inspection body;
- (d) The relevant technical documentation specified in 1.8.7.7;
- (e) A statement allowing the competent authority, its delegate or inspection body access for inspection purposes to the locations of manufacture, inspection, testing and storage and providing it with all necessary information.

1.8.7.1.4 Where the applicant can demonstrate to the satisfaction of the competent authority or its delegated inspection body conformity with 1.8.7.6 the applicant may establish an in-house inspection service which may perform part or all of the inspections and tests when specified in 6.2.2.10 or 6.2.3.6.

1.8.7.1.5 Design type approval certificates and certificates of conformity - including the technical documentation - shall be retained by the manufacturer or by the applicant for the type approval, if he is not the manufacturer, and by the inspection body, who issued the certificate, for a period of at least 20 years starting from the last date of production of products of the same type.

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1.8.7.1.6 When a manufacturer or owner intends to cease operation, he shall send the documentation to the competent authority. The competent authority shall then retain the documentation for the rest of the period specified in 1.8.7.1.5.

1.8.7.2 *Type approval*

Type approvals authorise the manufacture of pressure receptacles, tanks, battery-vehicles or MEGCs within the period of validity of that approval.

1.8.7.2.1 The applicant shall:

- (a) In the case of pressure receptacles, place at the disposal of the relevant body representative samples of the production envisaged. The relevant body may request further samples if required by the test programme;
- (b) In the case of tanks, battery-vehicles or MEGCs, give access to the prototype for type testing.

1.8.7.2.2 The relevant body shall:

- (a) Examine the technical documentation specified in 1.8.7.7.1 to verify that the design is in accordance with the relevant provisions of ADR, and the prototype or the prototype lot has been manufactured in conformity with the technical documentation and is representative of the design;
- (b) Perform the examinations and witness the tests specified in ADR, to determine that the provisions have been applied and fulfilled, and the procedures adopted by the manufacturer meet the requirements;
- (c) Check the certificate(s) issued by the materials manufacturer(s) against the relevant provisions of ADR;
- (d) As applicable, approve the procedures for the permanent joining of parts or check that they have been previously approved, and verify that the staff undertaking the permanent joining of parts and the non-destructive tests are qualified or approved;
- (e) Agree with the applicant the location and testing facilities where the examinations and necessary tests are to be carried out.

The relevant body shall issue a type-examination report to the applicant.

1.8.7.2.3 Where the type satisfies all applicable provisions, the competent authority, its delegate or the inspection body, shall issue a type approval certificate to the applicant.

This certificate shall contain:

- (a) The name and address of the issuer;
- (b) The name and address of the manufacturer and of the applicant when the applicant is not the manufacturer;
- (c) A reference to the version of ADR and standards used for the type examination;
- (d) Any requirements resulting from the examination;
- (e) The necessary data for identification of the type and variation, as defined by the relevant standard;

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- (f) The reference to the type examination report(s); and
- (g) The maximum period of validity of the type approval.

A list of the relevant parts of the technical documentation shall be annexed to the certificate (see 1.8.7.7.1).

- 1.8.7.2.4 The type approval shall be valid for a maximum of ten years. If within that period the relevant technical requirements of ADR (including referenced standards) have changed so that the approved type is no longer in conformity with them, the relevant body which issued the type approval shall withdraw it and inform the holder of the type approval.

NOTE: For the ultimate dates for withdrawal of existing type approvals, see column (5) of the tables in 6.2.4 and 6.8.2.6 or 6.8.3.6 as appropriate.

If a type approval has expired or has been withdrawn, the manufacture of the pressure receptacles, tanks, battery-vehicles or MEGCs according to that type approval is no longer authorised.

In such a case, the relevant provisions concerning the use, periodic inspection and intermediate inspection of pressure receptacles, tanks, battery-vehicles or MEGCs contained in the type approval which has expired or has been withdrawn shall continue to apply to these pressure receptacles, tanks, battery-vehicles or MEGCs constructed before the expiry or the withdrawal if they may continue to be used.

They may continue to be used as long as they remain in conformity with the requirements of ADR. If they are no longer in conformity with the requirements of ADR they may continue to be used only if such use is permitted by relevant transitional measures in Chapter 1.6.

Type approvals may be renewed by a complete review and assessment for conformity with the provisions of ADR applicable at the date of renewal. Renewal is not permitted after a type approval has been withdrawn. Interim amendments of an existing type approval (e.g. for pressure receptacles minor amendments such as the addition of further sizes or volumes not affecting conformity, or for tanks see 6.8.2.3.2) do not extend or modify the original validity of the certificate.

NOTE: The review and assessment of conformity can be done by a body other than the one which issued the original type approval.

The issuing body shall keep all documents for the type approval (see 1.8.7.7.1) for the whole period of validity including its renewals if granted.

- 1.8.7.2.5 In the case of a modification of a pressure receptacle, tank, battery-vehicle or MEGC with a valid, expired or withdrawn type approval, the testing, inspection and approval are limited to the parts of the pressure receptacle, tank, battery-vehicle or MEGC that have been modified. The modification shall meet the provisions of ADR applicable at the time of the modification. For all parts of the pressure receptacle, tank, battery-vehicle or MEGC not affected by the modification, the documentation of the initial type approval remains valid.

A modification may apply to one or more pressure receptacles, tanks, battery-vehicles or MEGCs covered by a type approval.

A certificate approving the modification shall be issued to the applicant by the competent authority of any Contracting Party to ADR or by a body designated by this authority. For tanks, battery-vehicles or MEGCs, a copy shall be kept as part of the tank record.

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Each application for an approval certificate for a modification shall be lodged by the applicant with a single competent authority or body designated by this authority.

1.8.7.3 *Supervision of manufacture*

1.8.7.3.1 The manufacturing process shall be subject to a survey by the relevant body to ensure the product is produced in conformity with the provisions of the type approval.

1.8.7.3.2 The applicant shall take all the necessary measures to ensure that the manufacturing process complies with the applicable provisions of ADR and of the type approval certificate and its annexes.

1.8.7.3.3 The relevant body shall:

- (a) Verify the conformity with the technical documentation specified in 1.8.7.7.2;
- (b) Verify that the manufacturing process produces products in conformity with the requirements and the documentation which apply to it;
- (c) Verify the traceability of materials and check the material certificate(s) against the specifications;
- (d) As applicable, verify that the personnel undertaking the permanent joining of parts and the non-destructive tests are qualified or approved;
- (e) Agree with the applicant on the location where the examinations and necessary tests are to be carried out; and
- (f) Record the results of its survey.

1.8.7.4 *Initial inspection and tests*

1.8.7.4.1 The applicant shall:

- (a) Affix the marks specified in ADR; and
- (b) Supply to the relevant body the technical documentation specified in 1.8.7.7.

1.8.7.4.2 The relevant body shall:

- (a) Perform the necessary examinations and tests in order to verify that the product is manufactured in accordance with the type approval and the relevant provisions;
- (b) Check the certificates supplied by the manufacturers of service equipment against the service equipment;
- (c) Issue an initial inspection and test report to the applicant relating to the detailed tests and verifications carried out and the verified technical documentation;
- (d) Draw up a written certificate of conformity of the manufacture and affix its registered mark when the manufacture satisfies the provisions; and
- (e) Check if the type approval remains valid after provisions of ADR (including referenced standards) relevant to the type approval have changed.

The certificate in (d) and report in (c) may cover a number of items of the same type (group certificate or report).

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- 1.8.7.4.3 The certificate shall contain as a minimum:
- (a) The name and address of the relevant body;
 - (b) The name and address of the manufacturer and the name and address of the applicant, if not the manufacturer;
 - (c) A reference to the version of the ADR and standards used for the initial inspections and tests;
 - (d) The results of the inspections and tests;
 - (e) The data for identification of the inspected product(s), at least the serial number or for non refillable cylinders the batch number; and
 - (f) The type approval number.

1.8.7.5 *Periodic inspection, intermediate inspection and exceptional checks*

- 1.8.7.5.1 The relevant body shall:
- (a) Perform the identification and verify the conformity with the documentation;
 - (b) Carry out the inspections and witness the tests in order to check that the requirements are met;
 - (c) Issue reports of the results of the inspections and tests, which may cover a number of items; and
 - (d) Ensure that the required marks are applied.
- 1.8.7.5.2 Reports of periodic inspections and tests of pressure receptacles shall be retained by the applicant at least until the next periodic inspection.

NOTE: For tanks, see provisions for tank records in 4.3.2.1.7.

1.8.7.6 *Surveillance of the applicant's in-house inspection service*

- 1.8.7.6.1 The applicant shall:
- (a) Implement an in-house inspection service with a quality system for inspections and tests documented in 1.8.7.7.5 and subject to surveillance;
 - (b) Fulfil the obligations arising out of the quality system as approved and to ensure that it remains satisfactory and efficient;
 - (c) Appoint trained and competent personnel for the in-house inspection service; and
 - (d) Affix the registered mark of the inspection body where appropriate.
- 1.8.7.6.2 The inspection body shall carry out an initial audit. If satisfactory the inspection body shall issue an authorisation for a period not exceeding three years. The following provisions shall be met:
- (a) This audit shall confirm that the inspections and tests performed on the product are in compliance with the requirements of ADR;

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- (b) The inspection body may authorise the in-house inspection service of the applicant to affix the registered mark of the inspection body to each approved product;
- (c) The authorisation may be renewed after a satisfactory audit in the last year prior to the expiry. The new period of validity shall begin with the date of expiry of the authorisation; and
- (d) The auditors of the inspection body shall be competent to carry out the assessment of conformity of the product covered by the quality system.

1.8.7.6.3 The inspection body shall carry out periodic audits within the duration of the authorisation to make sure that the applicant maintains and applies the quality system. The following provisions shall be met:

- (a) A minimum of two audits shall be carried out in a 12 month period;
- (b) The inspection body may require additional visits, training, technical changes, modifications of the quality system, restrict or prohibit the inspections and tests to be done by the applicant;
- (c) The inspection body shall assess any changes in the quality system and decide whether the modified quality system will still satisfy the requirements of the initial audit or whether a full reassessment is required;
- (d) The auditors of the inspection body shall be competent to carry out the assessment of conformity of the product covered by the quality system; and
- (e) The inspection body shall provide the applicant with a visit or audit report and, if a test has taken place, with a test report.

1.8.7.6.4 In cases of non conformity with the relevant requirements the inspection body shall ensure that corrective measures are taken. If corrective measures are not taken in due time, the inspection body shall suspend or withdraw the permission for the in-house inspection service to carry out its activities. The notice of suspension or withdrawal shall be transmitted to the competent authority. A report shall be provided to the applicant giving detailed reasons for the decisions taken by the inspection body.

1.8.7.7 Documents

The technical documentation shall enable an assessment to be made of conformity with the relevant requirements.

1.8.7.7.1 Documents for type approval

The applicant shall provide as appropriate:

- (a) The list of standards used for the design and manufacture;
- (b) A description of the type including all variations;
- (c) The instructions according to the relevant column of table A of Chapter 3.2 or a list of dangerous goods to be transported for dedicated products;
- (d) A general assembly drawing or drawings;

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- (e) The detailed drawings, including the dimensions used for the calculations, of the product, the service equipment, the structural equipment, the marking and/or the labelling necessary to verify the conformity;
- (f) The calculation notes, results and conclusions;
- (g) The list of the service equipment with the relevant technical data and information on the safety devices including the calculation of the relief capacity if relevant;
- (h) The list of material requested in the standard for manufacture used for every part, sub-part, lining, service and structural equipment and the corresponding material specifications or the corresponding declaration of conformity to ADR;
- (i) The approved qualification of permanent joining process;
- (j) The description of the heat treatment process(es); and
- (k) The procedures, descriptions and records of all relevant tests listed in the standards or ADR for the type approval and for the manufacture.

1.8.7.7.2 *Documents for the supervision of manufacture*

The applicant shall make available as appropriate:

- (a) The documents listed in 1.8.7.7.1;
- (b) A copy of the type approval certificate;
- (c) The manufacturing procedures including test procedures;
- (d) The manufacturing records;
- (e) The approved qualifications of permanent joining operators;
- (f) The approved qualifications of the non destructive test operators;
- (g) The reports of the destructive and non destructive tests;
- (h) The heat treatment records; and
- (i) The calibration records.

1.8.7.7.3 *Documents for initial inspection and tests*

The applicant shall make available as appropriate:

- (a) The documents listed in 1.8.7.7.1 and 1.8.7.7.2;
- (b) The material certificates of the product and any sub-parts;
- (c) The declarations of conformity and material certificates of the service equipment; and
- (d) A declaration of conformity including the description of the product and all the variations adopted from the type approval.

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1.8.7.7.4 *Documents for periodic inspections, intermediate inspections and exceptional checks*

The applicant shall make available as appropriate:

- (a) For pressure receptacles, the documents specifying special requirements when the manufacturing and periodic inspections and tests standards so require;
- (b) For tanks:
 - (i) the tank record; and
 - (ii) one or more of the documents mentioned in 1.8.7.7.1 to 1.8.7.7.3.

1.8.7.7.5 *Documents for the assessment of in-house inspection service*

The applicant for in-house inspection service shall make available the quality system documentation as appropriate:

- (a) The organizational structure and responsibilities;
- (b) The relevant inspection and test, quality control, quality assurance and process operation instructions, and systematic actions that will be used;
- (c) The quality records, such as inspection reports, test data, calibration data and certificates;
- (d) The management reviews to ensure the effective operation of the quality system arising from the audits in accordance with 1.8.7.6;
- (e) The process describing how customer and regulation requirements are met;
- (f) The process for control of documents and their revision;
- (g) The procedures for dealing with non-conforming products; and
- (h) The training programmes and qualification procedures for relevant personnel.

1.8.7.8 *Products manufactured, approved, inspected and tested according to standards*

The requirements of 1.8.7.7 are considered to have been complied with if the following standards, as relevant, are applied:

Applicable subsection and paragraph	References	Title of the document
1.8.7.7.1 to 1.8.7.7.4	EN 12972:2007	Tanks for transport of dangerous goods - Testing, inspection and marking of metallic tanks

1.8.8 **Procedures for conformity assessment of gas cartridges**

When assessing the conformity of gas cartridges, one of the following procedures shall be applied:

- (a) The procedure in section 1.8.7 for non-UN pressure receptacles, with the exception of 1.8.7.5; or
- (b) The procedure in sub-sections 1.8.8.1 to 1.8.8.7.

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1.8.8.1 *General provisions*

- 1.8.8.1.1 The supervision of manufacture shall be carried out by an Xa body and the tests as required in 6.2.6 shall be carried out either by that Xa body or by an IS-body approved by that Xa body; for definition of Xa and IS bodies see definitions in 6.2.3.6.1. Conformity assessment shall be carried out by the competent authority, its delegate or its approved inspection body of a Contracting Party to ADR.
- 1.8.8.1.2 By the application of 1.8.8, the applicant shall demonstrate, ensure and declare on his sole responsibility the conformity of gas cartridges with the provisions of 6.2.6 and all further applicable provisions of ADR.
- 1.8.8.1.3 The applicant shall
- (a) Carry out a design type examination of each type of gas cartridges (including materials to be used and variations of that type, e.g. volumes, pressures, drawings and closing and release devices) according to 1.8.8.2;
 - (b) Operate an approved quality system for design, manufacture, inspection and testing according to 1.8.8.3;
 - (c) Operate an approved testing regime according to 1.8.8.4 for the tests required in 6.2.6;
 - (d) Apply for the approval of his quality system for supervision of manufacture and for testing to one Xa body of his choice of the Contracting Party; if the applicant is not established in a Contracting Party he shall apply to one Xa body of a Contracting Party prior to first transport into a Contracting Party;
 - (e) If the gas cartridge is finally assembled from parts manufactured by the applicant by one or more other enterprise(s), provide written instructions how to assemble and fill the gas cartridges to meet the provisions of his type examination certificate.
- 1.8.8.1.4 Where the applicant and enterprises assembling or filling gas cartridges according to the instructions of the applicant, can demonstrate to the satisfaction of the Xa body conformity with the provisions of 1.8.7.6 excluding 1.8.7.6.1 (d) and 1.8.7.6.2 (b), they may establish an in-house inspection service which may perform part or all of the inspections and tests specified in 6.2.6.

1.8.8.2 *Design type examination*

- 1.8.8.2.1 The applicant shall establish a technical documentation for each type of gas cartridges including the technical standard(s) applied. If he chooses to apply a standard not referenced in 6.2.6, he shall add the standard applied to the documentation.
- 1.8.8.2.2 The applicant shall retain the technical documentation together with samples of that type at the disposal of the Xa body during production and afterwards for a period of minimum five years starting from the last date of production of gas cartridges according to that type examination certificate.
- 1.8.8.2.3 The applicant shall after careful examination issue a design type certificate which shall be valid for a maximum period of ten years; he shall add this certificate to the documentation. This certificate authorises him to produce gas cartridges of that type for that period.
- 1.8.8.2.4 If within that period the relevant technical requirements of ADR (including referenced standards) have changed so that the design type is no longer in conformity with them, the applicant shall withdraw his type examination certificate and inform the Xa body.

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1.8.8.2.5 The applicant may after careful and complete review reissue the certificate for another period of maximum ten years.

1.8.8.3 *Supervision of manufacture*

1.8.8.3.1 The procedure of design type examination as well as the manufacturing process shall be subject to a survey by the Xa body to ensure the type certified by the applicant and the product as produced are in conformity with the provisions of the design type certificate and the applicable provisions of ADR. If 1.8.8.1.3 (e) applies, the assembling and filling enterprises shall be included in that procedure.

1.8.8.3.2 The applicant shall take all the necessary measures to ensure that the manufacturing process complies with the applicable provisions of ADR and of his design type certificate and its annexes. If 1.8.8.1.3 (e) applies, the assembling and filling enterprises shall be included in that procedure.

1.8.8.3.3 The Xa body shall:

- (a) Verify the conformity of the design type examination of the applicant and conformity of the type of gas cartridges with the technical documentation specified in 1.8.8.2;
- (b) Verify that the manufacturing process produces products in conformity with the requirements and the documentation which apply to it; if the gas cartridge is finally assembled from parts manufactured by the applicant by one or more enterprise(s), the Xa body shall also verify that the gas cartridges are in full conformity with all applicable provisions after final assembly and filling and that the instructions of the applicant are correctly applied;
- (c) Verify that the personnel undertaking the permanent joining of parts and the tests are qualified or approved;
- (d) Record the results of its surveys.

1.8.8.3.4 If the findings of the Xa body show non-conformity of the design type certificate of the applicant or the manufacturing process, he shall require appropriate corrective measures or withdrawal of the certificate from the applicant.

1.8.8.4 *Leakproofness test*

1.8.8.4.1 The applicant and enterprises finally assembling and filling gas cartridges according to the instructions of the applicant shall:

- (a) Carry out the tests required in 6.2.6;
- (b) Record the test results;
- (c) Issue a certificate of conformity only for gas cartridges, which are in full compliance with the provisions of his design type examination and the applicable provisions of ADR and have successfully passed the tests as required in 6.2.6;
- (d) Retain the documentation as specified in 1.8.8.7 during production and afterwards for a period of minimum five years from the last date of production of gas cartridges belonging to one type approval for inspection by the Xa body at random intervals;
- (e) Affix a durable and legible mark identifying the type of gas cartridge, the applicant and the date of production or batch number; where due to limited available space the mark cannot be fully applied to the body of the gas cartridge, he shall affix a durable

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tag with this information to the gas cartridge or place it together with a gas cartridge in an inner packaging.

1.8.8.4.2 The Xa body shall:

- (a) Perform the necessary examinations and tests at random intervals, but at least shortly after starting of manufacture of a type of gas cartridges and thereafter at least once every three years, in order to verify that the procedure for design type examination of the applicant as well as that the manufacture and testing of the product are carried out in accordance with the design type certificate and the relevant provisions;
- (b) Check the certificates supplied by the applicant;
- (c) Carry out the tests as required in 6.2.6 or approve the program of testing and the in-house inspection service to carry out the tests.

1.8.8.4.3 The certificate shall contain as a minimum:

- (a) The name and address of the applicant and, when the final assembly is not carried out by the applicant but by an enterprise or enterprises in accordance with the written instructions of the applicant, the name(s) and address(es) of these enterprises;
- (b) A reference to the version of ADR and the standard(s) used for manufacture and tests;
- (c) The result of inspections and tests;
- (d) The data for the marking as required in 1.8.8.4.1 (e).

1.8.8.5 *(Reserved)*

1.8.8.6 *Surveillance of the in-house inspection service*

When the applicant or enterprise assembling or filling gas cartridges has established an in-house inspection service, the provisions of 1.8.7.6 excluding 1.8.7.6.1 (d) and 1.8.7.6.2 (b) shall be applied. The enterprise assembling or filling gas cartridges shall comply with the provisions relevant to the applicant.

1.8.8.7 *Documents*

The provisions of 1.8.7.7.1, 1.8.7.7.2, 1.8.7.7.3 and 1.8.7.7.5 shall be applied.

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CHAPTER 1.9

TRANSPORT RESTRICTIONS BY THE COMPETENT AUTHORITIES

- 1.9.1 In accordance with Article 4, paragraph 1 of ADR, the entry of dangerous goods into the territory of Contracting Parties may be subject to regulations or prohibitions imposed for reasons other than safety during carriage. Such regulations or prohibitions shall be published in an appropriate form.
- 1.9.2 Subject to the provisions of 1.9.3, a Contracting Party may apply to vehicles engaged in the international carriage of dangerous goods by road on its territory certain additional provisions not included in ADR, provided that those provisions do not conflict with Article 2, paragraph 2 of the Agreement, and are contained in its domestic legislation applying equally to vehicles engaged in the domestic carriage of dangerous goods by road on the territory of that Contracting Party.
- 1.9.3 Additional provisions falling within the scope of 1.9.2 are as follows:
- (a) Additional safety requirements or restrictions concerning vehicles using certain structures such as bridges, vehicles using combined transport modes such as ferries or trains, or vehicles entering or leaving ports or other transport terminals;
 - (b) Requirements for vehicles to follow prescribed routes to avoid commercial or residential areas, environmentally sensitive areas, industrial zones containing hazardous installations or roads presenting severe physical hazards;
 - (c) Emergency requirements regarding routeing or parking of vehicles carrying dangerous goods resulting from extreme weather conditions, earthquake, accident, industrial action, civil disorder or military hostilities;
 - (d) Restrictions on movement of dangerous goods traffic on certain days of the week or year.
- 1.9.4 The competent authority of the Contracting Party applying on its territory any additional provisions within the scope of 1.9.3 (a) and (d) above shall notify the secretariat of the United Nations Economic Commission for Europe of the additional provisions, which secretariat shall bring them to the attention of the Contracting Parties¹.

1.9.5 Tunnel restrictions

NOTE: Provisions concerning restrictions for the passage of vehicles through road tunnels are also included in Chapter 8.6.

1.9.5.1 General provisions

When applying restrictions to the passage of vehicles carrying dangerous goods through tunnels, the competent authority shall assign the road tunnel to one of the tunnel categories defined in 1.9.5.2.2. Account should be taken of the tunnel characteristics, risk assessment including availability and suitability of alternative routes and modes and traffic management considerations. The same tunnel may be assigned to more than one tunnel category, e.g. depending on the hours of the day, or the day of the week etc.

¹ A General Guideline for the Calculation of Risks in the Transport of Dangerous Goods by Road may be consulted on the website of the secretariat of the United Nations Economic Commission for Europe (<http://www.unece.org/trans/danger/danger.htm>).

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1.9.5.2 *Categorization*

1.9.5.2.1 The categorization shall be based on the assumption that in tunnels there are three major dangers which may cause numerous victims or serious damage to the tunnel structure:

- (a) Explosions;
- (b) Release of toxic gas or volatile toxic liquid;
- (c) Fires.

1.9.5.2.2 The five tunnel categories are the following:

Tunnel category A:

No restrictions for the transport of dangerous goods;

Tunnel category B:

Restriction for dangerous goods which may lead to a very large explosion;

The following dangerous goods are considered to fulfil this criterion²:

Class 1:	Compatibility groups A and L;
Class 3:	Classification code D (UN Nos. 1204, 2059, 3064, 3343, 3357 and 3379);
Class 4.1:	Classification codes D and DT; and Self-reactive substances, type B (UN Nos. 3221, 3222, 3231 and 3232);
Class 5.2:	Organic peroxides, type B (UN Nos. 3101, 3102, 3111 and 3112).
When the total net explosive mass per transport unit is greater than 1000 kg:	
Class 1:	Divisions 1.1, 1.2 and 1.5 (except compatibility groups A and L).
When carried in tanks:	
Class 2:	Classification codes F, TF and TFC;
Class 4.2:	Packing group I;
Class 4.3:	Packing group I;
Class 5.1:	Packing group I.
Class 6.1:	UN No. 1510

Tunnel category C:

Restriction for dangerous goods which may lead to a very large explosion, a large explosion or a large toxic release;

The following dangerous goods are considered to fulfil this criterion²:

- the dangerous goods restricted in tunnel category B, and
- the following dangerous goods:

² The assessment is based on the intrinsic dangerous properties of the goods, the type of containment and the quantity carried.

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Class 1:	Divisions 1.1, 1.2 and 1.5 (except compatibility groups A and L); and Division 1.3 (compatibility groups H and J);
Class 7:	UN Nos. 2977 and 2978.
When the net explosive mass per transport unit is greater than 5000 kg:	
Class 1:	Division 1.3 (compatibility groups C and G).
When carried in tanks:	
Class 2:	Classification codes 2A, 2O, 3A and 3O, and classification codes containing the letter T only or letter groups TC, TO and TOC
Class 3:	Packing group I for classification codes FC, FT1, FT2 and FTC;
Class 6.1:	Packing group I, except UN No. 1510
Class 8:	Packing group I for classification codes CT1, CFT and COT.

Tunnel category D:

Restriction for dangerous goods which may lead to a very large explosion, to a large explosion, to a large toxic release or to a large fire;

The following dangerous goods are considered to fulfil this criterion²:

- the dangerous goods restricted in tunnel category C, and
- the following dangerous goods:

Class 1:	Division 1.3 (compatibility groups C and G);
Class 2:	Classification codes F, FC, T, TF, TC, TO, TFC and TOC;
Class 4.1:	Self-reactive substances, types C, D, E and F; and UN Nos. 2956, 3241, 3242 and 3251;
Class 5.2:	Organic peroxides, types C, D, E and F;
Class 6.1:	Packing group I for classification codes TF1, TFC and TFW; and Toxic by inhalation entries for which special provision 354 is assigned in column (6) of Table A of Chapter 3.2 and toxic by inhalation entries of UN Nos. 3381 to 3390;
Class 8:	Packing group I for classification codes CT1, CFT and COT;
Class 9:	Classification codes M9 and M10.
When carried in bulk or in tanks:	
Class 3	
Class 4.2:	Packing group II;
Class 4.3:	Packing group II;
Class 6.1:	Packing group II; and Packing group III for classification code TF2;
Class 8:	Packing group I for classification codes CF1, CFT and CW1; and Packing group II for classification codes CF1 and CFT
Class 9:	Classification codes M2 and M3.

² The assessment is based on the intrinsic dangerous properties of the goods, the type of containment and the quantity carried.

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Tunnel category E:

Restriction for all dangerous goods other than UN Nos. 2919, 3291, 3331, 3359 and 3373 and for all dangerous goods in accordance with the provisions of Chapter 3.4 if the quantities carried exceed 8 tonnes total gross mass per transport unit.

NOTE: For the dangerous goods assigned to UN Nos. 2919 and 3331, restrictions to the passage through tunnels may, however, be part of the special arrangement approved by the competent authority(ies) on the basis of 1.7.4.2.

1.9.5.3 Provisions for road signs and notification of restrictions

1.9.5.3.1 Contracting Parties shall indicate tunnel prohibitions and alternative routes by means of signs and signals.

1.9.5.3.2 For this purpose, they may use signs C, 3h and D, 10a, 10b and 10c and signals according to the Vienna Convention on Road Signs and Signals (Vienna, 1968) and the European Agreement supplementing the Convention on Road Signs and Signals (Geneva, 1971) as interpreted by the Resolution on Road Signs and Signals (R.E.2) of the UNECE Inland Transport Committee Principal Working Party on Road Transport, as amended.

1.9.5.3.3 In order to facilitate international understanding of signs, the system of signs and signals prescribed in the Vienna Convention is based on the use of shapes, and colours characteristic of each class of signs and wherever possible, on the use of graphic symbols rather than inscriptions. Where Contracting Parties consider it necessary to modify the signs and symbols prescribed, the modifications made shall not alter their essential characteristics. Where Contracting Parties do not apply the Vienna Convention, the prescribed signs and symbols may be modified, provided that the modifications made shall not alter their essential intent.

1.9.5.3.4 Traffic signs and signals intended to prohibit access of vehicles carrying dangerous goods to road tunnels shall be affixed at a place where the choice of alternative routes is possible.

1.9.5.3.5 When access to tunnels is restricted or alternative routes are prescribed, the signs shall be displayed with additional panels as follows:

No sign: no restriction

Sign with additional panel bearing the letter B: applies to vehicles carrying dangerous goods not allowed in tunnels of category B;

Sign with additional panel bearing the letter C: applies to vehicles carrying dangerous goods not allowed in tunnels of category C;

Sign with additional panel bearing the letter D: applies to vehicles carrying dangerous goods not allowed in tunnels of category D;

Sign with additional panel bearing the letter E: applies to vehicles carrying dangerous goods not allowed in tunnels of category E.

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1.9.5.3.6 Tunnel restrictions shall apply to transport units for which an orange-coloured plate marking in accordance with 5.3.2 is required and, for tunnels of category E, they shall apply also to transport units for which a marking in accordance with 3.4.13 is required or carrying containers for which a marking in accordance with 3.4.13 is required.

Tunnel restrictions shall not apply when dangerous goods are carried in accordance with 1.1.3, except when vehicles carrying such goods are marked in accordance with 3.4.13 subject to 3.4.14³.

1.9.5.3.7 Restrictions shall be published officially and made publicly available. Contracting Parties shall notify the secretariat of UNECE of such restrictions and the secretariat shall make this information publicly available on its website.

1.9.5.3.8 When Contracting Parties apply specific operating measures designed to reduce the risks and related to some or all vehicles using tunnels, such as declaration before entering or passage in convoys escorted by accompanying vehicles, such operating measures shall be published officially and made publicly available.

³ or in accordance with 3.4.10 subject to 3.4.11 of ADR as applicable until 31 December 2010 if the transitional measures of 1.6.1.20 are applied.

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CHAPTER 1.10

SECURITY PROVISIONS

NOTE: *For the purposes of this Chapter, security means measures or precautions to be taken to minimise theft or misuse of dangerous goods that may endanger persons, property or the environment.*

1.10.1 General provisions

- 1.10.1.1 All persons engaged in the carriage of dangerous goods shall consider the security requirements set out in this Chapter commensurate with their responsibilities.
- 1.10.1.2 Dangerous goods shall only be offered for carriage to carriers that have been appropriately identified.
- 1.10.1.3 Areas within temporary storage terminals, temporary storage sites, vehicle depots, berthing areas and marshalling yards used for the temporary storage during carriage of dangerous goods shall be properly secured, well lit and, where possible and appropriate, not accessible to the general public.
- 1.10.1.4 Each member of a vehicle crew shall carry with them means of identification, which includes their photograph, during carriage of dangerous goods.
- 1.10.1.5 Safety inspections in accordance with 1.8.1 and 7.5.1.1 shall cover appropriate security measures.
- 1.10.1.6 The competent authority shall maintain up-to-date registers of all valid training certificates for drivers stipulated in 8.2.1 issued by it or by any recognized organization.

1.10.2 Security training

- 1.10.2.1 The training and the refresher training specified in Chapter 1.3 shall also include elements of security awareness. The security refresher training need not be linked to regulatory changes only.
- 1.10.2.2 Security awareness training shall address the nature of security risks, recognising security risks, methods to address and reduce such risks and actions to be taken in the event of a security breach. It shall include awareness of security plans (if appropriate) commensurate with the responsibilities and duties of individuals and their part in implementing security plans.
- 1.10.2.3 Such training shall be provided or verified upon employment in a position involving dangerous goods transport and shall be periodically supplemented with refresher training.
- 1.10.2.4 Records of all security training received shall be kept by the employer and made available to the employee or competent authority, upon request. Records shall be kept by the employer for a period of time established by the competent authority.

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1.10.3 Provisions for high consequence dangerous goods**1.10.3.1 Definition of high consequence dangerous goods**

1.10.3.1.1 High consequence dangerous goods are those which have the potential for misuse in a terrorist event and which may, as a result, produce serious consequences such as mass casualties, mass destruction or, particularly for Class 7, mass socio-economic disruption.

1.10.3.1.2 High consequence dangerous goods in classes other than Class 7 are those listed in Table 1.10.3.1.2 below and carried in quantities greater than those indicated therein.

Table 1.10.3.1.2: List of high consequence dangerous goods

Class	Division	Substance or article	Quantity		
			Tank (l) ^c	Bulk (kg) ^d	Packages (kg)
1	1.1	Explosives	a	a	0
	1.2	Explosives	a	a	0
	1.3	Compatibility group C explosives	a	a	0
	1.4	Explosives of UN Nos. 0104, 0237, 0255, 0267, 0289, 0361, 0365, 0366, 0440, 0441, 0455, 0456 and 0500	a	a	0
	1.5	Explosives	0	a	0
2		Flammable gases (classification codes including only the letter F)	3000	a	b
		Toxic gases (classification codes including letters T, TF, TC, TO, TFC or TOC) excluding aerosols	0	a	0
3		Flammable liquids of packing groups I and II	3000	a	b
		Desensitized explosives	0	a	0
4.1		Desensitized explosives	a	a	0
4.2		Packing group I substances	3000	a	b
4.3		Packing group I substances	3000	a	b
5.1		Oxidizing liquids of packing group I	3000	a	b
		Perchlorates, ammonium nitrate, ammonium nitrate fertilisers and ammonium nitrate emulsions or suspensions or gels	3000	3000	b
6.1		Toxic substances of packing group I	0	a	0
6.2		Infectious substances of Category A (UN Nos. 2814 and 2900, except for animal material)	a	0	0
8		Corrosive substances of packing group I	3000	a	b

^a Not relevant.

^b The provisions of 1.10.3 do not apply, whatever the quantity is.

^c A value indicated in this column is applicable only if carriage in tanks is authorized, in accordance with Chapter 3.2, Table A, column (10) or (12). For substances that are not authorized for carriage in tanks, the instruction in this column is not relevant.

^d A value indicated in this column is applicable only if carriage in bulk is authorized, in accordance with Chapter 3.2, Table A, column (10) or (17). For substances that are not authorized for carriage in bulk, the instruction in this column is not relevant.

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- 1.10.3.1.3 For dangerous goods of Class 7, high consequence radioactive material is that with an activity equal to or greater than a transport security threshold of 3 000 A₂ per single package (see also 2.2.7.2.2.1) except for the following radionuclides where the transport security threshold is given in Table 1.10.3.1.3 below.

Table 1.10.3.1.3: Transport security thresholds for specific radionuclides

Element	Radionuclide	Transport security threshold (TBq)
Americium	Am-241	0.6
Gold	Au-198	2
Cadmium	Cd-109	200
Californium	Cf-252	0.2
Curium	Cm-244	0.5
Cobalt	Co-57	7
Cobalt	Co-60	0.3
Caesium	Cs-137	1
Iron	Fe-55	8000
Germanium	Ge-68	7
Gadolinium	Gd-153	10
Iridium	Ir-192	0.8
Nickel	Ni-63	600
Palladium	Pd-103	900
Promethium	Pm-147	400
Polonium	Po-210	0.6
Plutonium	Pu-238	0.6
Plutonium	Pu-239	0.6
Radium	Ra-226	0.4
Ruthenium	Ru-106	3
Selenium	Se-75	2
Strontium	Sr-90	10
Thallium	Tl-204	200
Thulium	Tm-170	200
Ytterbium	Yb-169	3

- 1.10.3.1.4 For mixtures of radionuclides, determination of whether or not the transport security threshold has been met or exceeded can be calculated by summing the ratios of activity present for each radionuclide divided by the transport security threshold for that radionuclide. If the sum of the fractions is less than 1, then the radioactivity threshold for the mixture has not been met nor exceeded.

This calculation can be made with the formula:

$$\sum_i \frac{A_i}{T_i} < 1$$

Where:

A_i = activity of radionuclide i that is present in a package (TBq)

T_i = transport security threshold for radionuclide i (TBq).

- 1.10.3.1.5 When radioactive material possesses subsidiary risks of other classes, the criteria of table 1.10.3.1.2 shall also be taken into account (see also 1.7.5).

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1.10.3.2 *Security plans*

1.10.3.2.1 Carriers, consignors and other participants specified in 1.4.2 and 1.4.3 engaged in the carriage of high consequence dangerous goods (see Table 1.10.3.1.2) or high consequence radioactive material (see 1.10.3.1.3) shall adopt, implement and comply with a security plan that addresses at least the elements specified in 1.10.3.2.2.

1.10.3.2.2 The security plan shall comprise at least the following elements:

- (a) Specific allocation of responsibilities for security to competent and qualified persons with appropriate authority to carry out their responsibilities;
- (b) Records of dangerous goods or types of dangerous goods concerned;
- (c) Review of current operations and assessment of security risks, including any stops necessary to the transport operation, the keeping of dangerous goods in the vehicle, tank or container before, during and after the journey and the intermediate temporary storage of dangerous goods during the course of intermodal transfer or transshipment between units as appropriate;
- (d) Clear statement of measures that are to be taken to reduce security risks, commensurate with the responsibilities and duties of the participant, including:
 - training;
 - security policies (e.g. response to higher threat conditions, new employee/employment verification, etc.);
 - operating practices (e.g. choice/use of routes where known, access to dangerous goods in intermediate temporary storage (as defined in (c)), proximity to vulnerable infrastructure etc.);
 - equipment and resources that are to be used to reduce security risks;
- (e) Effective and up to date procedures for reporting and dealing with security threats, breaches of security or security incidents;
- (f) Procedures for the evaluation and testing of security plans and procedures for periodic review and update of the plans;
- (g) Measures to ensure the physical security of transport information contained in the security plan; and
- (h) Measures to ensure that the distribution of information relating to the transport operation contained in the security plan is limited to those who need to have it. Such measures shall not preclude the provision of information required elsewhere in ADR.

NOTE: Carriers, consignors and consignees should co-operate with each other and with competent authorities to exchange threat information, apply appropriate security measures and respond to security incidents.

1.10.3.3 Devices, equipment or arrangements to prevent the theft of the vehicle carrying high consequence dangerous goods (see Table 1.10.3.1.2) or high consequence radioactive material (see 1.10.3.1.3) and its cargo, shall be applied and measures taken to ensure that these are operational and effective at all times. The application of these protective measures shall not jeopardize emergency response.

NOTE: When appropriate and already fitted, the use of transport telemetry or other tracking methods or devices should be used to monitor the movement of high consequence dangerous goods (see Table 1.10.3.1.2) or high consequence radioactive material (see 1.10.3.1.3).

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- 1.10.4 In accordance with the provisions of 1.1.3.6, the requirements of 1.10.1, 1.10.2, 1.10.3 and 8.1.2.1 (d) do not apply when the quantities carried in packages on a transport unit do not exceed those referred to in 1.1.3.6.3, except for UN Nos. 0029, 0030, 0059, 0065, 0073, 0104, 0237, 0255, 0267, 0288, 0289, 0290, 0360, 0361, 0364, 0365, 0366, 0439, 0440, 0441, 0455, 0456 and 0500 and except for UN Nos. 2910 and 2911 if the activity level exceeds the A_2 value (see first indent of 1.1.3.6.2). In addition, the requirements of 1.10.1, 1.10.2, 1.10.3 and 8.1.2.1 (d) do not apply when the quantities carried in tanks or in bulk on a transport unit do not exceed those referred to in 1.1.3.6.3. In addition the provisions of this Chapter do not apply to the carriage of UN No. 2912 RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I) and UN No. 2913 RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I).
- 1.10.5 For radioactive material, the provisions of this Chapter are deemed to be complied with when the provisions of the Convention on Physical Protection of Nuclear Material¹ and the IAEA circular on "The Physical Protection of Nuclear Material and Nuclear Facilities"² are applied.

¹ *INFCIRC/274/Rev.1, IAEA, Vienna (1980).*

² *INFCIRC/225/Rev.4 (Corrected), IAEA, Vienna (1999).*

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PART 2

Classification

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CHAPTER 2.1

GENERAL PROVISIONS

2.1.1 Introduction

2.1.1.1 The classes of dangerous goods according to ADR are the following:

Class 1	Explosive substances and articles
Class 2	Gases
Class 3	Flammable liquids
Class 4.1	Flammable solids, self-reactive substances and solid desensitized explosives
Class 4.2	Substances liable to spontaneous combustion
Class 4.3	Substances which, in contact with water, emit flammable gases
Class 5.1	Oxidizing substances
Class 5.2	Organic peroxides
Class 6.1	Toxic substances
Class 6.2	Infectious substances
Class 7	Radioactive material
Class 8	Corrosive substances
Class 9	Miscellaneous dangerous substances and articles

2.1.1.2 Each entry in the different classes has been assigned a UN number. The following types of entries are used:

A. Single entries for well defined substances or articles including entries for substances covering several isomers, e.g.:

UN No. 1090	ACETONE
UN No. 1104	AMYL ACETATES
UN No. 1194	ETHYL NITRITE SOLUTION

B. Generic entries for a well defined group of substances or articles, which are not n.o.s. entries, e.g.:

UN No. 1133	ADHESIVES
UN No. 1266	PERFUMERY PRODUCTS
UN No. 2757	CARBAMATE PESTICIDE, SOLID, TOXIC
UN No. 3101	ORGANIC PEROXIDE TYPE B, LIQUID

C. Specific n.o.s. entries covering a group of substances or articles of a particular chemical or technical nature, not otherwise specified, e.g.:

UN No. 1477	NITRATES, INORGANIC, N.O.S.
UN No. 1987	ALCOHOLS, N.O.S.

D. General n.o.s. entries covering a group of substances or articles having one or more dangerous properties, not otherwise specified, e.g.:

UN No. 1325	FLAMMABLE SOLID, ORGANIC, N.O.S.
UN No. 1993	FLAMMABLE LIQUID, N.O.S.

The entries defined under B., C. and D. are defined as collective entries.

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2.1.1.3 For packing purposes, substances other than those of Classes 1, 2, 5.2, 6.2 and 7, and other than self-reactive substances of Class 4.1 are assigned to packing groups in accordance with the degree of danger they present:

Packing group I: Substances presenting high danger;
Packing group II: Substances presenting medium danger;
Packing group III: Substances presenting low danger.

The packing group(s) to which a substance is assigned is (are) indicated in Table A of Chapter 3.2.

2.1.2 Principles of classification

2.1.2.1 The dangerous goods covered by the heading of a class are defined on the basis of their properties according to sub-section 2.2.x.1 of the relevant class. Assignment of dangerous goods to a class and a packing group is made according to the criteria mentioned in the same sub-section 2.2.x.1. Assignment of one or several subsidiary risk(s) to a dangerous substance or article is made according to the criteria of the class or classes corresponding to those risks, as mentioned in the appropriate sub-section(s) 2.2.x.1.

2.1.2.2 All dangerous goods entries are listed in Table A of Chapter 3.2 in the numerical order of their UN Number. This table contains relevant information on the goods listed, such as name, class, packing group(s), label(s) to be affixed, packing and carriage provisions¹.

2.1.2.3 A substance may contain technical impurities (for example those deriving from the production process) or additives for stability or other purposes that do not affect their classification. However, a substance mentioned by name, i.e. listed as a single entry in Table A of Chapter 3.2, containing technical impurities or additives for stability or other purposes affecting its classification shall be considered a solution or mixture (see 2.1.3.3).

2.1.2.4 Dangerous goods which are listed or defined in sub-section 2.2.x.2 of each class are not to be accepted for carriage.

2.1.2.5 Goods not mentioned by name, i.e. goods not listed as single entries in Table A of Chapter 3.2 and not listed or defined in one of the above-mentioned sub-sections 2.2.x.2 shall be assigned to the relevant class in accordance with the procedure of section 2.1.3. In addition, the subsidiary risk (if any) and the packing group (if any) shall be determined. Once the class, subsidiary risk (if any) and packing group (if any) have been established the relevant UN number shall be determined. The decision trees in sub-sections 2.2.x.3 (list of collective entries) at the end of each class indicate the relevant parameters for selecting the relevant collective entry (UN number). In all cases the most specific collective entry covering the properties of the substance or article shall be selected, according to the hierarchy indicated in 2.1.1.2 by the letters B, C and D respectively. If the substance or article cannot be classified under entries of type B or C according to 2.1.1.2, then, and only then shall it be classified under an entry of type D.

2.1.2.6 On the basis of the test procedures of Chapter 2.3 and the criteria set out in sub-sections 2.2.x.1 of classes when it is so specified, it may be determined that a substance, solution or mixture of a certain class, mentioned by name in Table A of Chapter 3.2, does not meet the criteria of that class. In such a case, the substance, solution or mixture is deemed not to belong to that class.

¹ *Note by the Secretariat: An alphabetic list of these entries has been prepared by the secretariat and is reproduced in Table B of Chapter 3.2. This table is not an official part of the ADR.*

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2.1.2.7 For the purposes of classification, substances with a melting point or initial melting point of 20 °C or lower at a pressure of 101.3 kPa shall be considered to be liquids. A viscous substance for which a specific melting point cannot be determined shall be subjected to the ASTM D 4359-90 test or to the test for determining fluidity (penetrometer test) prescribed in 2.3.4.

2.1.3 Classification of substances, including solutions and mixtures (such as preparations and wastes), not mentioned by name

2.1.3.1 Substances including solutions and mixtures not mentioned by name shall be classified according to their degree of danger on the basis of the criteria mentioned in sub-section 2.2.x.1 of the various classes. The danger(s) presented by a substance shall be determined on the basis of its physical and chemical characteristics and physiological properties. Such characteristics and properties shall also be taken into account when such experience leads to a more stringent assignment.

2.1.3.2 A substance not mentioned by name in Table A of Chapter 3.2 presenting a single hazard shall be classified in the relevant class under a collective entry listed in sub-section 2.2.x.3 of that class.

2.1.3.3 A solution or mixture meeting the classification criteria of ADR composed of a single predominant substance mentioned by name in Table A of Chapter 3.2 and one or more substances not subject to ADR or traces of one or more substances mentioned by name in Table A of Chapter 3.2, shall be assigned the UN number and proper shipping name of the predominant substance mentioned by name in Table A of Chapter 3.2 unless:

- (a) The solution or mixture is mentioned by name in Table A of Chapter 3.2;
- (b) The name and description of the substance mentioned by name in Table A of Chapter 3.2 specifically indicate that they apply only to the pure substance;
- (c) The class, classification code, packing group, or physical state of the solution or mixture is different from that of the substance mentioned by name in Table A of Chapter 3.2; or
- (d) The hazard characteristics and properties of the solution or mixture necessitate emergency response measures that are different from those required for the substance mentioned by name in Table A of Chapter 3.2.

In those other cases, except the one described in (a), the solution or mixture shall be classified as a substance not mentioned by name in the relevant class under a collective entry listed in sub-section 2.2.x.3 of that class taking account of the subsidiary risks presented by that solution or mixture, if any, unless the solution or mixture does not meet the criteria of any class, in which case it is not subject to ADR.

2.1.3.4 Solutions and mixtures containing substances belonging to one of the entries mentioned in 2.1.3.4.1 or 2.1.3.4.2 shall be classified in accordance with the provisions of these paragraphs.

2.1.3.4.1 Solutions and mixtures containing one of the following substances mentioned by name shall always be classified under the same entry as the substance they contain, provided they do not have the hazard characteristics as indicated in 2.1.3.5.3:

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- Class 3

UN No. 1921 PROPYLENEIMINE, STABILIZED; UN No. 3064 NITROGLYCERIN SOLUTION IN ALCOHOL with more than 1% but not more than 5% nitroglycerin;

- Class 6.1

UN No. 1051 HYDROGEN CYANIDE, STABILIZED, containing less than 3% water; UN No. 1185 ETHYLENEIMINE, STABILIZED; UN No. 1259 NICKEL CARBONYL; UN No. 1613 HYDROCYANIC ACID, AQUEOUS SOLUTION (HYDROGEN CYANIDE, AQUEOUS SOLUTION), with not more than 20% hydrogen cyanide; UN No. 1614 HYDROGEN CYANIDE, STABILIZED, containing not more than 3% water and absorbed in a porous inert material; UN No. 1994 IRON PENTACARBONYL; UN No. 2480 METHYL ISOCYANATE; UN No. 2481 ETHYL ISOCYANATE; UN No. 3294 HYDROGEN CYANIDE, SOLUTION IN ALCOHOL, with not more than 45% hydrogen cyanide;

- Class 8

UN No. 1052 HYDROGEN FLUORIDE, ANHYDROUS; UN No. 1744 BROMINE or UN No. 1744 BROMINE SOLUTION; UN No. 1790 HYDROFLUORIC ACID with more than 85% hydrogen fluoride; UN No. 2576 PHOSPHORUS OXYBROMIDE, MOLTEN;

2.1.3.4.2 Solutions and mixtures containing a substance belonging to one of the following entries of Class 9:

UN No. 2315 POLYCHLORINATED BIPHENYLS, LIQUID;
UN No. 3151 POLYHALOGENATED BIPHENYLS, LIQUID;
UN No. 3151 POLYHALOGENATED TERPHENYLS, LIQUID;
UN No. 3152 POLYHALOGENATED BIPHENYLS, SOLID;
UN No. 3152 POLYHALOGENATED TERPHENYLS, SOLID; or
UN No. 3432 POLYCHLORINATED BIPHENYLS, SOLID

shall always be classified under the same entry of Class 9 provided that:

- they do not contain any additional dangerous component other than components of packing group III of classes 3, 4.1, 4.2, 4.3, 5.1, 6.1 or 8; and
- they do not have the hazard characteristics as indicated in 2.1.3.5.3.

2.1.3.5 Substances not mentioned by name in Table A of Chapter 3.2, having more than one hazard characteristic and solutions or mixtures meeting the classification criteria of ADR containing several dangerous substances shall be classified under a collective entry (see 2.1.2.5) and packing group of the appropriate class in accordance with their hazard characteristics. Such classification according to the hazard characteristics shall be carried out as follows:

2.1.3.5.1 The physical and chemical characteristics and physiological properties shall be determined by measurement or calculation and the substance, solution or mixture shall be classified according to the criteria mentioned in sub-section 2.2.x.1 of the various classes.

2.1.3.5.2 If this determination is not possible without disproportionate cost or effort (as for some kinds of wastes), the substance, solution or mixture shall be classified in the class of the component presenting the major hazard.

2.1.3.5.3 If the hazard characteristics of the substance, solution or mixture fall within more than one class or group of substances listed below then the substance, solution or mixture shall be

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classified in the class or group of substances corresponding to the major hazard on the basis of the following order of precedence:

- (a) Material of Class 7 (apart from radioactive material in excepted packages for which special provision 290 of Chapter 3.3 applies, where the other hazardous properties take precedence);
- (b) Substances of Class 1;
- (c) Substances of Class 2;
- (d) Liquid desensitized explosives of Class 3;
- (e) Self-reactive substances and solid desensitized explosives of Class 4.1;
- (f) Pyrophoric substances of Class 4.2;
- (g) Substances of Class 5.2;
- (h) Substances of Class 6.1 meeting the inhalation toxicity criteria of packing group I (Substances meeting the classification criteria of Class 8 and having an inhalation toxicity of dust and mist (LC₅₀) in the range of Packing group I and a toxicity through oral ingestion or dermal contact only in the range of Packing group III or less, shall be allocated to Class 8);
- (i) Infectious substances of Class 6.2.

2.1.3.5.4 If the hazard characteristics of the substance fall within more than one class or group of substances not listed in 2.1.3.5.3 above, the substance shall be classified in accordance with the same procedure but the relevant class shall be selected according to the precedence of hazards table in 2.1.3.10.

2.1.3.5.5 If the substance to be carried is a waste, with a composition that is not precisely known, its assignment to a UN number and packing group in accordance with 2.1.3.5.2 may be based on the consignor's knowledge of the waste, including all available technical and safety data as requested by safety and environmental legislation in force ².

In case of doubt, the highest danger level shall be taken.

If however, on the basis of the knowledge of the composition of the waste and the physical and chemical properties of the identified components, it is possible to demonstrate that the properties of the waste do not correspond to the properties of the packing group I level, the waste may be classified by default in the most appropriate n.o.s. entry of packing group II. However, if it is known that the waste possesses only environmentally hazardous properties, it may be assigned to packing group III under UN Nos. 3077 or 3082.

This procedure may not be used for wastes containing substances mentioned in 2.1.3.5.3, substances of Class 4.3, substances of the case mentioned in 2.1.3.7 or substances which are not accepted for carriage in accordance with 2.2.x.2.

² Such legislation is for instance the Commission Decision 2000/532/EC of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste (replaced by the Directive 2006/12/EC of the European Parliament and of the Council (Official Journal of the European Union No. L 114 of 27 April 2006, page 9)) and Council Decision 94/904/EC establishing a list of hazardous wastes pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous wastes (Official Journal of the European Communities No. L 226 of 6 September 2000, page 3).

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- 2.1.3.6 The most specific applicable collective entry (see 2.1.2.5) shall always be used, i.e. a general n.o.s. entry shall only be used if a generic entry or a specific n.o.s. entry cannot be used.
- 2.1.3.7 Solutions and mixtures of oxidizing substances or substances with an oxidizing subsidiary risk may have explosive properties. In such a case they are not to be accepted for carriage unless they meet the requirements for Class 1.
- 2.1.3.8 Substances of classes 1 to 6.2, 8 and 9, other than those assigned to UN Nos. 3077 and 3082, meeting the criteria of 2.2.9.1.10 are additionally to their hazards of classes 1 to 6.2, 8 and 9 considered to be environmentally hazardous substances. Other substances meeting the criteria of no other class, but those of 2.2.9.1.10 are to be assigned to UN Nos. 3077 and 3082 as appropriate.
- 2.1.3.9 Wastes that do not meet the criteria for classification in classes 1 to 9 but are covered by the *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal* may be carried under UN Nos. 3077 or 3082.

2.1.3.10 Table of precedence of hazards

Class and packing group	4.1, II	4.1, III	4.2, II	4.2, III	4.3, I	4.3, II	4.3, III	5.1, I	5.1, II	5.1, III	6.1, I DERMAL	6.1, I ORAL	6.1, II	6.1, III	8, I	8, II	8, III	9			
3, I	SOL LIQ 4.1 3, I	SOL LIQ 4.1 3, I	SOL LIQ 4.2 3, I	SOL LIQ 4.2 3, I	4.3, I	4.3, I	4.3, I	SOL LIQ 5.1, I 3, I	SOL LIQ 5.1, I 3, I	SOL LIQ 5.1, I 3, I	3, I	3, I	3, I	3, I	3, I	3, I	3, I	3, I			
3, II	SOL LIQ 4.1 3, II	SOL LIQ 4.1 3, II	SOL LIQ 4.2 3, II	SOL LIQ 4.2 3, II	4.3, I	4.3, II	4.3, II	SOL LIQ 5.1, I 3, I	SOL LIQ 5.1, II 3, II	SOL LIQ 5.1, II 3, II	3, I	3, I	3, II	3, II	8, I	3, II	3, II	3, II			
3, III	SOL LIQ 4.1 3, III	SOL LIQ 4.1 3, III	SOL LIQ 4.2 3, II	SOL LIQ 4.2 3, III	4.3, I	4.3, II	4.3, III	SOL LIQ 5.1, I 3, I	SOL LIQ 5.1, II 3, II	SOL LIQ 5.1, III 3, III	6.1, I	6.1, I	6.1, II	3, III ^a	8, I	8, II	3, III	3, III			
4.1, II			4.2, II	4.2, II	4.3, I	4.3, II	4.3, II	5.1, I	4.1, II	4.1, II	6.1, I	6.1, I	SOL LIQ 4.1, II 6.1, II	SOL LIQ 4.1, II 6.1, II	8, I	SOL LIQ 4.1, II 8, I	SOL LIQ 4.1, II 8, II	4.1, II			
4.1, III			4.2, II	4.2, III	4.3, I	4.3, II	4.3, III	5.1, I	4.1, II	4.1, III	6.1, I	6.1, I	6.1, II	SOL LIQ 4.1, III 6.1, III	8, I	8, II	SOL LIQ 4.1, III 8, III	4.1, III			
4.2, II					4.3, I	4.3, II	4.3, II	5.1, I	4.2, II	4.2, II	6.1, I	6.1, I	4.2, II	4.2, II	8, I	4.2, II	4.2, II	4.2, II			
4.2, III					4.3, I	4.3, II	4.3, III	5.1, I	5.1, II	4.2, III	6.1, I	6.1, I	6.1, II	4.2, III	8, I	8, II	4.2, III	4.2, III			
4.3, I								5.1, I	4.3, I	4.3, I	6.1, I	4.3, I	4.3, I	4.3, I	4.3, I	4.3, I	4.3, I	4.3, I			
4.3, II								5.1, I	4.3, II	4.3, II	6.1, I	4.3, I	4.3, II	4.3, II	8, I	4.3, II	4.3, II	4.3, II			
4.3, III								5.1, I	5.1, II	4.3, III	6.1, I	6.1, I	6.1, II	4.3, III	8, I	8, II	4.3, III	4.3, III			
5.1, I											5.1, I	5.1, I	5.1, I	5.1, I	5.1, I	5.1, I	5.1, I	5.1, I			
5.1, II											6.1, I	5.1, I	5.1, II	5.1, II	8, I	5.1, II	5.1, II	5.1, II			
5.1, III											6.1, I	6.1, I	6.1, II	5.1, III	8, I	8, II	5.1, III	5.1, III			
6.1, I DERMAL															SOL LIQ 6.1, I 8, I	6.1, I	6.1, I	6.1, I			
6.1, I ORAL															SOL LIQ 6.1, I 8, I	6.1, I	6.1, I	6.1, I			
6.1, II INHAL															SOL LIQ 6.1, I 8, I	6.1, II	6.1, II	6.1, II			
6.1, II DERMAL															SOL LIQ 6.1, I 8, I	SOL LIQ 6.1, II 8, II	6.1, II	6.1, II			
6.1, II ORAL															8, I	SOL LIQ 6.1, II 8, II	6.1, II	6.1, II			
6.1, III															8, I	8, II	8, III	6.1, III			
8, I																			8, I		
8, II																				8, II	
8, III																					8, III

SOL = Solid substances and mixtures
LIQ = Liquid substances, mixtures and solutions
DERMAL = Dermal toxicity
ORAL = Oral toxicity
INHAL = Inhalation toxicity
^a Class 6.1 for pesticides

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NOTE 1: Examples to explain the use of the table

Classification of a single substance

Description of the substance to be classified:

An amine not mentioned by name meeting the criteria for Class 3, packing group II as well as those for Class 8, packing group I.

Procedure:

The intersection of line 3 II with column 8 I gives 8 I.

This amine has therefore to be classified in Class 8 under:

UN No. 2734 AMINES LIQUID, CORROSIVE, FLAMMABLE, N.O.S. or UN No. 2734 POLYAMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.
packing group I

Classification of a mixture

Description of the mixture to be classified:

Mixture consisting of a flammable liquid classified in Class 3, packing group III, a toxic substance in Class 6.1, packing group II and a corrosive substance in Class 8, packing group I.

Procedure:

The intersection of line 3 III with column 6.1 II gives 6.1 II.

The intersection of line 6.1 II with column 8 I gives 8 I LIQ.

This mixture not further defined has therefore to be classified in Class 8 under:

UN No. 2922 CORROSIVE LIQUID, TOXIC, N.O.S. packing group I.

NOTE 2: Examples for the classification of mixtures and solutions under a class and a packing group:

A phenol solution of Class 6.1, (II), in benzene of Class 3, (II) is to be classified in Class 3, (II); this solution is to be classified under UN No. 1992 FLAMMABLE LIQUID, TOXIC, N.O.S., Class 3, (II), by virtue of the toxicity of the phenol.

A solid mixture of sodium arsenate of Class 6.1, (II) and sodium hydroxide of Class 8, (II) is to be classified under UN No. 3290 TOXIC SOLID, CORROSIVE, INORGANIC, N.O.S., in Class 6.1 (II).

A solution of crude or refined naphthalene of Class 4.1, (III) in petrol of Class 3, (II), is to be classified under UN No. 3295 HYDROCARBONS, LIQUID, N.O.S. in Class 3, (II).

A mixture of hydrocarbons of Class 3, (III), and of polychlorinated biphenyls (PCB) of Class 9, (II), is to be classified under UN No. 2315 POLYCHLORINATED BIPHENYLS LIQUID or UN No. 3432 POLYCHLORINATED BIPHENYLS SOLID in Class 9, (II).

A mixture of propyleneimine of Class 3, and polychlorinated biphenyls (PCB) of Class 9, (II), is to be classified under UN No. 1921 PROPYLENEIMINE, INHIBITED in Class 3.

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2.1.4 Classification of samples

2.1.4.1 When the class of a substance is uncertain and it is being carried for further testing, a tentative class, proper shipping name and UN number shall be assigned on the basis of the consignor's knowledge of the substance and application of:

- (a) the classification criteria of Chapter 2.2; and
- (b) the requirements of this Chapter.

The most severe packing group possible for the proper shipping name chosen shall be used.

Where this provision is used the proper shipping name shall be supplemented with the word "SAMPLE" (e.g., "FLAMMABLE LIQUID, N.O.S., SAMPLE"). In certain instances, where a specific proper shipping name is provided for a sample of a substance considered to meet certain classification criteria (e.g., GAS SAMPLE, NON-PRESSURIZED, FLAMMABLE, UN No. 3167) that proper shipping name shall be used. When an N.O.S. entry is used to carry the sample, the proper shipping name need not be supplemented with the technical name as required by special provision 274 of Chapter 3.3.

2.1.4.2 Samples of the substance shall be carried in accordance with the requirements applicable to the tentative assigned proper shipping name provided:

- (a) The substance is not considered to be a substance not accepted for carriage by sub-sections 2.2.x.2 of Chapter 2.2 or by Chapter 3.2;
- (b) The substance is not considered to meet the criteria for Class 1 or considered to be an infectious substance or a radioactive material;
- (c) The substance is in compliance with 2.2.41.1.15 or 2.2.52.1.9 if it is a self-reactive substance or an organic peroxide, respectively;
- (d) The sample is carried in a combination packaging with a net mass per package not exceeding 2.5 kg; and
- (e) The sample is not packed together with other goods.

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CHAPTER 2.2

CLASS SPECIFIC PROVISIONS

2.2.1 Class 1 Explosive substances and articles

2.2.1.1 Criteria

2.2.1.1.1 The heading of Class 1 covers:

- (a) Explosive substances: solid or liquid substances (or mixtures of substances) capable by chemical reaction of producing gases at such a temperature and pressure and at such a speed as to cause damage to the surroundings.

Pyrotechnic substances: substances or mixtures of substances designed to produce an effect by heat, light, sound, gas or smoke or a combination of these as the result of non-detonating self-sustaining exothermic chemical reactions;

NOTE 1: Substances which are not themselves explosive but which may form an explosive mixture of gas, vapour or dust are not substances of Class 1.

NOTE 2: Also excluded from Class 1 are: water- or alcohol-wetted explosives of which the water or alcohol content exceeds the limits specified and those containing plasticizers - these explosives are assigned to Class 3 or Class 4.1 - and those explosives which, on the basis of their predominant hazard, are assigned to Class 5.2.

- (b) Explosive articles: articles containing one or more explosive or pyrotechnic substances;

NOTE: Devices containing explosive or pyrotechnic substances in such small quantity or of such a character that their inadvertent or accidental ignition or initiation during carriage would not cause any manifestation external to the device by projection, fire, smoke, heat or loud noise are not subject to the requirements of Class 1.

- (c) Substances and articles not mentioned above which are manufactured with a view to producing a practical effect by explosion or a pyrotechnic effect.

For the purposes of Class 1, the following definition applies:

Phlegmatized means that a substance (or "phlegmatizer") has been added to an explosive to enhance its safety in handling and carriage. The phlegmatizer renders the explosive insensitive, or less sensitive, to the following actions: heat, shock, impact, percussion or friction. Typical phlegmatizing agents include, but are not limited to: wax, paper, water, polymers (such as chlorofluoropolymers), alcohol and oils (such as petroleum jelly and paraffin).

2.2.1.1.2 Any substance or article having or suspected of having explosive properties shall be considered for assignment to Class 1 in accordance with the tests, procedures and criteria prescribed in Part I, Manual of Tests and Criteria.

A substance or article assigned to Class 1 can only be accepted for carriage when it has been assigned to a name or n.o.s. entry listed in Table A of Chapter 3.2 and meets the criteria of the Manual of Tests and Criteria.

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- 2.2.1.1.3 The substances and articles of Class 1 shall be assigned to a UN Number and a name or n.o.s. entry listed in Table A of Chapter 3.2. Interpretation of the names of substances and articles in Table A of Chapter 3.2 shall be based upon the glossary in 2.2.1.4.

Samples of new or existing explosive substances or articles carried for purposes including: testing, classification, research and development quality control, or as a commercial sample, other than initiating explosive, may be assigned to UN No. 0190 SAMPLES, EXPLOSIVE.

The assignment of explosive substances and articles not mentioned by name as such in Table A of Chapter 3.2 to an n.o.s entry of Class 1 or UN No. 0190 SAMPLES, EXPLOSIVE as well as the assignment of certain substances the carriage of which is subject to a specific authorization by the competent authority according to the special provisions referred to in Column (6) of Table A of Chapter 3.2 shall be made by the competent authority of the country of origin. This competent authority shall also approve in writing the conditions of carriage of these substances and articles. If the country of origin is not a Contracting Party to ADR, the classification and the conditions of carriage shall be recognized by the competent authority of the first country Contracting Party to ADR reached by the consignment.

- 2.2.1.1.4 Substances and articles of Class 1 shall have been assigned to a division in accordance with 2.2.1.1.5 and to a compatibility group in accordance with 2.2.1.1.6. The division shall be based on the results of the tests described in 2.3.0 and 2.3.1 applying the definitions in 2.2.1.1.5. The compatibility group shall be determined in accordance with the definitions in 2.2.1.1.6. The classification code shall consist of the division number and the compatibility group letter.

2.2.1.1.5 *Definition of divisions*

Division 1.1 Substances and articles which have a mass explosion hazard (a mass explosion is an explosion which affects almost the entire load virtually instantaneously).

Division 1.2 Substances and articles which have a projection hazard but not a mass explosion hazard.

Division 1.3 Substances and articles which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard:

- (a) combustion of which gives rise to considerable radiant heat; or
- (b) which burn one after another, producing minor blast or projection effects or both.

Division 1.4 Substances and articles which present only a slight risk of explosion in the event of ignition or initiation during carriage. The effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. An external fire shall not cause virtually instantaneous explosion of almost the entire contents of the package.

Division 1.5 Very insensitive substances having a mass explosion hazard which are so insensitive that there is very little probability of initiation or of transition from burning to detonation under normal conditions of carriage. As a minimum requirement they must not explode in the external fire test.

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Division 1.6 Extremely insensitive articles which do not have a mass explosion hazard. The articles contain only extremely insensitive substances and demonstrate a negligible probability of accidental initiation or propagation.

NOTE: The risk from articles of Division 1.6 is limited to the explosion of a single article.

2.2.1.1.6 *Definition of compatibility groups of substances and articles*

- A Primary explosive substance.
- B Article containing a primary explosive substance and not having two or more effective protective features. Some articles, such as detonators for blasting, detonator assemblies for blasting and primers, cap-type, are included, even though they do not contain primary explosives.
- C Propellant explosive substance or other deflagrating explosive substance or article containing such explosive substance.
- D Secondary detonating explosive substance or black powder or article containing a secondary detonating explosive substance, in each case without means of initiation and without a propelling charge, or article containing a primary explosive substance and having two or more effective protective features.
- E Article containing a secondary detonating explosive substance, without means of initiation, with a propelling charge (other than one containing a flammable liquid or gel or hypergolic liquids).
- F Article containing a secondary detonating explosive substance with its own means of initiation, with a propelling charge (other than one containing a flammable liquid or gel or hypergolic liquids) or without a propelling charge.
- G Pyrotechnic substance, or article containing a pyrotechnic substance, or article containing both an explosive substance and an illuminating, incendiary, tear- or smoke-producing substance (other than a water-activated article or one which contains white phosphorus, phosphides, a pyrophoric substance, a flammable liquid or gel or hypergolic liquids).
- H Article containing both an explosive substance and white phosphorus.
- J Article containing both an explosive substance and a flammable liquid or gel.
- K Article containing both an explosive substance and a toxic chemical agent.
- L Explosive substance or article containing an explosive substance and presenting a special risk (e.g. due to water activation or the presence of hypergolic liquids, phosphides or a pyrophoric substance) necessitating isolation of each type.
- N Articles containing only extremely insensitive substances.
- S Substance or article so packed or designed that any hazardous effects arising from accidental functioning are confined within the package unless the package has been degraded by fire, in which case all blast or projection effects are limited to the extent that they do not significantly hinder or prevent fire-fighting or other emergency response efforts in the immediate vicinity of the package.

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NOTE 1: *Each substance or article, packed in a specified packaging, may be assigned to one compatibility group only. Since the criterion of compatibility group S is empirical, assignment to this group is necessarily linked to the tests for assignment of a classification code.*

NOTE 2: *Articles of compatibility groups D and E may be fitted or packed together with their own means of initiation provided that such means have at least two effective protective features designed to prevent an explosion in the event of accidental functioning of the means of initiation. Such articles and packages shall be assigned to compatibility groups D or E.*

NOTE 3: *Articles of compatibility groups D and E may be packed together with their own means of initiation, which do not have two effective protective features (i.e. means of initiation assigned to compatibility group B), provided that they comply with mixed packing provision MP21 of Section 4.1.10. Such packages shall be assigned to compatibility groups D or E.*

NOTE 4: *Articles may be fitted or packed together with their own means of ignition provided that the means of ignition cannot function during normal conditions of carriage.*

NOTE 5: *Articles of compatibility groups C, D and E may be packed together. Such packages shall be assigned to compatibility group E.*

2.2.1.1.7 *Assignment of fireworks to divisions*

2.2.1.1.7.1 Fireworks shall normally be assigned to divisions 1.1, 1.2, 1.3, and 1.4 on the basis of test data derived from Test Series 6 of the Manual of Tests and Criteria. However, since the range of such articles is very extensive and the availability of test facilities may be limited, assignment to divisions may also be made in accordance with the procedure in 2.2.1.1.7.2.

2.2.1.1.7.2 Assignment of fireworks to UN Nos. 0333, 0334, 0335 and 0336 may be made on the basis of analogy, without the need for Test Series 6 testing, in accordance with the default fireworks classification table in 2.2.1.1.7.5. Such assignment shall be made with the agreement of the competent authority. Items not specified in the table shall be classified on the basis of test data derived from Test Series 6.

NOTE 1: *The addition of other types of fireworks to column 1 of the table in 2.2.1.1.7.5 shall only be made on the basis of full test data submitted to the UN Sub-Committee of Experts on the Transport of Dangerous Goods for consideration.*

NOTE 2: *Test data derived by competent authorities which validates, or contradicts the assignment of fireworks specified in column 4 of the table in 2.2.1.1.7.5 to divisions in column 5 should be submitted to the UN Sub-Committee of Experts on the Transport of Dangerous Goods for information.*

2.2.1.1.7.3 Where fireworks of more than one division are packed in the same package, they shall be classified on the basis of the most dangerous division unless test data derived from Test Series 6 indicate otherwise.

2.2.1.1.7.4 The classification shown in the table in 2.2.1.1.7.5 applies only for articles packed in fibreboard boxes (4G).

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2.2.1.1.7.5 Default fireworks classification table ¹

NOTE 1: *References to percentages in the table, unless otherwise stated, are to the mass of all pyrotechnic substances (e.g. rocket motors, lifting charge, bursting charge and effect charge).*

NOTE 2: *"Flash composition" in this table refers to pyrotechnic substances in powder form or as pyrotechnic units as presented in the fireworks, that are used to produce an aural effect, or used as a bursting charge or lifting charge, unless the time taken for the pressure rise is demonstrated to be more than 8 ms for 0.5 g of pyrotechnic substance in the HSL Flash Composition Test in Appendix 7 of the Manual of Tests and Criteria.*

NOTE 3: *Dimensions in mm refer to:*

- *for spherical and peanut shells the diameter of the sphere of the shell;*
- *for cylinder shells the length of the shell;*
- *for a shell in mortar, Roman candle, shot tube firework or mine the inside diameter of the tube comprising or containing the firework;*
- *for a bag mine or cylinder mine, the inside diameter of the mortar intended to contain the mine.*

¹ This table contains a list of firework classifications which may be used in the absence of Test Series 6 data (see 2.2.1.1.7.2).

Type	Includes: / Synonym:	Definition	Specification	Classification
Shell, spherical or cylindrical	Spherical display shell: aerial shell, colour shell, dye shell, multi-break shell, multi-effect shell, nautical shell, parachute shell, smoke shell, star shell; report shell: maroon, salute, sound shell, thunderclap, aerial shell kit	Device with or without propellant charge, with delay fuse and bursting charge, pyrotechnic unit(s) or loose pyrotechnic substance and designed to be projected from a mortar	All report shells	1.1G
			Colour shell: ≥ 180 mm	1.1G
			Colour shell: < 180 mm with $> 25\%$ flash composition, as loose powder and/or report effects	1.1G
Peanut shell		Device with two or more spherical aerial shells in a common wrapper propelled by the same propellant charge with separate external delay fuses	Colour shell: < 180 mm with $\leq 25\%$ flash composition, as loose powder and/or report effects	1.3G
			Colour shell: ≤ 50 mm, or ≤ 60 g pyrotechnic substance, with $\leq 2\%$ flash composition as loose powder and/or report effects	1.4G
Preloaded mortar, shell in mortar		Assembly comprising a spherical or cylindrical shell inside a mortar from which the shell is designed to be projected	The most hazardous spherical aerial shell determines the classification	
			All report shells	1.1G
			Colour shell: ≥ 180 mm	1.1G
			Colour shell: $> 25\%$ flash composition as loose powder and/or report effects	1.1G
			Colour shell: > 50 mm and < 180 mm	1.2G
			Colour shell: ≤ 50 mm, or ≤ 60 g pyrotechnic substance, with $\leq 25\%$ flash composition as loose powder and/or report effects	1.3G

Type	Includes: / Synonym:	Definition	Specification	Classification
Shell, spherical or cylindrical (cont'd)	Shell of shells (spherical) (Reference to percentages for shell of shells are to the gross mass of the fireworks article)	Device without propellant charge, with delay fuse and bursting charge, containing report shells and inert materials and designed to be projected from a mortar	> 120 mm	1.1G
		Device without propellant charge, with delay fuse and bursting charge, containing report shells $\leq 25\text{g}$ flash composition per report unit, with $\leq 33\%$ flash composition and $\geq 60\%$ inert materials and designed to be projected from a mortar	≤ 120 mm	1.3G
Battery/ combination	Barrage, bombardos, cakes, finale box, flowerbed, hybrid, multiple tubes, shell cakes, banger batteries, flash banger batteries	Device without propellant charge, with delay fuse and bursting charge, containing colour shells and/or pyrotechnic units and designed to be projected from a mortar	> 300 mm	1.1G
		Device without propellant charge, with delay fuse and bursting charge, containing colour shells $\leq 70\text{mm}$ and/or pyrotechnic units, with $\leq 25\%$ flash composition and $\leq 60\%$ pyrotechnic substance and designed to be projected from a mortar	> 200 mm and ≤ 300 mm	1.3G
		Device with propellant charge, with delay fuse and bursting charge, containing colour shells ≤ 70 mm and/or pyrotechnic units, with $\leq 25\%$ flash composition and $\leq 60\%$ pyrotechnic substance and designed to be projected from a mortar	≤ 200 mm	1.3G
		Assembly including several elements either containing the same type or several types each corresponding to one of the types of fireworks listed in this table, with one or two points of ignition	The most hazardous firework type determines the classification	

Type	Includes: / Synonym:	Definition	Specification	Classification
Roman candle	Exhibition candle, candle, bombettes	Tube containing a series of pyrotechnic units consisting of alternate pyrotechnic substance, propellant charge, and transmitting fuse	<p>≥ 50 mm inner diameter, containing flash composition, or < 50 mm with > 25% flash composition</p> <p>≥ 50 mm inner diameter, containing no flash composition</p> <p>< 50 mm inner diameter and ≤ 25% flash composition</p> <p>≤ 30 mm inner diameter, each pyrotechnic unit ≤ 25 g and ≤ 5% flash composition</p>	1.1G 1.2G 1.3G 1.4G
Shot tube	Single shot Roman candle, small preloaded mortar	Tube containing a pyrotechnic unit consisting of pyrotechnic substance, propellant charge with or without transmitting fuse	<p>≤ 30 mm inner diameter and pyrotechnic unit > 25 g, or > 5% and ≤ 25% flash composition</p> <p>≤ 30 mm inner diameter, pyrotechnic unit ≤ 25 g and ≤ 5% flash composition</p>	1.3G 1.4G
Rocket	Avalanche rocket, signal rocket, whistling rocket, bottle rocket, sky rocket, missile type rocket, table rocket	Tube containing pyrotechnic substance and/or pyrotechnic units, equipped with stick(s) or other means for stabilization of flight, and designed to be propelled into the air	<p>Flash composition effects only</p> <p>Flash composition > 25% of the pyrotechnic substance</p> <p>> 20 g pyrotechnic substance and flash composition ≤ 25%</p> <p>≤ 20 g pyrotechnic substance, black powder bursting charge and ≤ 0.13 g flash composition per report and ≤ 1 g in total</p>	1.1G 1.1G 1.3G 1.4G

Type	Includes: / Synonym:	Definition	Specification	Classification
Mine	Pot-a-feu, ground mine, bag mine, cylinder mine	Tube containing propellant charge and pyrotechnic units and designed to be placed on the ground or to be fixed in the ground. The principal effect is ejection of all the pyrotechnic units in a single burst producing a widely dispersed visual and/or aural effect in the air or: Cloth or paper bag or cloth or paper cylinder containing propellant charge and pyrotechnic units, designed to be placed in a mortar and to function as a mine	> 25% flash composition, as loose powder and/or report effects ≥ 180 mm and ≤ 25% flash composition, as loose powder and/or report effects < 180 mm and ≤ 25% flash composition, as loose powder and/or report effects ≤ 150 g pyrotechnic substance, containing ≤ 5% flash composition as loose powder and/or report effects. Each pyrotechnic unit ≤ 25 g, each report effect < 2g; each whistle, if any, ≤ 3 g ≥ 1 kg pyrotechnic substance < 1 kg pyrotechnic substance	1.1G 1.1G 1.3G 1.4G
Fountain	Volcanos, gerbs, showers, lances, Bengal fire, flitter sparkle, cylindrical fountains, cone fountains, illuminating torch	Non-metallic case containing pressed or consolidated pyrotechnic substance producing sparks and flame	Perchlorate based sparklers: > 5 g per item or > 10 items per pack Perchlorate based sparklers: ≤ 5 g per item and ≤ 10 items per pack; Nitrate based sparklers: ≤ 30 g per item	1.3G 1.4G
Sparkler	Handheld sparklers, non-handheld sparklers, wire sparklers	Rigid wire partially coated (along one end) with slow burning pyrotechnic substance with or without an ignition tip	Perchlorate based items: > 5 g per item or > 10 items per pack Perchlorate based items: ≤ 5 g per item and ≤ 10 items per pack; nitrate based items: ≤ 30 g per item	1.3G 1.4G
Bengal stick	Dipped stick	Non-metallic stick partially coated (along one end) with slow-burning pyrotechnic substance and designed to be held in the hand	Perchlorate based items: > 5 g per item or > 10 items per pack Perchlorate based items: ≤ 5 g per item and ≤ 10 items per pack; nitrate based items: ≤ 30 g per item	1.3G 1.4G

Type	Includes: / Synonym:	Definition	Specification	Classification
Low hazard fireworks and novelties	Table bombs, throwdowns, crackling granules, smokes, fog, snakes, glow worm, serpents, snaps, party poppers	Device designed to produce very limited visible and/ or audible effect which contains small amounts of pyrotechnic and/or explosive composition.	Throwdowns and snaps may contain up to 1.6 mg of silver fulminate; snaps and party poppers may contain up to 16 mg of potassium chlorate/red phosphorous mixture; other articles may contain up to 5 g of pyrotechnic substance, but no flash composition	1.4G
Spinner	Aerial spinner, helicopter, chaser, ground spinner	Non-metallic tube or tubes containing gas- or spark-producing pyrotechnic substance, with or without noise producing composition, with or without aerofoils attached	Pyrotechnic substance per item > 20 g, containing ≤ 3% flash composition as report effects, or whistle composition ≤ 5 g Pyrotechnic substance per item ≤ 20 g, containing ≤ 3% flash composition as report effects, or whistle composition ≤ 5 g	1.3G 1.4G
Wheels	Catherine wheels, Saxon	Assembly including drivers containing pyrotechnic substance and provided with a means of attaching it to a support so that it can rotate	≥ 1 kg total pyrotechnic substance, no report effect, each whistle (if any) ≤ 25 g and ≤ 50 g whistle composition per wheel < 1 kg total pyrotechnic substance, no report effect, each whistle (if any) ≤ 5 g and ≤ 10 g whistle composition per wheel	1.3G 1.4G
Aerial wheel	Flying Saxon, UFO's, rising crown	Tubes containing propellant charges and sparks-flame- and/or noise producing pyrotechnic substances, the tubes being fixed to a supporting ring	> 200 g total pyrotechnic substance or > 60 g pyrotechnic substance per driver, ≤ 3% flash composition as report effects, each whistle (if any) ≤ 25 g and ≤ 50 g whistle composition per wheel	1.3G

Type	Includes: / Synonym:	Definition	Specification	Classification
			<p>≤ 200 g total pyrotechnic substance and ≤ 60 g pyrotechnic substance per driver, ≤ 3% flash composition as report effects, each whistle (if any) ≤ 5 g and ≤ 10 g whistle composition per wheel</p> <p>The most hazardous firework type determines the classification</p>	1.4G
Selection pack	Display selection box, display selection pack, garden selection box, indoor selection box; assortment	A pack of more than one type each corresponding to one of the types of fireworks listed in this table		
Firecracker	Celebration cracker, celebration roll, string cracker	Assembly of tubes (paper or cardboard) linked by a pyrotechnic fuse, each tube intended to produce an aural effect	Each tube ≤ 140 mg of flash composition or ≤ 1 g black powder	1.4G
Banger	Salute, flash banger, lady cracker	Non-metallic tube containing report composition intended to produce an aural effect	> 2 g flash composition per item	1.1G
			<p>≤ 2 g flash composition per item and ≤ 10 g per inner packaging</p> <p>≤ 1 g flash composition per item and ≤ 10 g per inner packaging or ≤ 10 g black powder per item</p>	1.3G
				1.4G

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2.2.1.1.8 Exclusion from Class 1

2.2.1.1.8.1 An article or a substance may be excluded from Class 1 by virtue of test results and the Class 1 definition with the approval of the competent authority of any ADR Contracting Party who may also recognize an approval granted by the competent authority of a country which is not an ADR Contracting Party provided that this approval has been granted in accordance with the procedures applicable according to RID, ADR, ADN, the IMDG Code or the ICAO Technical Instructions.

2.2.1.1.8.2 With the approval of the competent authority in accordance with 2.2.1.1.8.1, an article may be excluded from Class 1 when three unpackaged articles, each individually activated by its own means of initiation or ignition or external means to function in the designed mode, meet the following test criteria:

- (a) No external surface shall have a temperature of more than 65 °C. A momentary spike in temperature up to 200 °C is acceptable;
- (b) No rupture or fragmentation of the external casing or movement of the article or detached parts thereof of more than one metre in any direction;

***NOTE:** Where the integrity of the article may be affected in the event of an external fire these criteria shall be examined by a fire test, such as described in ISO 12097-3.*

- (c) No audible report exceeding 135 dB(C) peak at a distance of one metre;
- (d) No flash or flame capable of igniting a material such as a sheet of 80 ± 10 g/m² paper in contact with the article; and
- (e) No production of smoke, fumes or dust in such quantities that the visibility in a one cubic metre chamber equipped with appropriately sized blow out panels is reduced more than 50% as measured by a calibrated light (lux) meter or radiometer located one metre from a constant light source located at the midpoint on opposite walls. The general guidance on Optical Density Testing in ISO 5659-1 and the general guidance on the Photometric System described in Section 7.5 in ISO 5659-2 may be used or similar optical density measurement methods designed to accomplish the same purpose may also be employed. A suitable hood cover surrounding the back and sides of the light meter shall be used to minimize effects of scattered or leaking light not emitted directly from the source.

***NOTE 1:** If during the tests addressing criteria (a), (b), (c) and (d) no or very little smoke is observed the test described in (e) may be waived.*

***NOTE 2:** The competent authority referred to in 2.2.1.1.8.1 may require testing in packaged form if it is determined that, as packaged for carriage, the article may pose a greater risk.*

2.2.1.2 **Substances and articles not accepted for carriage**

2.2.1.2.1 Explosive substances which are unduly sensitive according to the criteria of the Manual of Tests and Criteria, Part I, or are liable to spontaneous reaction, as well as explosive substances and articles which cannot be assigned to a name or n.o.s. entry listed in Table A of Chapter 3.2, shall not be accepted for carriage.

2.2.1.2.2 Articles of compatibility group K shall not be accepted for carriage (1.2K, UN No. 0020 and 1.3K, UN No. 0021).

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2.2.1.3 *List of collective entries*

Classification code (see 2.2.1.1.4)	UN No.	Name of the substance or article
1.1A	0473	SUBSTANCES, EXPLOSIVE, N.O.S.
1.1B	0461	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.
1.1C	0474 0497 0498 0462	SUBSTANCES, EXPLOSIVE, N.O.S. PROPELLANT, LIQUID PROPELLANT, SOLID ARTICLES, EXPLOSIVE, N.O.S.
1.1D	0475 0463	SUBSTANCES, EXPLOSIVE, N.O.S. ARTICLES, EXPLOSIVE, N.O.S.
1.1E	0464	ARTICLES, EXPLOSIVE, N.O.S.
1.1F	0465	ARTICLES, EXPLOSIVE, N.O.S.
1.1G	0476	SUBSTANCES, EXPLOSIVE, N.O.S.
1.1L	0357 0354	SUBSTANCES, EXPLOSIVE, N.O.S. ARTICLES, EXPLOSIVE, N.O.S.
1.2B	0382	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.
1.2C	0466	ARTICLES, EXPLOSIVE, N.O.S.
1.2D	0467	ARTICLES, EXPLOSIVE, N.O.S.
1.2E	0468	ARTICLES, EXPLOSIVE, N.O.S.
1.2F	0469	ARTICLES, EXPLOSIVE, N.O.S.
1.2L	0358 0248 0355	SUBSTANCES, EXPLOSIVE, N.O.S. CONTRIVANCES, WATER-ACTIVATED with burster, expelling charge or propelling charge ARTICLES, EXPLOSIVE, N.O.S.
1.3C	0132 0477 0495 0499 0470	DEFLAGRATING METAL SALTS OF AROMATIC NITRO- DERIVATIVES, N.O.S. SUBSTANCES, EXPLOSIVE, N.O.S. PROPELLANT, LIQUID PROPELLANT, SOLID ARTICLES, EXPLOSIVE, N.O.S.
1.3G	0478	SUBSTANCES, EXPLOSIVE, N.O.S.
1.3L	0359 0249 0356	SUBSTANCES, EXPLOSIVE, N.O.S. CONTRIVANCES, WATER-ACTIVATED with burster, expelling charge or propelling charge ARTICLES, EXPLOSIVE, N.O.S.
1.4B	0350 0383	ARTICLES, EXPLOSIVE, N.O.S. COMPONENTS, EXPLOSIVE TRAIN, N.O.S.
1.4C	0479 0501 0351	SUBSTANCES, EXPLOSIVE, N.O.S. PROPELLANT, SOLID ARTICLES, EXPLOSIVE, N.O.S.

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Classification code (see 2.2.1.1.4)	UN No.	Name of the substance or article
1.4D	0480	SUBSTANCES, EXPLOSIVE, N.O.S.
	0352	ARTICLES, EXPLOSIVE, N.O.S.
1.4E	0471	ARTICLES, EXPLOSIVE, N.O.S.
1.4F	0472	ARTICLES, EXPLOSIVE, N.O.S.
1.4G	0485	SUBSTANCES, EXPLOSIVE, N.O.S.
	0353	ARTICLES, EXPLOSIVE, N.O.S.
1.4S	0481	SUBSTANCES, EXPLOSIVE, N.O.S.
	0349	ARTICLES, EXPLOSIVE, N.O.S.
	0384	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.
1.5D	0482	SUBSTANCES, EXPLOSIVE, VERY INSENSITIVE (SUBSTANCES, EVI) N.O.S.
1.6N	0486	ARTICLES, EXPLOSIVE, EXTREMELY INSENSITIVE (ARTICLES, EEI)
	0190	SAMPLES, EXPLOSIVE other than initiating explosive <i>NOTE: Division and Compatibility Group shall be defined as directed by the competent authority and according to the principles in 2.2.1.1.4.</i>

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2.2.1.4 *Glossary of names*

NOTE 1: *The descriptions in the glossary are not intended to replace the test procedures, nor to determine the hazard classification of a substance or article of Class 1. Assignment to the correct division and a decision on whether Compatibility Group S is appropriate shall be based on testing of the product in accordance with the Manual of Tests and Criteria, Part I or by analogy with similar products which have already been tested and assigned in accordance with the procedures of the Manual of Tests and Criteria.*

NOTE 2: *The figures given after the names refer to the relevant UN numbers (Column 1 of Table A of Chapter 3.2). For the classification code, see 2.2.1.1.4.*

AIR BAG INFLATORS or AIR BAG MODULES or SEAT-BELT PRETENSIONERS:
UN No. 0503

Articles which contain pyrotechnic substances and are used as life-saving vehicle airbags or seat-belts.

AMMUNITION, ILLUMINATING, with or without burster, expelling charge or propelling charge: UN Nos. 0171, 0254, 0297

Ammunition designed to produce a single source of intense light for lighting up an area. The term includes illuminating cartridges, grenades and projectiles; and illuminating and target identification bombs.

NOTE: *The following articles: CARTRIDGES, SIGNAL; SIGNAL DEVICES HAND; SIGNALS, DISTRESS; FLARES, AERIAL; FLARES, SURFACE are not included in this definition. They are listed separately.*

AMMUNITION, INCENDIARY, liquid or gel, with burster, expelling charge or propelling charge: UN No. 0247

Ammunition containing liquid or gelatinous incendiary substance. Except when the incendiary substance is an explosive per se, it also contains one or more of the following: a propelling charge with primer and igniter charge; a fuze with burster or expelling charge.

AMMUNITION, INCENDIARY, WHITE PHOSPHORUS with burster, expelling charge or propelling charge: UN Nos. 0243, 0244

Ammunition containing white phosphorus as incendiary substance. It also contains one or more of the following: a propelling charge with primer and igniter charge; a fuze with burster or expelling charge.

AMMUNITION, INCENDIARY with or without burster, expelling charge or propelling charge: UN Nos. 0009, 0010, 0300

Ammunition containing incendiary composition. Except when the composition is an explosive per se, it also contains one or more of the following: a propelling charge with primer and igniter charge; a fuze with burster or expelling charge.

AMMUNITION, PRACTICE: UN Nos. 0362, 0488

Ammunition without a main bursting charge, containing a burster or expelling charge. Normally it also contains a fuze and a propelling charge.

NOTE: *GRENADES, PRACTICE are not included in this definition. They are listed separately.*

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AMMUNITION, PROOF: UN No. 0363

Ammunition containing pyrotechnic substances, used to test the performance or strength of new ammunition, weapon components or assemblies.

AMMUNITION, SMOKE, WHITE PHOSPHORUS, with burster, expelling charge or propelling charge: UN Nos. 0245, 0246

Ammunition containing white phosphorus as a smoke-producing substance. It also contains one or more of the following: a propelling charge with primer and igniter charge; a fuze with burster or expelling charge. The term includes grenades, smoke.

AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge: UN Nos. 0015, 0016, 0303

Ammunition containing a smoke-producing substance such as chlorosulphonic acid mixture or titanium tetrachloride; or a smoke-producing pyrotechnic composition based on hexachloroethane or red phosphorus. Except when the substance is an explosive per se, the ammunition also contains one or more of the following: a propelling charge with primer and igniter charge; a fuze with burster or expelling charge. The term includes grenades, smoke.

NOTE: *SIGNALS, SMOKE are not included in this definition. They are listed separately.*

AMMUNITION, TEAR-PRODUCING, with burster, expelling charge or propelling charge: UN Nos. 0018, 0019, 0301

Ammunition containing a tear-producing substance. It also contains one or more of the following: a pyrotechnic substance; a propelling charge with primer and igniter charge; a fuze with burster or expelling charge.

ARTICLES, EXPLOSIVE, EXTREMELY INSENSITIVE (ARTICLES EEI): UN No. 0486

Articles containing only extremely insensitive substances which demonstrate a negligible probability of accidental initiation or propagation under normal conditions of transport, and which have passed Test Series 7.

ARTICLES, PYROPHORIC: UN No. 0380

Articles which contain a pyrophoric substance (capable of spontaneous ignition when exposed to air) and an explosive substance or component. The term excludes articles containing white phosphorus.

ARTICLES, PYROTECHNIC, for technical purposes: UN Nos. 0428, 0429, 0430, 0431, 0432

Articles which contain pyrotechnic substances and are used for technical purposes such as heat generation, gas generation, theatrical effects, etc.

NOTE: *The following articles: all ammunition; CARTRIDGES, SIGNAL; CUTTERS, CABLE, EXPLOSIVE; FIREWORKS; FLARES, AERIAL; FLARES, SURFACE; RELEASE DEVICES, EXPLOSIVE; RIVETS, EXPLOSIVE; SIGNAL DEVICES, HAND; SIGNALS, DISTRESS; SIGNALS, RAILWAY TRACK, EXPLOSIVES; SIGNALS, SMOKE are not included in this definition. They are listed separately.*

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BLACK POWDER (GUNPOWDER), COMPRESSED or BLACK POWDER (GUNPOWDER), IN PELLETS: UN No. 0028

Substance consisting of a pelletized form of black powder.

BLACK POWDER (GUNPOWDER), granular or as meal: UN No. 0027

Substance consisting of an intimate mixture of charcoal or other carbon and either potassium nitrate or sodium nitrate, with or without sulphur.

BOMBS, WITH FLAMMABLE LIQUID, with bursting charge: UN Nos. 0399, 0400

Articles which are dropped from aircraft, consisting of a tank filled with inflammable liquid and bursting charge.

BOMBS, PHOTO-FLASH: UN No. 0038

Explosive articles which are dropped from aircraft to provide brief, intense illumination for photography. They contain a charge of detonating explosive without means of initiation or with means of initiation containing two or more effective protective features.

BOMBS, PHOTO-FLASH: UN No. 0037

Explosive articles which are dropped from aircraft to provide brief, intense illumination for photography. They contain a charge of detonating explosive with means of initiation not containing two or more effective protective features.

BOMBS, PHOTO-FLASH: UN Nos. 0039, 0299

Explosive articles which are dropped from aircraft to provide brief, intense illumination for photography. They contain a photo-flash composition.

BOMBS with bursting charge: UN Nos. 0034; 0035

Explosive articles which are dropped from aircraft, without means of initiation or with means of initiation containing two or more effective protective features.

BOMBS with bursting charge: UN Nos. 0033, 0291

Explosive articles which are dropped from aircraft, with means of initiation not containing two or more effective protective features.

BOOSTERS WITH DETONATOR: UN Nos. 0225, 0268

Articles consisting of a charge of detonating explosive with means of initiation. They are used to increase the initiating power of detonators or detonating cord.

BOOSTERS without detonator: UN Nos. 0042, 0283

Articles consisting of a charge of detonating explosive without means of initiation. They are used to increase the initiating power of detonators or detonating cord.

BURSTERS, explosive: UN No. 0043

Articles consisting of a small charge of explosive used to open projectiles or other ammunition in order to disperse their contents.

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CARTRIDGES, FLASH: UN Nos. 0049, 0050

Articles consisting of a casing, a primer and flash powder, all assembled in one piece ready for firing.

CARTRIDGES FOR TOOLS, BLANK: UN No. 0014

Article, used in tools, consisting of a closed cartridge case with a centre or rim fire primer with or without a charge of smokeless or black powder but with no projectile.

CARTRIDGES FOR WEAPONS, BLANK: UN Nos. 0326, 0413, 0327, 0338, 0014

Ammunition consisting of a closed cartridge case with a centre or rim fire primer and a charge of smokeless or black powder but no projectile. It produces a loud noise and is used for training, saluting, propelling charge, starter pistols, etc. The term includes ammunition, blank.

CARTRIDGES FOR WEAPONS, INERT PROJECTILE: UN Nos. 0328, 0417, 0339, 0012

Ammunition consisting of a projectile without bursting charge but with a propelling charge with or without a primer. The articles may include a tracer, provided that the predominant hazard is that of the propelling charge.

CARTRIDGES FOR WEAPONS with bursting charge: UN Nos. 0006, 0321, 0412

Ammunition consisting of a projectile with a bursting charge without means of initiation or with means of initiation containing two or more effective protective features; and a propelling charge with or without a primer. The term includes fixed (assembled) ammunition, semi-fixed (partially assembled) ammunition and separate loading ammunition when the components are packed together.

CARTRIDGES FOR WEAPONS with bursting charge: UN Nos. 0005, 0007, 0348

Ammunition consisting of a projectile with a bursting charge with means of initiation not containing two or more effective protective features; and a propelling charge with or without a primer. The term includes fixed (assembled) ammunition, semi-fixed (partially assembled) ammunition and separate loading ammunition when the components are packed together.

CARTRIDGES, OIL WELL: UN Nos. 0277, 0278

Articles consisting of a thin casing of fibreboard, metal or other material containing only propellant powder which projects a hardened projectile to perforate an oil well casing.

NOTE: *CHARGES, SHAPED are not included in this definition. They are listed separately.*

CARTRIDGES, POWER DEVICE: UN Nos. 0275, 0276, 0323, 0381

Articles designed to accomplish mechanical actions. They consist of a casing with a charge of deflagrating explosive and a means of ignition. The gaseous products of the deflagration produce inflation, linear or rotary motion or activate diaphragms, valves or switches or project fastening devices or extinguishing agents.

CARTRIDGES, SIGNAL: UN Nos. 0054, 0312, 0405

Articles designed to fire coloured flares or other signals from signal pistols, etc.

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CARTRIDGES, SMALL ARMS: UN Nos. 0417, 0339, 0012

Ammunition consisting of a cartridge case fitted with a centre or rim fire primer and containing both a propelling charge and solid projectile. They are designed to be fired in weapons of calibre not larger than 19.1 mm. Shot-gun cartridges of any calibre are included in this description.

NOTE: *CARTRIDGES, SMALL ARMS, BLANK, are not included in this definition. They are listed separately. Some military small arms cartridges are not included in this definition. They are listed under CARTRIDGES FOR WEAPONS, INERT PROJECTILE.*

CARTRIDGES, SMALL ARMS, BLANK: UN Nos. 0014, 0327, 0338

Ammunition consisting of a closed cartridge case with a centre or rim fire primer and a charge of smokeless or black powder. The cartridge cases contain no projectiles. The cartridges are designed to be fired from weapons with a calibre of at most 19.1 mm and serve to produce a loud noise and are used for training, saluting, propelling charge, starter pistols, etc.

CASES, CARTRIDGE, EMPTY, WITH PRIMER: UN Nos. 0379; 0055

Articles consisting of a cartridge case made from metal, plastics or other non-inflammable material, in which the only explosive component is the primer.

CASES, COMBUSTIBLE, EMPTY, WITHOUT PRIMER: UN Nos. 0447, 0446

Articles consisting of a cartridge case made partly or entirely from nitrocellulose.

CHARGES, BURSTING, PLASTICS BONDED: UN Nos. 0457, 0458, 0459, 0460

Articles consisting of a charge of detonating explosive, plastics bonded, manufactured in a specific form without a casing and without means of initiation. They are designed as components of ammunition such as warheads.

CHARGES, DEMOLITION: UN No. 0048

Articles containing a charge of a detonating explosive in a casing of fibreboard, plastics, metal or other material. The articles are without means of initiation or with means of initiation containing two or more effective protective features.

NOTE: *The following articles: BOMBS; MINES; PROJECTILES are not included in this definition. They are listed separately.*

CHARGES, DEPTH: UN No. 0056

Articles consisting of a charge of detonating explosive contained in a drum or projectile without means of initiation or with means of initiation containing two or more effective protective features. They are designed to detonate under water.

CHARGES, EXPLOSIVE, COMMERCIAL without detonator: UN Nos. 0442, 0443, 0444, 0445

Articles consisting of a charge of detonating explosive without means of initiation, used for explosive welding, jointing, forming and other metallurgical processes.

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CHARGES, PROPELLING, FOR CANNON: UN Nos. 0242, 0279, 0414

Charges of propellant in any physical form for separate-loading ammunition for cannon.

CHARGES, PROPELLING: UN Nos. 0271, 0272, 0415, 0491

Articles consisting of a charge of a propellant charge in any physical form, with or without a casing, as a component of rocket motors or for reducing the drag of projectiles.

CHARGES, SHAPED, without detonator: UN Nos. 0059, 0439, 0440, 0441

Articles consisting of a casing containing a charge of detonating explosive with a cavity lined with rigid material, without means of initiation. They are designed to produce a powerful, penetrating jet effect.

CHARGES, SHAPED, FLEXIBLE, LINEAR: UN Nos. 0237, 0288

Articles consisting of a V-shaped core of a detonating explosive clad by a flexible sheath.

CHARGES, SUPPLEMENTARY, EXPLOSIVE: UN No. 0060

Articles consisting of a small removable booster placed in the cavity of a projectile between the fuze and the bursting charge.

COMPONENTS, EXPLOSIVE TRAIN, N.O.S.: UN Nos. 0382, 0383, 0384, 0461

Articles containing an explosive designed to transmit detonation or deflagration within an explosive train.

CONTRIVANCES, WATER-ACTIVATED with burster, expelling charge or propelling charge: UN Nos. 0248, 0249

Articles whose functioning depends upon physico-chemical reaction of their contents with water.

CORD, DETONATING, flexible: UN Nos. 0065, 0289

Article consisting of a core of detonating explosive enclosed in spun fabric and a plastics or other covering. The covering is not necessary if the spun fabric is sift-proof.

CORD (FUSE) DETONATING, metal clad: UN Nos. 0102, 0290

Article consisting of a core of detonating explosive clad by a soft metal tube with or without protective covering.

CORD (FUSE) DETONATING, MILD EFFECT, metal clad: UN No. 0104

Article consisting of a core of detonating explosive clad by a soft metal tube with or without a protective covering. The quantity of explosive substance is so small that only a mild effect is manifested outside the cord.

CORD, IGNITER: UN No. 0066

Article consisting of textile yarns covered with black powder or another fast burning pyrotechnic composition and of a flexible protective covering; or it consists of a core of black powder surrounded by a flexible woven fabric. It burns progressively along its length with an external flame and is used to transmit ignition from a device to a charge or primer.

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CUTTERS, CABLE, EXPLOSIVE: UN No. 0070

Articles consisting of a knife-edged device which is driven by a small charge of deflagrating explosive into an anvil.

DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting: UN Nos. 0360, 0361, 0500

Non-electric detonators assembled with and activated by such means as safety fuse, shock tube, flash tube or detonating cord. They may be of instantaneous design or incorporate delay elements. Detonating relays incorporating detonating cord are included.

DETONATORS, ELECTRIC for blasting: UN Nos. 0030, 0255, 0456

Articles specially designed for the initiation of blasting explosives. These detonators may be constructed to detonate instantaneously or may contain a delay element. Electric detonators are activated by an electric current.

DETONATORS FOR AMMUNITION: UN Nos. 0073, 0364, 0365, 0366

Articles consisting of a small metal or plastics tube containing explosives such as lead azide, PETN or combinations of explosives. They are designed to start a detonation train.

DETONATORS, NON-ELECTRIC for blasting: UN Nos. 0029, 0267, 0455

Articles specially designed for the initiation of blasting explosives. These detonators may be constructed to detonate instantaneously or may contain a delay element. Non-electric detonators are activated by such means as shock tube, flash tube, safety fuse, other igniferous device or flexible detonating cord. Detonating relays without detonating cord are included.

EXPLOSIVE, BLASTING, TYPE A: UN No. 0081

Substances consisting of liquid organic nitrates such as nitroglycerine or a mixture of such ingredients with one or more of the following: nitrocellulose; ammonium nitrate or other inorganic nitrates; aromatic nitro-derivatives, or combustible materials, such as wood-meal and aluminium powder. They may contain inert components such as kieselguhr, and additives such as colouring agents and stabilizers. Such explosives shall be in powdery, gelatinous or elastic form. The term includes dynamite; gelatine, blasting and gelatine dynamites.

EXPLOSIVE, BLASTING, TYPE B: UN Nos. 0082, 0331

Substances consisting of

- (a) a mixture of ammonium nitrate or other inorganic nitrates with an explosive such as trinitrotoluene, with or without other substances such as wood-meal and aluminium powder; or
- (b) a mixture of ammonium nitrate or other inorganic nitrates with other combustible substances which are not explosive ingredients. In both cases they may contain inert components such as kieselguhr, and additives such as colouring agents and stabilizers. Such explosives must not contain nitroglycerine, similar liquid organic nitrates or chlorates.

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EXPLOSIVE, BLASTING, TYPE C: UN No. 0083

Substances consisting of a mixture of either potassium or sodium chlorate or potassium, sodium or ammonium perchlorate with organic nitro-derivatives or combustible materials such as wood-meal or aluminium powder or a hydrocarbon. They may contain inert components such as kieselguhr and additives such as colouring agents and stabilizers. Such explosives must not contain nitroglycerine or similar liquid organic nitrates.

EXPLOSIVE, BLASTING, TYPE D: UN No. 0084

Substances consisting of a mixture of organic nitrated compounds and combustible materials such as hydrocarbons and aluminium powder. They may contain inert components such as kieselguhr and additives such as colouring agents and stabilizers. Such explosives must not contain nitroglycerine, similar liquid organic nitrates, chlorates and ammonium nitrate. The term generally includes plastic explosives.

EXPLOSIVES, BLASTING, TYPE E: UN Nos. 0241, 0332

Substances consisting of water as an essential ingredient and high proportions of ammonium nitrate or other oxidizers, some or all of which are in solution. The other constituents may include nitro-derivatives such as trinitrotoluene, hydrocarbons or aluminium powder. They may contain inert components such as kieselguhr and additives such as colouring agents and stabilizers. The term includes explosives, emulsion, explosives, slurry and explosives, wattergel.

FIREWORKS: UN Nos. 0333, 0334, 0335, 0336, 0337

Pyrotechnic articles designed for entertainment.

FLARES, AERIAL: UN Nos. 0093, 0403, 0404, 0420, 0421

Articles containing pyrotechnic substances which are designed to be dropped from an aircraft to illuminate, identify, signal or warn.

FLARES, SURFACE: UN Nos. 0092, 0418, 0419

Articles containing pyrotechnic substances which are designed for use on the surface to illuminate, identify, signal or warn.

FLASH POWDER: UN Nos. 0094, 0305

Pyrotechnic substance which, when ignited, produces an intense light.

FRACTURING DEVICES, EXPLOSIVE without detonator, for oil wells: UN No. 0099

Articles consisting of a charge of detonating explosive contained in a casing without means of initiation. They are used to fracture the rock around a drill shaft to assist the flow of crude oil from the rock.

FUSE, IGNITER, tubular, metal clad: UN No. 0103

Article consisting of a metal tube with a core of deflagrating explosive.

FUSE, NON-DETONATING: UN No. 0101

Article consisting of cotton yarns impregnated with fine black powder (quickmatch). It burns with an external flame and is used in ignition trains for fireworks, etc.

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FUSE, SAFETY: UN No. 0105

Article consisting of a core of fine grained black powder surrounded by a flexible woven fabric with one or more protective outer coverings. When ignited, it burns at a predetermined rate without any external explosive effect.

FUZES, DETONATING: UN Nos. 0106, 0107, 0257, 0367

Articles with explosive components designed to produce a detonation in ammunition. They incorporate mechanical, electrical, chemical or hydrostatic components to initiate the detonation. They generally incorporate protective features.

FUZES, DETONATING with protective features: UN Nos. 0408, 0409, 0410

Articles with explosive components designed to produce a detonation in ammunition. They incorporate mechanical, electrical, chemical or hydrostatic components to initiate the detonation. The detonating fuze must incorporate two or more effective protective features.

FUZES, IGNITING: UN Nos. 0316, 0317, 0368

Articles with primary explosive components designed to produce a deflagration in ammunition. They incorporate mechanical, electrical, chemical or hydrostatic components to start the deflagration. They generally incorporate protective features.

GRENADES, hand or rifle, with bursting charge: UN Nos. 0284, 0285

Articles which are designed to be thrown by hand or to be projected by a rifle. They are without means of initiation or with means of initiation containing two or more effective protective features.

GRENADES, hand or rifle, with bursting charge: UN Nos. 0292, 0293

Articles which are designed to be thrown by hand or to be projected by a rifle. They are with means of initiation not containing two or more effective protective features.

GRENADES, PRACTICE, hand or rifle: UN Nos. 0110, 0372, 0318, 0452

Articles without a main bursting charge which are designed to be thrown by hand or to be projected by a rifle. They contain the priming device and may contain a spotting charge.

HEXOTONAL: UN No. 0393

Substance consisting of an intimate mixture of cyclotrimethylene-trinitramine (RDX), trinitrotoluene (TNT) and aluminium.

HEXOLITE (HEXOTOL), dry or wetted with less than 15% water, by mass: UN No. 0118

Substance consisting of an intimate mixture of cyclotrimethylene-trinitramine (RDX) and trinitrotoluene (TNT). The term includes "Composition B".

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IGNITERS: UN Nos. 0121, 0314, 0315, 0325, 0454

Articles containing one or more explosive substances designed to produce a deflagration in an explosive train. They may be actuated chemically, electrically or mechanically.

NOTE: The following articles: CORD, IGNITER; FUSE, IGNITER; FUSE, NON-DETONATING; FUZES, IGNITING; LIGHTERS, FUSE; PRIMERS, CAP TYPE; PRIMERS, TUBULAR are not included in this definition. They are listed separately.

JET PERFORATING GUNS, CHARGED, oil well, without detonator: UN Nos. 0124, 0494

Articles consisting of a steel tube or metallic strip, into which are inserted shaped charges connected by detonating cord, without means of initiation.

LIGHTERS, FUSE: UN No. 0131

Articles of various design actuated by friction, percussion or electricity and used to ignite safety fuse.

MINES with bursting charge: UN Nos. 0137, 0138

Articles consisting normally of metal or composition receptacles filled with a detonating explosive, without means of initiation or with means of initiation containing two or more effective protective features. They are designed to be operated by the passage of ships, vehicles or personnel. The term includes "Bangalore torpedoes".

MINES with bursting charge: UN Nos. 0136, 0294

Articles consisting normally of metal or composition receptacles filled with a detonating explosive, with means of initiation not containing two or more effective protective features. They are designed to be operated by the passage of ships, vehicles or personnel. The term includes "Bangalore torpedoes".

OCTOLITE (OCTOL), dry or wetted with less than 15% water, by mass: UN No. 0266

Substance consisting of an intimate mixture of cyclotetramethylene-tetranitramine (HMX) and trinitrotoluene (TNT).

OCTONAL: UN No. 0496

Substance consisting of an intimate mixture of cyclotetramethylenetetranitramine (HMX), trinitrotoluene (TNT) and aluminium.

PENTOLITE, dry or wetted with less than 15% water, by mass: UN No. 0151

Substance consisting of an intimate mixture of pentaerythrite tetranitrate (PETN) and trinitrotoluene (TNT).

POWDER CAKE (POWDER PASTE), WETTED with not less than 17% alcohol, by mass;
POWDER CAKE (POWDER PASTE), WETTED with not less than 25% water, by mass:
UN Nos. 0433, 0159

Substance consisting of nitrocellulose impregnated with not more than 60% of nitroglycerine or other liquid organic nitrates or a mixture of these.

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POWDER, SMOKELESS: UN Nos. 0160, 0161, 0509

Substance based on nitrocellulose used as propellant. The term includes propellants with a single base (nitrocellulose (NC) alone), those with a double base (such as NC and nitroglycerine/(NG)) and those with a triple base (such as NC/NG/nitroguanidine).

***NOTE:** Cast, pressed or bag-charges of smokeless powder are listed under CHARGES, PROPELLING or CHARGES, PROPELLING, FOR CANON.*

PRIMERS, CAP TYPE: UN Nos. 0044, 0377, 0378

Articles consisting of a metal or plastics cap containing a small amount of primary explosive mixture that is readily ignited by impact. They serve as igniting elements in small arms cartridges and in percussion primers for propelling charges.

PRIMERS, TUBULAR: UN Nos. 0319, 0320, 0376

Articles consisting of a primer for ignition and an auxiliary charge of deflagrating explosive such as black powder used to ignite the propelling charge in a cartridge case for cannon, etc.

PROJECTILES, inert with tracer: UN Nos. 0345, 0424, 0425

Articles such as a shell or bullet, which are projected from a cannon or other gun, rifle or other small arm.

PROJECTILES with burster or expelling charge: UN Nos. 0346, 0347

Articles such as a shell or bullet, which are projected from a cannon or other gun. They are without means of initiation or with means of initiation containing two or more effective protective features. They are used to scatter dyes for spotting or other inert materials.

PROJECTILES with burster or expelling charge: UN Nos. 0426, 0427

Articles such as a shell or bullet, which are projected from a cannon or other gun. They are with means of initiation not containing two or more effective protective features. They are used to scatter dyes for spotting or other inert materials.

PROJECTILES with burster or expelling charge: UN Nos. 0434, 0435

Articles such as a shell or bullet, which are projected from a cannon or other gun, rifle or other small arm. They are used to scatter dyes for spotting or other inert materials.

PROJECTILES with bursting charge: UN Nos. 0168, 0169, 0344

Articles such as a shell or bullet, which are projected from a cannon or other gun. They are without means of initiation or with means of initiation containing two or more effective protective features.

PROJECTILES with bursting charge: UN Nos. 0167, 0324

Articles such as a shell or bullet, which are projected from a cannon or other gun. They are with means of initiation not containing two or more effective protective features.

PROPELLANT, LIQUID: UN Nos. 0495, 0497

Substance consisting of a deflagrating liquid explosive, used for propulsion.

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PROPELLANT, SOLID: UN Nos. 0498, 0499, 0501

Substance consisting of a deflagrating solid explosive, used for propulsion.

RELEASE DEVICES, EXPLOSIVE: UN No. 0173

Articles consisting of a small charge of explosive with means of initiation and rods or links. They sever the rods or links to release equipment quickly.

RIVETS, EXPLOSIVE: UN No. 0174

Articles consisting of a small charge of explosive inside a metallic rivet.

ROCKET MOTORS: UN Nos. 0186, 0280, 0281

Articles consisting of a charge of explosive, generally a solid propellant, contained in a cylinder fitted with one or more nozzles. They are designed to propel a rocket or a guided missile.

ROCKET MOTORS, LIQUID FUELLED: UN Nos. 0395, 0396

Articles consisting of a liquid fuel within a cylinder fitted with one or more nozzles. They are designed to propel a rocket or a guided missile.

ROCKET MOTORS WITH HYPERGOLIC LIQUIDS with or without expelling charge: UN Nos. 0322, 0250

Articles consisting of a hypergolic fuel contained in a cylinder fitted with one or more nozzles. They are designed to propel a rocket or a guided missile.

ROCKETS, LINE THROWING: UN Nos. 0238, 0240, 0453

Articles consisting of a rocket motor which is designed to extend a line.

ROCKETS, LIQUID FUELLED with bursting charge: UN Nos. 0397, 0398

Articles consisting of a liquid fuel within a cylinder fitted with one or more nozzles and fitted with a warhead. The term includes guided missiles.

ROCKETS with bursting charge: UN Nos. 0181, 0182

Articles consisting of a rocket motor and a warhead without means of initiation or with means of initiation containing two or more effective protective features. The term includes guided missiles.

ROCKETS with bursting charge: UN Nos. 0180, 0295

Articles consisting of a rocket motor and a warhead with means of initiation not containing two or more effective protective features. The term includes guided missiles.

ROCKETS with expelling charge: UN Nos. 0436, 0437, 0438

Articles consisting of a rocket motor and a charge to expel the payload from a rocket head. The term includes guided missiles.

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ROCKETS with inert head: UN Nos. 0183, 0502

Articles consisting of a rocket motor and an inert head. The term includes guided missiles.

SAMPLES, EXPLOSIVE, other than initiating explosive UN No. 0190

New or existing explosive substances or articles, not yet assigned to a name in Table A of Chapter 3.2 and carried in conformity with the instructions of the competent authority and generally in small quantities, *inter alia*, for the purposes of testing, classification, research and development, or quality control, or as commercial samples.

NOTE: *Explosive substances or articles already assigned to another name in Table A of Chapter 3.2 are not included in this definition.*

SIGNAL DEVICES, HAND: UN Nos. 0191, 0373

Portable articles containing pyrotechnic substances which produce visual signals or warnings. The term includes small surface flares such as highway or railway flares and small distress flares.

SIGNALS, DISTRESS, ship: UN Nos. 0194, 0195, 0505, 0506

Articles containing pyrotechnic substances designed to produce signals by means of sound, flame or smoke or any combination thereof.

SIGNALS, RAILWAY TRACK, EXPLOSIVE: UN Nos. 0192, 0193, 0492, 0493

Articles containing a pyrotechnic substance which explodes with a loud report when the article is crushed. They are designed to be placed on a rail.

SIGNALS, SMOKE: UN Nos. 0196, 0197, 0313, 0487, 0507

Articles containing pyrotechnic substances which emit smoke. In addition they may contain devices for emitting audible signals.

SOUNDING DEVICES, EXPLOSIVE: UN Nos. 0374, 0375

Articles consisting of a charge of detonating explosive, without means of initiation or with means of initiation containing two or more effective protective features. They are dropped from ships and function when they reach a predetermined depth or the sea bed.

SOUNDING DEVICES, EXPLOSIVE: UN Nos. 0204, 0296

Articles consisting of a charge of detonating explosive with means of initiation not containing two or more effective protective features. They are dropped from ships and function when they reach a predetermined depth or the sea bed.

SUBSTANCES, EXPLOSIVE, VERY INSENSITIVE (Substances, EVI), N.O.S.: UN No. 0482

Substances presenting a mass explosion hazard but which are so insensitive that there is very little probability of initiation or of transition from burning to detonation under normal conditions of transport, and which have passed Test Series 5.

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TORPEDOES, LIQUID FUELLED with inert head: UN No. 0450

Articles consisting of a liquid explosive system to propel the torpedo through the water, with an inert head.

TORPEDOES, LIQUID FUELLED with or without bursting charge: UN No. 0449

Articles consisting of either a liquid explosive system to propel the torpedo through the water, with or without a warhead; or a liquid non-explosive system to propel the torpedo through the water, with a warhead.

TORPEDOES with bursting charge: UN No. 0451

Articles consisting of a non-explosive system to propel the torpedo through the water, and a warhead without means of initiation or with means of initiation containing two or more effective protective features.

TORPEDOES with bursting charge: UN No. 0329

Articles consisting of an explosive system to propel the torpedo through the water, and a warhead without means of initiation or with means of initiation containing two or more effective protective features.

TORPEDOES with bursting charge: UN No. 0330

Articles consisting of an explosive or non-explosive system to propel the torpedo through the water, and a warhead with means of initiation not containing two or more effective protective features.

TRACERS FOR AMMUNITION: UN Nos. 0212, 0306

Sealed articles containing pyrotechnic substances, designed to reveal the trajectory of a projectile.

TRITONAL: UN No. 0390

Substance consisting of trinitrotoluene (TNT) mixed with aluminium.

WARHEADS, ROCKET with burster or expelling charge: UN No. 0370

Articles consisting of an inert payload and a small charge of detonating or deflagrating explosive, without means of initiation or with means of initiation containing two or more effective protective features. They are designed to be fitted to a rocket motor to scatter inert material. The term includes warheads for guided missiles.

WARHEADS, ROCKET with burster or expelling charge: UN No. 0371

Articles consisting of an inert payload and a small charge of detonating or deflagrating explosive, with means of initiation not containing two or more effective protective features. They are designed to be fitted to a rocket motor to scatter inert material. The term includes warheads for guided missiles.

WARHEADS, ROCKET with bursting charge: UN Nos. 0286, 0287

Articles consisting of a detonating explosive, without means of initiation or with means of initiation containing two or more effective protective features. They are designed to be fitted to a rocket. The term includes warheads for guided missiles.

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WARHEADS, ROCKET with bursting charge: UN No. 0369

Articles consisting of a detonating explosive, with means of initiation not containing two or more effective protective features. They are designed to be fitted to a rocket. The term includes warheads for guided missiles.

WARHEADS, TORPEDO with bursting charge: UN No. 0221

Articles consisting of a detonating explosive, without means of initiation or with means of initiation containing two or more effective protective features. They are designed to be fitted to a torpedo.

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2.2.2 Class 2 Gases

2.2.2.1 Criteria

2.2.2.1.1 The heading of Class 2 covers pure gases, mixtures of gases, mixtures of one or more gases with one or more other substances and articles containing such substances.

A gas is a substance which:

- (a) at 50 °C has a vapour pressure greater than 300 kPa (3 bar); or
- (b) is completely gaseous at 20 °C at the standard pressure of 101.3 kPa.

NOTE 1: *UN No. 1052 HYDROGEN FLUORIDE, ANHYDROUS is nevertheless classified in Class 8.*

NOTE 2: *A pure gas may contain other components deriving from its production process or added to preserve the stability of the product, provided that the level of these components does not change its classification or its conditions of carriage, such as filling ratio, filling pressure, test pressure.*

NOTE 3: *N.O.S. entries in 2.2.2.3 may cover pure gases as well as mixtures.*

2.2.2.1.2 The substances and articles of Class 2 are subdivided as follows:

1. *Compressed gas:* a gas which when packaged under pressure for carriage is entirely gaseous at -50 °C; this category includes all gases with a critical temperature less than or equal to -50 °C;
2. *Liquefied gas:* a gas which when packaged under pressure for carriage is partially liquid at temperatures above -50 °C. A distinction is made between:
 - High pressure liquefied gas:* a gas with a critical temperature above -50 °C and equal to or below +65 °C; and
 - Low pressure liquefied gas:* a gas with a critical temperature above +65 °C;
3. *Refrigerated liquefied gas:* a gas which when packaged for carriage is made partially liquid because of its low temperature;
4. *Dissolved gas:* a gas which when packaged under pressure for carriage is dissolved in a liquid phase solvent;
5. Aerosol dispensers and receptacles, small, containing gas (gas cartridges);
6. Other articles containing gas under pressure;
7. Non-pressurized gases subject to special requirements (gas samples);
8. Chemicals under pressure: liquids, pastes or powders, pressurized with a propellant that meets the definition of a compressed or liquefied gas and mixtures thereof.

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2.2.2.1.3 Substances and articles (except aerosols and chemicals under pressure) of Class 2 are assigned to one of the following groups according to their hazardous properties, as follows:

- A asphyxiant;
- O oxidizing;
- F flammable;
- T toxic;
- TF toxic, flammable;
- TC toxic, corrosive;
- TO toxic, oxidizing;
- TFC toxic, flammable, corrosive;
- TOC toxic, oxidizing, corrosive.

For gases and gas mixtures presenting hazardous properties associated with more than one group according to the criteria, the groups designated by letter T take precedence over all other groups. The groups designated by letter F take precedence over the groups designated by letters A or O.

NOTE 1: *In the UN Model Regulations, the IMDG Code and the ICAO Technical Instructions, gases are assigned to one of the following three divisions, based on the primary hazard:*

- Division 2.1: flammable gases (corresponding to the groups designated by the capital letter F);*
- Division 2.2: non-flammable, non-toxic gases (corresponding to the groups designated by the capital letters A or O);*
- Division 2.3: toxic gases (corresponding to the groups designated by the capital letter T i.e. T, TF, TC, TO, TFC and TOC).*

NOTE 2: *Receptacles, small containing gas (UN No. 2037) shall be assigned to the groups A to TOC according to the hazard of the contents. For aerosols (UN No. 1950), see 2.2.2.1.6. For chemicals under pressure (UN Nos. 3500 to 3505), see 2.2.2.1.7.*

NOTE 3: *Corrosive gases are considered to be toxic, and are therefore assigned to the group TC, TFC or TOC.*

2.2.2.1.4 If a mixture of Class 2 mentioned by name in Table A of Chapter 3.2 meets different criteria as mentioned in 2.2.2.1.2 and 2.2.2.1.5, this mixture shall be classified according to the criteria and assigned to an appropriate N.O.S. entry.

2.2.2.1.5 Substances and articles (except aerosols and chemicals under pressure) of Class 2 which are not mentioned by name in Table A of Chapter 3.2 shall be classified under a collective entry listed in 2.2.2.3 in accordance with 2.2.2.1.2 and 2.2.2.1.3. The following criteria shall apply:

Asphyxiant gases

Gases which are non-oxidizing, non-flammable and non-toxic and which dilute or replace oxygen normally in the atmosphere.

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Flammable gases

Gases which at 20 °C and a standard pressure of 101.3 kPa:

- (a) are ignitable when in a mixture of 13% or less by volume with air; or
- (b) have a flammable range with air of at least 12 percentage points regardless of the lower flammable limit.

Flammability shall be determined by tests or by calculation, in accordance with methods adopted by ISO (see ISO 10156:2010).

Where insufficient data are available to use these methods, tests by a comparable method recognized by the competent authority of the country of origin may be used.

If the country of origin is not a Contracting Party to ADR these methods shall be recognized by the competent authority of the first country Contracting Party to ADR reached by the consignment.

Oxidizing gases

Gases, which may, generally by providing oxygen, cause or contribute to the combustion of other material more than air does. These are pure gases or gas mixtures with an oxidizing power greater than 23.5% as determined by a method specified in ISO 10156:2010.

Toxic gases

NOTE: *Gases meeting the criteria for toxicity in part or completely owing to their corrosivity are to be classified as toxic. See also the criteria under the heading "Corrosive gases" for a possible subsidiary corrosivity risk.*

Gases which:

- (a) are known to be so toxic or corrosive to humans as to pose a hazard to health; or
- (b) are presumed to be toxic or corrosive to humans because they have a LC₅₀ value for acute toxicity equal to or less than 5 000 ml/m³ (ppm) when tested in accordance with 2.2.61.1.

In the case of gas mixtures (including vapours of substances from other classes) the following formula may be used:

$$LC_{50} \text{ Toxic (mixture)} = \frac{1}{\sum_{i=1}^n \frac{f_i}{T_i}}$$

where f_i = mole fraction of the i^{th} component substance of the mixture;

T_i = toxicity index of the i^{th} component substance of the mixture.

The T_i equals the LC₅₀ value as found in packing instruction P200 of 4.1.4.1.

When no LC₅₀ value is listed in packing instruction P200 of 4.1.4.1, a LC₅₀ value available in scientific literature shall be used.

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When the LC₅₀ value is unknown, the toxicity index is determined by using the lowest LC₅₀ value of substances of similar physiological and chemical effects, or through testing if this is the only practical possibility.

Corrosive gases

Gases or gas mixtures meeting the criteria for toxicity completely owing to their corrosivity are to be classified as toxic with a subsidiary corrosivity risk.

A gas mixture that is considered to be toxic due to the combined effects of corrosivity and toxicity has a subsidiary risk of corrosivity when the mixture is known by human experience to be destructive to the skin, eyes or mucous membranes or when the LC₅₀ value of the corrosive components of the mixture is equal to or less than 5 000 ml/m³ (ppm) when the LC₅₀ is calculated by the formula:

$$LC_{50} \text{ Corrosive (mixture)} = \frac{1}{\sum_{i=1}^n \frac{f_{ci}}{T_{ci}}}$$

where f_{ci} = mole fraction of the i^{th} corrosive component substance of the mixture;

T_{ci} = toxicity index of the i^{th} corrosive component substance of the mixture.

The T_{ci} equals the LC₅₀ value as found in packing instruction P200 of 4.1.4.1.

When no LC₅₀ value is listed in packing instruction P200 of 4.1.4.1, a LC₅₀ value available in scientific literature shall be used.

When the LC₅₀ value is unknown the toxicity index is determined by using the lowest LC₅₀ value of substances of similar physiological and chemical effects, or through testing if this is the only practical possibility.

2.2.2.1.6 *Aerosols*

Aerosols (UN No. 1950) are assigned to one of the following groups according to their hazardous properties, as follows:

- A asphyxiant;
- O oxidizing;
- F flammable;
- T toxic;
- C corrosive;
- CO corrosive, oxidizing;
- FC flammable, corrosive;
- TF toxic, flammable;
- TC toxic, corrosive;
- TO toxic, oxidizing;

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TFC toxic, flammable, corrosive;

TOC toxic, oxidizing, corrosive.

The classification depends on the nature of the contents of the aerosol dispenser.

NOTE: *Gases, which meet the definition of toxic gases according to 2.2.2.1.5 and gases identified as "Considered as pyrophoric" by table note c of Table 2 of packing instruction P200 in 4.1.4.1, shall not be used as a propellant in an aerosol dispenser. Aerosols with contents meeting the criteria for packing group I for toxicity or corrosivity shall not be accepted for carriage (see also 2.2.2.2.2).*

The following criteria shall apply:

- (a) Assignment to group A shall apply when the contents do not meet the criteria for any other group according to sub-paragraphs (b) to (f) below;
- (b) Assignment to group O shall apply when the aerosol contains an oxidizing gas according to 2.2.2.1.5;
- (c) Assignment to group F shall apply if the contents include 85% by mass or more flammable components and the chemical heat of combustion is 30 kJ/g or more.

It shall not apply if the contents contain 1% by mass or less flammable components and the heat of combustion is less than 20 kJ/g.

Otherwise the aerosol shall be tested for flammability in accordance with the tests described in the *Manual of Tests and Criteria*, Part III, section 31. Extremely flammable and flammable aerosols shall be assigned to group F;

NOTE: *Flammable components are flammable liquids, flammable solids or flammable gases and gas mixtures as defined in Notes 1 to 3 of sub-section 31.1.3 of Part III of the Manual of Tests and Criteria. This designation does not cover pyrophoric, self-heating or water-reactive substances. The chemical heat of combustion shall be determined by one of the following methods ASTM D 240, ISO/FDIS 13943:1999 (E/F) 86.1 to 86.3 or NFPA 30B.*

- (d) Assignment to group T shall apply when the contents, other than the propellant of aerosol dispensers to be ejected, are classified as Class 6.1, packing groups II or III;
- (e) Assignment to group C shall apply when the contents, other than the propellant of aerosol dispensers to be ejected, meet the criteria for Class 8, packing groups II or III;
- (f) When the criteria for more than one group amongst groups O, F, T, and C are met, assignment to groups CO, FC, TF, TC TO, TFC or TOC shall apply, as relevant.

2.2.2.1.7 *Chemicals under pressure*

Chemicals under pressure (UN Nos. 3500 to 3505) are assigned to one of the following groups according to their hazardous properties, as follows:

- A asphyxiant;
- F flammable;
- T toxic;
- C corrosive;
- FC flammable, corrosive;

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TF toxic, flammable.

The classification depends on the hazard characteristics of the components in the different states:

The propellant;

The liquid; or

The solid.

NOTE 1: *Gases, which meet the definition of toxic gases or of oxidizing gases according to 2.2.2.1.5 or gases identified as "Considered as pyrophoric" by table note c of Table 2 of packing instruction P200 in 4.1.4.1, shall not be used as a propellant in chemicals under pressure.*

NOTE 2: *Chemicals under pressure with contents meeting the criteria for packing group I for toxicity or corrosivity or with contents meeting both the criteria for packing group II or III for toxicity and for packing group II or III for corrosivity shall not be accepted for carriage under these UN numbers.*

NOTE 3: *Chemicals under pressure with components meeting the properties of Class 1; liquid desensitized explosives of Class 3; self-reactive substances and solid desensitized explosives of Class 4.1; Class 4.2; Class 4.3; Class 5.1; Class 5.2; Class 6.2; or Class 7, shall not be used for carriage under these UN numbers.*

NOTE 4: *A chemical under pressure in an aerosol dispenser shall be carried under UN No. 1950.*

The following criteria shall apply:

- (a) *Assignment to group A shall apply when the contents do not meet the criteria for any other group according to sub-paragraphs (b) to (e) below;*
- (b) *Assignment to group F shall apply if one of the components, which can be a pure substance or a mixture, needs to be classified as flammable. Flammable components are flammable liquids and liquid mixtures, flammable solids and solid mixtures or flammable gases and gas mixtures meeting the following criteria:*
 - (i) *A flammable liquid is a liquid having a flashpoint of not more than 93 °C;*
 - (ii) *A flammable solid is a solid which meets the criteria in 2.2.41.1;*
 - (iii) *A flammable gas is a gas which meets the criteria in 2.2.2.1.5;*
- (c) *Assignment to group T shall apply when the contents, other than the propellant, are classified as dangerous goods of Class 6.1, packing groups II or III;*
- (d) *Assignment to group C shall apply when the contents, other than the propellant, are classified as dangerous goods of Class 8, packing groups II or III;*
- (e) *When the criteria for two groups amongst groups F, T, and C are met, assignment to groups FC or TF shall apply, as relevant.*

2.2.2.2 Gases not accepted for carriage

2.2.2.2.1 Chemically unstable substances of Class 2 shall not be accepted for carriage, unless the necessary steps have been taken to prevent all possibility of a dangerous reaction e.g. decomposition, dismutation or polymerisation under normal conditions during transport. To

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this end particular care shall be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions.

2.2.2.2.2 The following substances and mixtures shall not be accepted for carriage:

- UN No. 2186 HYDROGEN CHLORIDE, REFRIGERATED LIQUID;
- UN No. 2421 NITROGEN TRIOXIDE;
- UN No. 2455 METHYL NITRITE;
- Refrigerated liquefied gases which cannot be assigned to classification codes 3A, 3O or 3F;
- Dissolved gases which cannot be classified under UN Nos. 1001, 2073 or 3318;
- Aerosols where gases which are toxic according to 2.2.2.1.5 or pyrophoric according to packing instruction P200 in 4.1.4.1 are used as propellants;
- Aerosols with contents meeting the criteria for packing group I for toxicity or corrosivity (see 2.2.61 and 2.2.8);
- Receptacles, small, containing gases which are very toxic (LC₅₀ lower than 200 ppm) or pyrophoric according to packing instruction P200 in 4.1.4.1.

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2.2.2.3 *List of collective entries*

Compressed gases		
Classification code	UN No.	Name of the substance or article
1 A	1956	COMPRESSED GAS, N.O.S.
1 O	3156	COMPRESSED GAS, OXIDIZING, N.O.S.
1 F	1964	HYDROCARBON GAS MIXTURE, COMPRESSED, N.O.S.
	1954	COMPRESSED GAS, FLAMMABLE, N.O.S.
1T	1955	COMPRESSED GAS, TOXIC, N.O.S.
1 TF	1953	COMPRESSED GAS, TOXIC, FLAMMABLE, N.O.S.
1 TC	3304	COMPRESSED GAS, TOXIC, CORROSIVE, N.O.S.
1 TO	3303	COMPRESSED GAS, TOXIC, OXIDIZING, N.O.S.
1 TFC	3305	COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.
1 TOC	3306	COMPRESSED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.

Liquefied gases		
Classification code	UN No.	Name of the substance or article
2 A	1058 1078	LIQUEFIED GASES, non-flammable, charged with nitrogen, carbon dioxide or air REFRIGERANT GAS, N.O.S. such as mixtures of gases, indicated by the letter R..., which as: Mixture F1, have a vapour pressure at 70 °C not exceeding 1.3 MPa (13 bar) and a density at 50 °C not lower than that of dichlorofluoromethane (1.30 kg/l); Mixture F2, have a vapour pressure at 70 °C not exceeding 1.9 MPa (19 bar) and a density at 50 °C not lower than that of dichlorodifluoromethane (1.21 kg/l); Mixture F3, have a vapour pressure at 70 °C not exceeding 3 MPa (30 bar) and a density at 50 °C not lower than that of chlorodifluoromethane (1.09 kg/l). <i>NOTE: Trichlorofluoromethane (Refrigerant R 11), 1,1,2-trichloro-1,2,2-trifluoroethane (Refrigerant R 113), 1,1,1-trichloro-2,2,2-trifluoroethane (Refrigerant R 113a), 1-chloro-1,2,2-trifluoroethane (Refrigerant R 133) and 1-chloro-1,1,2-trifluoroethane (Refrigerant R 133b) are not substances of Class 2. They may, however, enter into the composition of mixtures F1 to F3.</i>
	1968	INSECTICIDE GAS, N.O.S.
	3163	LIQUEFIED GAS, N.O.S.
2 O	3157	LIQUEFIED GAS, OXIDIZING, N.O.S.
2 F	1010	BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, having a vapour pressure at 70 °C not exceeding 1.1 MPa (11 bar) and a density at 50 °C not lower than 0.525 kg/l. <i>NOTE: Butadienes, stabilized are also classified under UN No. 1010, see Table A of Chapter 3.2.</i>
	1060	METHYLACETYLENE AND PROPADIENE MIXTURE, STABILIZED such as mixtures of methylacetylene and propadiene with hydrocarbons, which as: Mixture P1, contain not more than 63% methylacetylene and propadiene by volume and not more than 24% propane and propylene by volume, the percentage of C ₄ - saturated hydrocarbons being not less than 14% by volume; and as Mixture P2, contain not more than 48% methylacetylene and propadiene by volume and not more than 50% propane and propylene by volume, the percentage of C ₄ - saturated hydrocarbons being not less than 5% by volume, as well as mixtures of propadiene with 1 to 4% methylacetylene.

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Liquefied gases (cont'd)		
Classification code	UN No.	Name of the substance or article
2 F <i>(cont'd)</i>	1965	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. such as mixtures, which as: Mixture A, have a vapour pressure at 70 °C not exceeding 1.1 MPa (11 bar) and a density at 50 °C not lower than 0.525 kg/l; Mixture A01, have a vapour pressure at 70 °C not exceeding 1.6 MPa (16 bar) and a relative density at 50 °C not lower than 0.516 kg/l; Mixture A02, have a vapour pressure at 70 °C not exceeding 1.6 MPa (16 bar) and a relative density at 50 °C not lower than 0.505 kg/l; Mixture A0, have a vapour pressure at 70 °C not exceeding 1.6 MPa (16 bar) and a density at 50 °C not lower than 0.495 kg/l; Mixture A1, have a vapour pressure at 70 °C not exceeding 2.1 MPa (21 bar) and a density at 50 °C not lower than 0.485 kg/l; Mixture B1 have a vapour pressure at 70 °C not exceeding 2.6 MPa (26 bar) and a relative density at 50 °C not lower than 0.474 kg/l; Mixture B2 have a vapour pressure at 70 °C not exceeding 2.6 MPa (26 bar) and a relative density at 50 °C not lower than 0.463 kg/l; Mixture B, have a vapour pressure at 70 °C not exceeding 2.6 MPa (26 bar) and a density at 50 °C not lower than 0.450 kg/l; Mixture C, have a vapour pressure at 70 °C not exceeding 3.1 MPa (31 bar) and a relative density at 50 °C not lower than 0.440 kg/l; NOTE 1: <i>In the case of the foregoing mixtures, the use of the following names customary in the trade is permitted for describing these substances: for mixtures A, A01, A02 and A0: BUTANE; for mixture C: PROPANE.</i> NOTE 2: <i>UN No. 1075 PETROLEUM GASES, LIQUEFIED may be used as an alternative entry for UN No. 1965 HYDROCARBON GAS MIXTURE LIQUEFIED, N.O.S. for carriage prior to or following maritime or air carriage.</i>
	3354	INSECTICIDE GAS, FLAMMABLE, N.O.S.
	3161	LIQUEFIED GAS, FLAMMABLE, N.O.S.
2 T	1967	INSECTICIDE GAS, TOXIC, N.O.S.
	3162	LIQUEFIED GAS, TOXIC, N.O.S.
2 TF	3355	INSECTICIDE GAS, TOXIC, FLAMMABLE, N.O.S.
	3160	LIQUEFIED GAS, TOXIC, FLAMMABLE, N.O.S.
2 TC	3308	LIQUEFIED GAS, TOXIC, CORROSIVE, N.O.S.
2 TO	3307	LIQUEFIED GAS, TOXIC, OXIDIZING, N.O.S.
2 TFC	3309	LIQUEFIED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.
2 TOC	3310	LIQUEFIED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.

Refrigerated liquefied gases		
Classification code	UN No.	Name of the substance or article
3 A	3158	GAS, REFRIGERATED LIQUID, N.O.S.
3 O	3311	GAS, REFRIGERATED LIQUID, OXIDIZING, N.O.S.
3 F	3312	GAS, REFRIGERATED LIQUID, FLAMMABLE, N.O.S.

Dissolved gases		
Classification code	UN No.	Name of the substance or article
4		Only substances listed in Table A of Chapter 3.2 are to be accepted for carriage.

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Aerosols and receptacles, small, containing gas		
Classification code	UN No.	Name of the substance or article
5	1950	AEROSOLS
	2037	RECEPTACLES, SMALL CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable

Other articles containing gas under pressure		
Classification code	UN No.	Name of the substance or article
6A	2857	REFRIGERATING MACHINES containing non-flammable, non-toxic gases or ammonia solutions (UN 2672)
	3164	ARTICLES, PRESSURIZED, PNEUMATIC (containing non-flammable gas) or
	3164	ARTICLES, PRESSURIZED, HYDRAULIC (containing non-flammable gas)
6F	3150	DEVICES, SMALL, HYDROCARBON GAS POWERED or
	3150	HYDROCARBON GAS REFILLS FOR SMALL DEVICES, with release device
	3478	FUEL CELL CARTRIDGES, containing liquefied flammable gas or
	3478	FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT, containing liquefied flammable gas or
	3478	FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing liquefied flammable gas
	3479	FUEL CELL CARTRIDGES, containing hydrogen in metal hydride or
	3479	FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT, containing hydrogen in metal hydride or
3479	FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing hydrogen in metal hydride	

Gas samples		
Classification code	UN No.	Name of the substance or article
7 F	3167	GAS SAMPLE, NON-PRESSURIZED, FLAMMABLE, N.O.S., not refrigerated liquid
7 T	3169	GAS SAMPLE, NON-PRESSURIZED, TOXIC, N.O.S., not refrigerated liquid
7 TF	3168	GAS SAMPLE, NON-PRESSURIZED, TOXIC, FLAMMABLE, N.O.S., not refrigerated liquid

Chemicals under pressure		
Classification code	UN No.	Name of the substance or article
8A	3500	CHEMICAL UNDER PRESSURE, N.O.S.
8F	3501	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.
8T	3502	CHEMICAL UNDER PRESSURE, TOXIC, N.O.S.
8C	3503	CHEMICAL UNDER PRESSURE, CORROSIVE, N.O.S.
8TF	3504	CHEMICAL UNDER PRESSURE, FLAMMABLE, TOXIC, N.O.S.
8FC	3505	CHEMICAL UNDER PRESSURE, FLAMMABLE, CORROSIVE, N.O.S.

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2.2.3 Class 3 Flammable liquids

2.2.3.1 Criteria

2.2.3.1.1 The heading of Class 3 covers substances and articles containing substances of this Class which:

- are liquids according to subparagraph (a) of the definition for "liquid" in 1.2.1;
- have at 50 °C a vapour pressure of not more than 300 kPa (3 bar) and are not completely gaseous at 20 °C and at standard pressure of 101.3 kPa; and
- have a flash-point of not more than 60 °C (see 2.3.3.1 for the relevant test).

The heading of Class 3 also covers liquid substances and molten solid substances with a flash-point of more than 60°C and which are carried or handed over for carriage whilst heated at temperatures equal to or higher than their flash-point. These substances are assigned to UN No. 3256.

The heading of Class 3 also covers liquid desensitized explosives. Liquid desensitized explosives are explosive substances which are dissolved or suspended in water or other liquid substances, to form an homogeneous liquid mixture to suppress their explosive properties. Such entries in Table A of Chapter 3.2 are UN Nos. 1204, 2059, 3064, 3343, 3357 and 3379.

NOTE 1: *Substances having a flash-point above 35 °C, which do not sustain combustion according to the criteria of sub-section 32.2.5 of Part III of the Manual of Tests and Criteria, are not substances of Class 3; if, however, these substances are handed over for carriage and carried whilst heated at temperatures equal to or higher than their flash-point, they are substances of Class 3.*

NOTE 2: *By derogation from paragraph 2.2.3.1.1 above, diesel fuel, gasoil, heating oil (light) including synthetically manufactured products having a flash-point above 60 °C and not more than 100 °C shall be deemed substances of Class 3, UN No. 1202.*

NOTE 3: *Liquids which are highly toxic on inhalation, having a flash-point below 23 °C and toxic substances, having a flash-point of 23 °C or above are substances of Class 6.1 (see 2.2.61.1).*

NOTE 4: *Flammable liquid substances and preparations used as pesticides, which are highly toxic, toxic or slightly toxic and have a flash-point of 23 °C or above are substances of Class 6.1 (see 2.2.61.1).*

2.2.3.1.2 The substances and articles of Class 3 are subdivided as follows:

- F Flammable liquids, without subsidiary risk and articles containing such substances:
 - F1 Flammable liquids having a flash-point of or below 60 °C;
 - F2 Flammable liquids having a flash-point above 60 °C which are carried or handed over for carriage at or above their flash-point (elevated temperature substances);
 - F3 Articles containing flammable liquids;
- FT Flammable liquids, toxic:
 - FT1 Flammable liquids, toxic;
 - FT2 Pesticides;

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- FC Flammable liquids, corrosive;
 FTC Flammable liquids, toxic, corrosive;
 D Liquid desensitized explosives.

2.2.3.1.3 Substances and articles classified in Class 3 are listed in Table A of Chapter 3.2. Substances not mentioned by name in Table A of Chapter 3.2 shall be assigned to the relevant entry of 2.2.3.3 and the relevant packing group in accordance with the provisions of this section. Flammable liquids shall be assigned to one of the following packing groups according to the degree of danger they present for carriage:

Packing group	Flash point (closed cup)	Initial boiling point
I	--	≤ 35°C
II ^a	< 23°C	> 35°C
III ^a	≥ 23°C ≤ 60°C	> 35°C

^a See also 2.2.3.1.4.

For a liquid with (a) subsidiary risk(s), the packing group determined in accordance with the table above and the packing group based on the severity of the subsidiary risk(s) shall be considered; the classification and packing group shall then be determined in accordance with the table of precedence of hazards in 2.1.3.10.

2.2.3.1.4 Liquid or viscous mixtures and preparations, including those containing no more than 20% nitrocellulose with a nitrogen content not exceeding 12.6% (by dry mass), shall be assigned to packing group III only if the following requirements are met:

- (a) the height of the separated layer of solvent is less than 3% of the total height of the sample in the solvent-separation test (see Manual of Tests and Criteria, Part III, sub-section 32.5.1); and
- (b) the viscosity² and flash-point are in accordance with the following table:

Kinematic viscosity (extrapolated) ν (at near-zero shear rate) mm^2/s at 23 °C	Flow time t in accordance with ISO 2431:1993		Flash-point in °C
	in s	Jet diameter in mm	
20 < ν ≤ 80	20 < t ≤ 60	4	above 17
80 < ν ≤ 135	60 < t ≤ 100	4	above 10
135 < ν ≤ 220	20 < t ≤ 32	6	above 5
220 < ν ≤ 300	32 < t ≤ 44	6	above -1
300 < ν ≤ 700	44 < t ≤ 100	6	above -5
700 < ν	100 < t	6	-5 and below

² *Viscosity determination:* Where the substance concerned is non-Newtonian, or where a flow cup method of viscosity determination is otherwise unsuitable, a variable shear-rate viscometer shall be used to determine the dynamic viscosity coefficient of the substance, at 23 °C, at a number of shear rates. The values obtained are plotted against shear rate and then extrapolated to zero shear rate. The dynamic viscosity thus obtained, divided by the density, gives the apparent kinematic viscosity at near-zero shear rate.

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NOTE: Mixtures containing more than 20% but not more than 55% nitrocellulose with a nitrogen content not exceeding 12.6% by dry mass are substances assigned to UN No. 2059.

Mixtures having a flash-point below 23 °C and containing:

- more than 55% nitrocellulose, whatever their nitrogen content; or
- not more than 55% nitrocellulose with a nitrogen content above 12.6% by dry mass,

are substances of Class 1 (UN Nos. 0340 or 0342) or of Class 4.1 (UN Nos. 2555, 2556 or 2557).

2.2.3.1.5 Non-toxic, non-corrosive and non-environmentally hazardous solutions and homogeneous mixtures having a flash-point of 23 °C or above (viscous substances, such as paints or varnishes, excluding substances containing more than 20% nitrocellulose) packed in receptacles of less than 450 litres capacity, are not subject to ADR if, in the solvent-separation test (see Manual of Tests and Criteria, Part III, sub-section 32.5.1), the height of the separated layer of solvent is less than 3% of the total height, and if the substances at 23 °C have, in the flow cup conforming to ISO 2431:1993 having a jet 6 mm in diameter, a flow time of:

- (a) not less than 60 seconds; or
- (b) not less than 40 seconds and contain not more than 60% of substances of Class 3.

2.2.3.1.6 If substances of Class 3, as a result of admixtures, come into categories of risk different from those to which the substances mentioned by name in Table A of Chapter 3.2 belong, these mixtures or solutions shall be assigned to the entries to which they belong on the basis of their actual degree of danger.

NOTE: For the classification of solutions and mixtures (such as preparations and wastes) see also 2.1.3.

2.2.3.1.7 On the basis of the test procedures in accordance with 2.3.3.1 and 2.3.4, and the criteria set out in 2.2.3.1.1, it may also be determined whether the nature of a solution or a mixture mentioned by name or containing a substance mentioned by name is such that the solution or mixture is not subject to the provisions for this Class (see also 2.1.3).

2.2.3.2 Substances not accepted for carriage

2.2.3.2.1 Substances of Class 3 which are liable to form peroxides easily (as happens with ethers or with certain heterocyclic oxygenated substances) shall not be accepted for carriage if their peroxide content, calculated as hydrogen peroxide (H₂O₂), exceeds 0.3%. The peroxide content shall be determined as indicated in 2.3.3.3.

2.2.3.2.2 The chemically unstable substances of Class 3 shall not be accepted for carriage unless the necessary steps have been taken to prevent their dangerous decomposition or polymerization during carriage. To this end, it shall be ensured in particular that receptacles and tanks do not contain any substance liable to promote these reactions.

2.2.3.2.3 Liquid desensitized explosives other than those listed in Table A of Chapter 3.2 shall not be accepted for carriage as substances of Class 3.

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2.2.3.3 *List of collective entries (cont'd)*

Toxic	FT1	1228 MERCAPTANS, LIQUID, FLAMMABLE, TOXIC, N.O.S. or 1228 MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, TOXIC, N.O.S. 1986 ALCOHOLS, FLAMMABLE, TOXIC, N.O.S. 1988 ALDEHYDES, FLAMMABLE, TOXIC, N.O.S. 2478 ISOCYANATES, FLAMMABLE, TOXIC, N.O.S. or 2478 ISOCYANATE SOLUTION, FLAMMABLE, TOXIC, N.O.S. 3248 MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S. 3273 NITRILES, FLAMMABLE, TOXIC, N.O.S. 1992 FLAMMABLE LIQUID, TOXIC, N.O.S.
		FT2
FT	pesticide (f.p<23 °C)	2758 CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2760 ARSENICAL PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2762 ORGANOCHLORINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2764 TRIAZINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2772 THIOCARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2776 COPPER BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2778 MERCURY BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2780 SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2782 BIPYRIDILIUM PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2784 ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC 2787 ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC 3024 COUMARIN DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC 3346 PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC 3350 PYRETHROID PESTICIDE, LIQUID, FLAMMABLE TOXIC 3021 PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S. <i>NOTE: The classification of a pesticide under an entry shall be effected on the basis of the active ingredient, of the physical state of the pesticide and any subsidiary risks it may exhibit.</i>
Corrosive	FC	3469 PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or 3469 PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning or reducing compound) 2733 AMINES, FLAMMABLE, CORROSIVE, N.O.S. or 2733 POLYAMINES, FLAMMABLE, CORROSIVE, N.O.S. 2985 CHLOROSILANES, FLAMMABLE, CORROSIVE, N.O.S. 3274 ALCOHOLATES SOLUTION, N.O.S., in alcohol 2924 FLAMMABLE LIQUID, CORROSIVE, N.O.S.
Toxic, corrosive	FTC	3286 FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.
Liquid desensitised explosive	D	3343 NITROGLYCERIN MIXTURE, DESENSITIZED, LIQUID, FLAMMABLE, N.O.S. with not more than 30% nitroglycerin by mass 3357 NITROGLYCERIN MIXTURE, DESENSITIZED, LIQUID, N.O.S. with not more than 30% nitroglycerin by mass 3379 DESENSITIZED EXPLOSIVE, LIQUID, N.O.S.

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2.2.41 Class 4.1 Flammable solids, self-reactive substances and solid desensitized explosives

2.2.41.1 Criteria

2.2.41.1.1 The heading of Class 4.1 covers flammable substances and articles, desensitized explosives which are solids according to subparagraph (a) of the definition "solid" in 1.2.1 and self-reactive liquids or solids.

The following are assigned to Class 4.1:

- readily flammable solid substances and articles (see paragraphs 2.2.41.1.3 to 2.2.41.1.8);
- self-reactive solids or liquids (see paragraphs 2.2.41.1.9 to 2.2.41.1.17);
- solid desensitized explosives (see 2.2.41.1.18);
- substances related to self-reactive substances (see 2.2.41.1.19).

2.2.41.1.2 The substances and articles of Class 4.1 are subdivided as follows:

F Flammable solids, without subsidiary risk:

- F1 Organic;
- F2 Organic, molten;
- F3 Inorganic;

FO Flammable solids, oxidizing;

FT Flammable solids, toxic:

- FT1 Organic, toxic;
- FT2 Inorganic, toxic;

FC Flammable solids, corrosive:

- FC1 Organic, corrosive;
- FC2 Inorganic, corrosive;

D Solid desensitized explosives without subsidiary risk;

DT Solid desensitized explosives, toxic;

SR Self-reactive substances:

- SR1 Not requiring temperature control;
- SR2 Requiring temperature control.

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Flammable solids

Definition and properties

2.2.41.1.3 *Flammable solids* are readily combustible solids and solids which may cause fire through friction.

Readily combustible solids are powdered, granular, or pasty substances which are dangerous if they can be easily ignited by brief contact with an ignition source, such as a burning match, and if the flame spreads rapidly. The danger may come not only from the fire but also from toxic combustion products. Metal powders are especially dangerous because of the difficulty of extinguishing a fire since normal extinguishing agents such as carbon dioxide or water can increase the hazard.

Classification

2.2.41.1.4 Substances and articles classified as flammable solids of Class 4.1 are listed in Table A of Chapter 3.2. The assignment of organic substances and articles not mentioned by name in Table A of Chapter 3.2 to the relevant entry of sub-section 2.2.41.3 in accordance with the provisions of Chapter 2.1 can be based on experience or on the results of the test procedures in accordance with Part III, sub-section 33.2.1 of the Manual of Tests and Criteria. The assignment of inorganic substances not mentioned by name shall be based on the results of the test procedures in accordance with Part III, sub-section 33.2.1 of the Manual of Tests and Criteria; experience shall also be taken into account when it leads to a more stringent assignment.

2.2.41.1.5 When substances not mentioned by name are assigned to one of the entries listed in 2.2.41.3 on the basis of the test procedures in accordance with the Manual of Tests and Criteria, Part III, sub-section 33.2.1, the following criteria apply:

- (a) With the exception of metal powders or powders of metal alloys, powdery, granular or pasty substances shall be classified as readily flammable substances of Class 4.1 if they can be easily ignited by brief contact with an ignition source (e.g. a burning match), or if, in the event of ignition, the flame spreads rapidly, the burning time is less than 45 seconds for a measured distance of 100 mm or the rate of burning is greater than 2.2 mm/s;
- (b) Metal powders or powders of metal alloys shall be assigned to Class 4.1 if they can be ignited by a flame and the reaction spreads over the whole length of the sample in 10 minutes or less.

Solids which may cause fire through friction shall be classified in Class 4.1 by analogy with existing entries (e.g. matches) or in accordance with any appropriate special provision.

2.2.41.1.6 On the basis of the test procedure in accordance with the Manual of Tests and Criteria, Part III, Section 33.2.1 and the criteria set out in 2.2.41.1.4 and 2.2.41.1.5, it may also be determined whether the nature of a substance mentioned by name is such that the substance is not subject to the provisions for this Class.

2.2.41.1.7 If substances of Class 4.1, as a result of admixtures, come into different categories of risk from those to which the substances mentioned by name in Table A of Chapter 3.2 belong, these mixtures shall be assigned to the entries to which they belong on the basis of their actual degree of danger.

NOTE: For the classification of solutions and mixtures (such as preparations and wastes), see also 2.1.3.

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Assignment of packing groups

2.2.41.1.8 Flammable solids classified under the various entries in Table A of Chapter 3.2 shall be assigned to packing groups II or III on the basis of test procedures of the Manual of Tests and Criteria, Part III, sub-section 33.2.1, in accordance with the following criteria:

- (a) Readily flammable solids which, when tested, have a burning time of less than 45 seconds over a measured distance of 100 mm shall be assigned to:

Packing group II: if the flame passes the wetted zone;

Packing group III: if the wetted zone stops the flame for at least four minutes;

- (b) Metal powders or powders of metal alloys shall be assigned to:

Packing group II: if, when tested, the reaction spreads over the whole length of the sample in five minutes or less;

Packing group III: if, when tested, the reaction spreads over the whole length of the sample in more than five minutes.

For solids which may cause fire through friction, the packing group shall be assigned by analogy with existing entries or in accordance with any special provision.

Self-reactive substances

Definitions

2.2.41.1.9 For the purposes of ADR, *self-reactive substances* are thermally unstable substances liable to undergo a strongly exothermic decomposition even without participation of oxygen (air). Substances are not considered to be self-reactive substances of Class 4.1, if:

- (a) they are explosives according to the criteria of Class 1;
- (b) they are oxidizing substances according to the classification procedure for Class 5.1 (see 2.2.51.1) except that mixtures of oxidizing substances which contain 5% or more of combustible organic substances shall be subjected to the classification procedure defined in Note 2;
- (c) they are organic peroxides according to the criteria of Class 5.2 (see 2.2.52.1);
- (d) their heat of decomposition is less than 300 J/g; or
- (e) their self-accelerating decomposition temperature (SADT) (see Note 3 below) is greater than 75 °C for a 50 kg package.

NOTE 1: *The heat of decomposition can be determined using any internationally recognised method e.g. differential scanning calorimetry and adiabatic calorimetry.*

NOTE 2: *Mixtures of oxidizing substances meeting the criteria of Class 5.1 which contain 5% or more of combustible organic substances, which do not meet the criteria mentioned in (a), (c), (d) or (e) above, shall be subjected to the self-reactive substance classification procedure.*

A mixture showing the properties of a self-reactive substance, type B to F, shall be classified as a self-reactive substance of Class 4.1.

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A mixture showing the properties of a self-reactive substance, type G, according to the principle given in sub-section 20.4.3 (g) of Part II of the Manual of Tests and Criteria shall be considered for classification as a substance of Class 5.1 (see 2.2.51.1).

NOTE 3: *The self-accelerating decomposition temperature (SADT) is the lowest temperature at which self-accelerating decomposition may occur with a substance in the packaging as used during carriage. Requirements for the determination of the SADT are given in the Manual of Tests and Criteria, Part II, Chapter 20 and section 28.4.*

NOTE 4: *Any substance which shows the properties of a self-reactive substance shall be classified as such, even if this substance gives a positive test result according to 2.2.42.1.5 for inclusion in Class 4.2.*

Properties

- 2.2.41.1.10 The decomposition of self-reactive substances can be initiated by heat, contact with catalytic impurities (e.g. acids, heavy-metal compounds, bases), friction or impact. The rate of decomposition increases with temperature and varies with the substance. Decomposition, particularly if no ignition occurs, may result in the evolution of toxic gases or vapours. For certain self-reactive substances, the temperature shall be controlled. Some self-reactive substances may decompose explosively, particularly if confined. This characteristic may be modified by the addition of diluents or by the use of appropriate packagings. Certain self-reactive substances burn vigorously. Self-reactive substances are, for example, some compounds of the types listed below:

aliphatic azo compounds (-C-N=N-C-);
organic azides (-C-N₃);
diazonium salts (-CN₂⁺ Z⁻);
N-nitroso compounds (-N-N=O); and
aromatic sulphohydrazides (-SO₂-NH-NH₂).

This list is not exhaustive and substances with other reactive groups and some mixtures of substances may have similar properties.

Classification

- 2.2.41.1.11 Self-reactive substances are classified into seven types according to the degree of danger they present. The types of self-reactive substances range from type A, which is not accepted for carriage in the packaging in which it is tested, to type G, which is not subject to the provisions for self-reactive substances of Class 4.1. The classification of types B to F is directly related to the maximum quantity allowed in one packaging. The principles to be applied for classification as well as the applicable classification procedures, test methods and criteria and an example of a suitable test report are given in Part II of the Manual of Tests and Criteria.
- 2.2.41.1.12 Self-reactive substances which have already been classified and are already permitted for carriage in packagings are listed in 2.2.41.4, those already permitted for carriage in IBCs are listed in 4.1.4.2, packing instruction IBC520 and those already permitted for carriage in tanks according to Chapter 4.2 are listed in 4.2.5.2, portable tank instruction T23. Each permitted substance listed is assigned to a generic entry of Table A of Chapter 3.2 (UN Nos. 3221 to 3240), and appropriate subsidiary risks and remarks providing relevant transport information are given.

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The collective entries specify:

- self-reactive substances types B to F, see 2.2.41.1.11 above;
- physical state (liquid/solid); and
- temperature control (when required), see 2.2.41.1.17 below.

The classification of the self-reactive substances listed in 2.2.41.4 is based on the technically pure substance (except where a concentration of less than 100% is specified).

- 2.2.41.1.13 Classification of self-reactive substances not listed in 2.2.41.4, 4.1.4.2, packing instruction IBC520 or 4.2.5.2, portable tank instruction T23 and assignment to a collective entry shall be made by the competent authority of the country of origin on the basis of a test report. The statement of approval shall contain the classification and the relevant conditions of carriage. If the country of origin is not a Contracting Party to ADR, the classification and the conditions of carriage shall be recognized by the competent authority of the first country Contracting Party to ADR reached by the consignment.
- 2.2.41.1.14 Activators, such as zinc compounds, may be added to some self-reactive substances to change their reactivity. Depending on both the type and the concentration of the activator, this may result in a decrease in thermal stability and a change in explosive properties. If either of these properties is altered, the new formulation shall be assessed in accordance with the classification procedure.
- 2.2.41.1.15 Samples of self-reactive substances or formulations of self-reactive substances not listed in 2.2.41.4, for which a complete set of test results is not available and which are to be carried for further testing or evaluation, shall be assigned to one of the appropriate entries for self-reactive substances type C provided the following conditions are met:
- the available data indicate that the sample would be no more dangerous than self-reactive substances type B;
 - the sample is packaged in accordance with packing method OP2 and the quantity per transport unit is limited to 10 kg;
 - the available data indicate that the control temperature, if any, is sufficiently low to prevent any dangerous decomposition and sufficiently high to prevent any dangerous phase separation.

Desensitization

- 2.2.41.1.16 In order to ensure safety during carriage, self-reactive substances are in many cases desensitized by use of a diluent. Where a percentage of a substance is stipulated, this refers to the percentage by mass, rounded to the nearest whole number. If a diluent is used, the self-reactive substance shall be tested with the diluent present in the concentration and form used in carriage. Diluents which may allow a self-reactive substance to concentrate to a dangerous extent in the event of leakage from a packaging shall not be used. Any diluent shall be compatible with the self-reactive substance. In this regard, compatible diluents are those solids or liquids which have no detrimental influence on the thermal stability and hazard type of the self-reactive substance. Liquid diluents in formulations requiring temperature control (see 2.2.41.1.14) shall have a boiling point of at least 60 °C and a flash-point not less than 5 °C. The boiling point of the liquid shall be at least 50 °C higher than the control temperature of the self-reactive substance.

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Temperature control requirements

- 2.2.41.1.17 Certain self-reactive substances may only be carried under temperature controlled conditions. The control temperature is the maximum temperature at which the self-reactive substance can be safely carried. It is assumed that the temperature of the immediate surroundings of a package only exceeds 55 °C during carriage for a relatively short time in a 24 hour period. In the event of loss of temperature control, it may be necessary to implement emergency procedures. The emergency temperature is the temperature at which such procedures shall be implemented.

The control and emergency temperatures are derived from the SADT (see table 1). The SADT shall be determined in order to decide whether a substance shall be subjected to temperature control during carriage. Provisions for the determination of the SADT are given in the Manual of Tests and Criteria, Part II, Chapter 20 and Section 28.4.

Table 1: Derivation of control and emergency temperatures

Type of receptacle	SADT ^a	Control temperature	Emergency temperature
Single packagings and IBCs	20 °C or less	20 °C below SADT	10 °C below SADT
	over 20 °C to 35 °C	15 °C below SADT	10 °C below SADT
	over 35 °C	10 °C below SADT	5 °C below SADT
Tanks	not greater than 50 °C	10 °C below SADT	5 °C below SADT

^a *SADT of the substance as packaged for carriage.*

Self-reactive substances with an SADT not greater than 55 °C shall be subject to temperature control during carriage. Where applicable, control and emergency temperatures are listed in 2.2.41.4. The actual temperature during carriage may be lower than the control temperature but shall be selected so as to avoid dangerous separation of phases.

Solid desensitized explosives

- 2.2.41.1.18 Solid desensitized explosives are substances which are wetted with water or alcohols or are diluted with other substances to suppress their explosive properties. Such entries in Table A of Chapter 3.2 are: UN Nos. 1310, 1320, 1321, 1322, 1336, 1337, 1344, 1347, 1348, 1349, 1354, 1355, 1356, 1357, 1517, 1571, 2555, 2556, 2557, 2852, 2907, 3317, 3319, 3344, 3364, 3365, 3366, 3367, 3368, 3369, 3370, 3376, 3380 and 3474.

Substances related to self-reactive substances

- 2.2.41.1.19 Substances that:
- have been provisionally accepted into Class 1 according to Test Series 1 and 2 but exempted from Class 1 by Test Series 6;
 - are not self-reactive substances of Class 4.1; and
 - are not substances of Classes 5.1 or 5.2;

are also assigned to Class 4.1. UN Nos. 2956, 3241, 3242 and 3251 are such entries.

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2.2.41.2 *Substances not accepted for carriage*

2.2.41.2.1 The chemically unstable substances of Class 4.1 shall not be accepted for carriage unless the necessary steps have been taken to prevent their dangerous decomposition or polymerization during carriage. To this end, it shall in particular be ensured that receptacles and tanks do not contain any substance liable to promote these reactions.

2.2.41.2.2 Flammable solids, oxidizing, assigned to UN No. 3097 shall not be accepted for carriage unless they meet the requirements for Class 1 (see also 2.1.3.7).

2.2.41.2.3 The following substances shall not be accepted for carriage:

- Self-reactive substances of type A (see Manual of Tests and Criteria, Part II, paragraph 20.4.2 (a));
- Phosphorus sulphides which are not free from yellow and white phosphorus;
- Solid sensitized explosives other than those listed in Table A of Chapter 3.2;
- Inorganic flammable substances in the molten form other than UN No. 2448 SULPHUR, MOLTEN.

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2.2.41.3 *List of collective entries*

Flammable solids	without subsidiary risk	organic	F1	3175 SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S. 1353 FIBRES IMPREGNATED WITH WEAKLY NITRATED NITROCELLULOSE, N.O.S. or 1353 FABRICS IMPREGNATED WITH WEAKLY NITRATED NITROCELLULOSE, N.O.S. 1325 FLAMMABLE SOLID, ORGANIC, N.O.S.	
		molten	F2	3176 FLAMMABLE SOLID, ORGANIC, MOLTEN, N.O.S.	
		inorganic	F3	3089 METAL POWDER, FLAMMABLE, N.O.S. ^{a b} 3181 METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S. 3182 METAL HYDRIDES, FLAMMABLE, N.O.S. ^c 3178 FLAMMABLE SOLID, INORGANIC, N.O.S.	
	oxidizing	FO	3097 FLAMMABLE SOLID, OXIDIZING, N.O.S. (not allowed, see para. 2.2.41.2.2)		
	Solid desensitized explosives	toxic	organic	FT1	2926 FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.
			inorganic	FT2	3179 FLAMMABLE SOLID, TOXIC, INORGANIC, N.O.S.
corrosive		organic	FC1	2925 FLAMMABLE SOLID, CORROSIVE, ORGANIC, N.O.S.	
		inorganic	FC2	3180 FLAMMABLE SOLID, CORROSIVE, INORGANIC, N.O.S.	
without subsidiary risk		D	3319 NITROGLYCERIN MIXTURE, DESENSITIZED, SOLID, N.O.S. with more than 2% but not more than 10% nitroglycerin by mass 3344 PENTAERYTHRITOL TETRANITRATE (PENTAERYTHRITOL TETRANITRATE, PETN) MIXTURE, DESENSITIZED, SOLID, N.O.S. with more than 10% but not more than 20% PETN by mass 3380 DESENSITIZED EXPLOSIVE, SOLID, N.O.S.		
toxic		DT	Only substances listed in Table A of Chapter 3.2 are to be accepted for carriage as substances of Class 4.1		
Self-reactive substances		not requiring temperature control	SR1	3221 SELF-REACTIVE LIQUID TYPE A 3222 SELF-REACTIVE SOLID TYPE A 3221 SELF-REACTIVE LIQUID TYPE B 3222 SELF-REACTIVE SOLID TYPE B 3223 SELF-REACTIVE LIQUID TYPE C 3224 SELF-REACTIVE SOLID TYPE C 3225 SELF-REACTIVE LIQUID TYPE D 3226 SELF-REACTIVE SOLID TYPE D 3227 SELF-REACTIVE LIQUID TYPE E 3228 SELF-REACTIVE SOLID TYPE E 3229 SELF-REACTIVE LIQUID TYPE F 3230 SELF-REACTIVE SOLID TYPE F 3229 SELF-REACTIVE LIQUID TYPE G 3230 SELF-REACTIVE SOLID TYPE G	
			SR2	3231 SELF-REACTIVE LIQUID TYPE B, TEMPERATURE CONTROLLED 3232 SELF-REACTIVE SOLID TYPE B, TEMPERATURE CONTROLLED 3233 SELF-REACTIVE LIQUID TYPE C, TEMPERATURE CONTROLLED 3234 SELF-REACTIVE SOLID TYPE C, TEMPERATURE CONTROLLED 3235 SELF-REACTIVE LIQUID TYPE D, TEMPERATURE CONTROLLED 3236 SELF-REACTIVE SOLID TYPE D, TEMPERATURE CONTROLLED 3237 SELF-REACTIVE LIQUID TYPE E, TEMPERATURE CONTROLLED 3238 SELF-REACTIVE SOLID TYPE E, TEMPERATURE CONTROLLED 3239 SELF-REACTIVE LIQUID TYPE F, TEMPERATURE CONTROLLED 3240 SELF-REACTIVE SOLID TYPE F, TEMPERATURE CONTROLLED	

^a Metals and metal alloys in powdered or other flammable form, liable to spontaneous combustion, are substances of Class 4.2.

^b Metals and metal alloys in powdered or other flammable form, which in contact with water, emit flammable gases, are substances of Class 4.3.

^c Metals hydrides which, in contact with water, emit flammable gases, are substances of Class 4.3. Aluminium borohydride or aluminium borohydride in devices are substances of Class 4.2, UN No. 2870.

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2.2.41.4 *List of currently assigned self-reactive substances in packagings*

In the column "Packing Method" codes "OP1" to "OP8" refer to packing methods in 4.1.4.1, packing instruction P520 (see also 4.1.7.1). Self-reactive substances to be carried shall fulfil the classification and the control and emergency temperatures (derived from the SADT) as listed. For substances permitted in IBCs, see 4.1.4.2, packing instruction IBC520 and, for those permitted in tanks according to Chapter 4.2, see 4.2.5.2, portable tank instruction T23.

NOTE: The classification given in this table is based on the technically pure substance (except where a concentration of less than 100% is specified). For other concentrations, the substance may be classified differently following the procedures given in Part II of the Manual of Tests and Criteria and in 2.2.41.1.17.

SELF-REACTIVE SUBSTANCE	Concentration (%)	Packing method	Control temperature (°C)	Emergency temperature (°C)	UN generic entry	Remarks
ACETONE-PYROGALLOL COPOLYMER 2-DIAZO-1-NAPHTHOL-5-SULPHONATE	100	OP8			3228	
AZODICARBONAMIDE FORMULATION TYPE B, TEMPERATURE CONTROLLED	< 100	OP5			3232	(1) (2)
AZODICARBONAMIDE FORMULATION TYPE C	< 100	OP6			3224	(3)
AZODICARBONAMIDE FORMULATION TYPE C, TEMPERATURE CONTROLLED	< 100	OP6			3234	(4)
AZODICARBONAMIDE FORMULATION TYPE D	< 100	OP7			3226	(5)
AZODICARBONAMIDE FORMULATION TYPE D, TEMPERATURE CONTROLLED	< 100	OP7			3236	(6)
2,2'-AZODI(2,4-DIMETHYL- 4-METHOXY- VALERONITRILE)	100	OP7	-5	+5	3236	
2,2'-AZODI(2,4-DIMETHYL- VALERONITRILE)	100	OP7	+10	+15	3236	
2,2'-AZODI(ETHYL- 2-METHYL-PROPIONATE)	100	OP7	+20	+25	3235	
1,1-AZODI(HEXAHYDROBENZONITRILE)	100	OP7			3226	
2,2'-AZODI(ISOBUTYRONITRILE)	100	OP6	+40	+45	3234	
2,2'-AZODI(ISOBUTYRONITRILE) as a water based paste	≤ 50%	OP6			3224	
2,2'-AZODI(2-METHYLBUTYRONITRILE)	100	OP7	+35	+40	3236	
BENZENE-1,3-DISULPHONYL HYDRAZIDE, as a paste	52	OP7			3226	
BENZENE SULPHONYL HYDRAZIDE	100	OP7			3226	
4-(BENZYL(ETHYL)AMINO)-3-ETHOXY- BENZENEDIAZONIUM ZINC CHLORIDE	100	OP7			3226	
4-(BENZYL(METHYL)AMINO)-3-ETHOXY- BENZENEDIAZONIUM ZINC CHLORIDE	100	OP7	+40	+45	3236	
3-CHLORO-4-DIETHYLAMINOBENZENE- DIAZONIUM ZINC CHLORIDE	100	OP7			3226	
2-DIAZO-1-NAPHTHOL-4-SULPHONYL CHLORIDE	100	OP5			3222	(2)
2-DIAZO-1-NAPHTHOL-5-SULPHONYL CHLORIDE	100	OP5			3222	(2)
2-DIAZO-1-NAPHTHOL SULPHONIC ACID ESTER MIXTURE, TYPE D	< 100	OP7			3226	(9)
2,5-DIBUTOXY-4-(4-MORPHOLINYL)- BENZENEDIAZONIUM, TETRACHLOROZINCATE (2:1)	100	OP8			3228	
2,5-DIETHOXY-4-MORPHOLINO- BENZENEDIAZONIUM ZINC CHLORIDE	67-100	OP7	+35	+40	3236	
2,5-DIETHOXY-4-MORPHOLINO- BENZENEDIAZONIUM ZINC CHLORIDE	66	OP7	+40	+45	3236	
2,5-DIETHOXY-4-MORPHOLINO- BENZENEDIAZONIUM TETRAFLUOROBORATE	100	OP7	+30	+35	3236	

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SELF-REACTIVE SUBSTANCE	Concentration (%)	Packing method	Control temperature (°C)	Emergency temperature (°C)	UN generic entry	Remarks
2,5-DIETHOXY-4-(4-MORPHOLINYL)-BENZENEDIAZONIUM SULPHATE	100	OP7			3226	
2,5-DIETHOXY-4-(PHENYLSULPHONYL)-BENZENEDIAZONIUM ZINC CHLORIDE	67	OP7	+40	+45	3236	
DIETHYLENEGLYCOL BIS (ALLYL CARBONATE) + DI- ISOPROPYL-PEROXYDICARBONATE	≥ 88+≤ 12	OP8	-10	0	3237	
2,5-DIMETHOXY-4-(4-METHYL-PHENYLSULPHONYL)BENZENE- DIAZONIUM ZINC CHLORIDE	79	OP7	+40	+45	3236	
4-(DIMETHYLAMINO)-BENZENE-DIAZONIUM TRICHLOROZINCATE (-1)	100	OP8			3228	
4-DIMETHYLAMINO-6-(2-DIMETHYL-AMINOETHOXY) TOLUENE- 2-DIAZONIUM ZINC CHLORIDE	100	OP7	+40	+45	3236	
N,N'-DINITROSO-N,N'- DIMETHYL TEREPHTHALAMIDE, as a paste	72	OP6			3224	
N,N'-DINITROSOPENTAMETHYLENE-TETRAMINE	82	OP6			3224	(7)
DIPHENYLOXIDE-4,4'-DISULPHONYL HYDRAZIDE	100	OP7			3226	
4-DIPROPYLAMINOBENZENE- DIAZONIUM ZINC CHLORIDE	100	OP7			3226	
2-(N,N-ETHOXYCARBONYL-PHENYLAMINO)-3-METHOXY-4-(N-METHYL-N-CYCLOHEXYLAMINO) BENZENEDIAZONIUM ZINC CHLORIDE	63-92	OP7	+ 40	+ 45	3236	
2-(N,N-ETHOXYCARBONYL-PHENYLAMINO)-3-METHOXY-4-(N-METHYL-N-CYCLOHEXYLAMINO) BENZENEDIAZONIUM ZINC CHLORIDE	62	OP7	+ 35	+ 40	3236	
N-FORMYL-2-(NITROMETHYLENE)-1,3-PERHYDROTHIAZINE	100	OP7	+45	+50	3236	
2-(2-HYDROXYETHOXY)-1-(PYRROLIDIN-1-YL)BENZENE-4- DIAZONIUM ZINC CHLORIDE	100	OP7	+ 45	+ 50	3236	
3-(2-HYDROXYETHOXY)-4- (PYRROLIDIN-1-YL) BENZENE DIAZONIUM ZINC CHLORIDE	100	OP7	+40	+45	3236	
2-(N,N-METHYLAMINOETHYL CARBONYL)-4-(3,4-DIMETHYLPHENYLSULPHONYL) BENZENEDIAZONIUM HYDROGEN SULPHATE	96	OP7	+45	+50	3236	
4-METHYLBENZENESULPHONYLHYDRAZIDE	100	OP7			3226	
3-METHYL-4-(PYRROLIDIN-1-YL) BENZENEDIAZONIUM TETRAFLUOROBORATE	95	OP6	+45	+50	3234	
4-NITROSOPHENOL	100	OP7	+35	+40	3236	
SELF-REACTIVE LIQUID, SAMPLE		OP2			3223	(8)
SELF-REACTIVE LIQUID, SAMPLE, TEMPERATURE CONTROLLED		OP2			3233	(8)
SELF-REACTIVE SOLID, SAMPLE		OP2			3224	(8)
SELF-REACTIVE SOLID, SAMPLE, TEMPERATURE CONTROLLED		OP2			3234	(8)
SODIUM 2-DIAZO-1-NAPHTHOL- 4-SULPHONATE	100	OP7			3226	
SODIUM 2-DIAZO-1-NAPHTHOL- 5-SULPHONATE	100	OP7			3226	
TETRAMINE PALLADIUM (II) NITRATE	100	OP6	+30	+35	3234	

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Remarks

- (1) Azodicarbonamide formulations which fulfil the criteria of paragraph 20.4.2 (b) of the Manual of Tests and Criteria. The control and emergency temperatures shall be determined by the procedure given in 2.2.41.1.17.
- (2) "EXPLOSIVE" subsidiary risk label required (Model No. 1, see 5.2.2.2.2).
- (3) Azodicarbonamide formulations which fulfil the criteria of paragraph 20.4.2 (c) of the Manual of Tests and Criteria.
- (4) Azodicarbonamide formulations which fulfil the criteria of paragraph 20.4.2 (c) of the Manual of Tests and Criteria. The control and emergency temperatures shall be determined by the procedure given in 2.2.41.1.17.
- (5) Azodicarbonamide formulations which fulfil the criteria of paragraph 20.4.2 (d) of the Manual of Tests and Criteria.
- (6) Azodicarbonamide formulations which fulfil the criteria of paragraph 20.4.2 (d) of the Manual of Tests and Criteria. The control and emergency temperatures shall be determined by the procedure given in 2.2.41.1.17.
- (7) With a compatible diluent having a boiling point of not less than 150 °C.
- (8) See 2.2.41.1.15.
- (9) This entry applies to mixtures of esters of 2-diazo-1-naphthol-4-sulphonic acid and 2-diazo-1-naphthol-5-sulphonic acid which fulfil the criteria of paragraph 20.4.2 (d) of the *Manual of Test and Criteria*.

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2.2.42 Class 4.2 Substances liable to spontaneous combustion

2.2.42.1 Criteria

2.2.42.1.1 The heading of Class 4.2 covers:

- *Pyrophoric substances* which are substances, including mixtures and solutions (liquid or solid), which even in small quantities ignite on contact with air within five minutes. These are the Class 4.2 substances the most liable to spontaneous combustion; and
- *Self-heating substances and articles* which are substances and articles, including mixtures and solutions, which, on contact with air, without energy supply, are liable to self-heating. These substances will ignite only in large amounts (kilograms) and after long periods of time (hours or days).

2.2.42.1.2 The substances and articles of Class 4.2 are subdivided as follows:

S Substances liable to spontaneous combustion, without subsidiary risk:

- S1 Organic, liquid;
- S2 Organic, solid;
- S3 Inorganic, liquid;
- S4 Inorganic, solid;
- S5 Organometallic;

SW Substances liable to spontaneous combustion, which, in contact with water, emit flammable gases;

SO Substances liable to spontaneous combustion, oxidizing;

ST Substances liable to spontaneous combustion, toxic:

- ST1 Organic, toxic, liquid;
- ST2 Organic, toxic, solid;
- ST3 Inorganic, toxic, liquid;
- ST4 Inorganic, toxic, solid;

SC Substances liable to spontaneous combustion, corrosive:

- SC1 Organic, corrosive, liquid;
- SC2 Organic, corrosive, solid;
- SC3 Inorganic, corrosive, liquid;
- SC4 Inorganic, corrosive, solid.

Properties

2.2.42.1.3 Self-heating of a substance is a process where the gradual reaction of that substance with oxygen (in air) generates heat. If the rate of heat production exceeds the rate of heat loss, then the temperature of the substance will rise which, after an induction time, may lead to self-ignition and combustion.

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Classification

- 2.2.42.1.4 Substances and articles classified in Class 4.2 are listed in Table A of Chapter 3.2. The assignment of substances and articles not mentioned by name in Table A of Chapter 3.2 to the relevant specific N.O.S. entry of 2.2.42.3 in accordance with the provisions of Chapter 2.1 can be based on experience or the results of the test procedures in accordance with the Manual of Tests and Criteria, Part III, Section 33.3. Assignment to general N.O.S. entries of Class 4.2 shall be based on the results of the test procedures in accordance with the Manual of Tests and Criteria, Part III, section 33.3; experience shall also be taken into account when it leads to a more stringent assignment.
- 2.2.42.1.5 When substances or articles not mentioned by name are assigned to one of the entries listed in 2.2.42.3 on the basis of the test procedures in accordance with the Manual of Tests and Criteria, Part III, section 33.3, the following criteria shall apply:
- (a) Solids liable to spontaneous combustion (pyrophoric) shall be assigned to Class 4.2 when they ignite on falling from a height of 1 m or within five minutes;
 - (b) Liquids liable to spontaneous combustion (pyrophoric) shall be assigned to Class 4.2 when:
 - (i) on being poured on an inert carrier, they ignite within five minutes, or
 - (ii) in the event of a negative result of the test according to (i), when poured on a dry, indented filter paper (Whatman No. 3 filter), they ignite or carbonize it within five minutes;
 - (c) Substances in which, in a 10 cm sample cube, at 140 °C test temperature, spontaneous combustion or a rise in temperature to over 200 °C is observed within 24 hours shall be assigned to Class 4.2. This criterion is based on the temperature of the spontaneous combustion of charcoal, which is at 50 °C for a sample cube of 27 m³. Substances with a temperature of spontaneous combustion higher than 50 °C for a volume of 27 m³ are not to be assigned to Class 4.2.

NOTE 1: *Substances carried in packages with a volume of not more than 3 m³ are exempted from Class 4.2 if, tested with a 10 cm sample cube at 120 °C, no spontaneous combustion nor a rise in temperature to over 180 °C is observed within 24 hours.*

NOTE 2: *Substances carried in packages with a volume of not more than 450 litres are exempted from Class 4.2 if, tested with a 10 cm sample cube at 100 °C, no spontaneous combustion nor a rise in temperature to over 160 °C is observed within 24 hours.*

NOTE 3: *Since organometallic substances can be classified in Class 4.2 or 4.3 with additional subsidiary risks, depending on their properties, a specific classification flow chart for these substances is given in 2.3.5.*

- 2.2.42.1.6 If substances of Class 4.2, as a result of admixtures, come into different categories of risk from those to which the substances mentioned by name in Table A of Chapter 3.2 belong, these mixtures shall be assigned to the entries to which they belong on the basis of their actual degree of danger.

NOTE: *For the classification of solutions and mixtures (such as preparations and wastes), see also 2.1.3.*

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2.2.42.1.7 On the basis of the test procedure in the Manual of Tests and Criteria, Part III, section 33.3 and the criteria set out in 2.2.42.1.5, it may also be determined whether the nature of a substance mentioned by name is such that the substance is not subject to the provisions for this Class.

Assignment of packing groups

2.2.42.1.8 Substances and articles classified under the various entries in Table A of Chapter 3.2 shall be assigned to packing groups I, II or III on the basis of test procedures of the Manual of Tests and Criteria, Part III, section 33.3, in accordance with the following criteria:

- (a) Substances liable to spontaneous combustion (pyrophoric) shall be assigned to packing group I;
- (b) Self-heating substances and articles in which, in a 2.5 cm sample cube, at 140 °C test temperature, spontaneous combustion or a rise in temperature to over 200 °C is observed within 24 hours, shall be assigned to packing group II;

Substances with a temperature of spontaneous combustion higher than 50 °C for a volume of 450 litres are not to be assigned to packing group II;

- (c) Slightly self-heating substances in which, in a 2.5 cm sample cube, the phenomena referred to under (b) are not observed, in the given conditions, but in which in a 10 cm sample cube at 140 °C test temperature spontaneous combustion or a rise in temperature to over 200 °C is observed within 24 hours, shall be assigned to packing group III.

2.2.42.2 *Substances not accepted for carriage*

The following substances shall not be accepted for carriage:

- UN No. 3255 tert-BUTYL HYPOCHLORITE; and
- Self-heating solids, oxidizing, assigned to UN No. 3127 unless they meet the requirements for Class 1 (see 2.1.3.7).

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2.2.42.3 *List of collective entries*

Substances liable to spontaneous combustion	organic	liquid S1	2845 PYROPHORIC LIQUID, ORGANIC, N.O.S. 3183 SELF-HEATING LIQUID, ORGANIC, N.O.S.
		solid S2	1373 FIBRES or FABRICS, ANIMAL or VEGETABLE or SYNTHETIC, N.O.S. with oil 2006 PLASTICS, NITROCELLULOSE-BASED, SELF-HEATING, N.O.S. 3313 ORGANIC PIGMENTS, SELF HEATING 2846 PYROPHORIC SOLID, ORGANIC, N.O.S. 3088 SELF-HEATING SOLID, ORGANIC, N.O.S.
Without subsidiary risk	inorganic	liquid S3	3194 PYROPHORIC LIQUID, INORGANIC, N.O.S. 3186 SELF-HEATING LIQUID, INORGANIC, N.O.S.
S		solid S4	1383 PYROPHORIC METAL, N.O.S. or 1383 PYROPHORIC ALLOY, N.O.S. 1378 METAL CATALYST, WETTED with a visible excess of liquid 2881 METAL CATALYST, DRY 3189 ^a METAL POWDER, SELF-HEATING, N.O.S. 3205 ALKALINE EARTH METAL ALCOHOLATES, N.O.S. 3200 PYROPHORIC SOLID, INORGANIC, N.O.S. 3190 SELF-HEATING SOLID, INORGANIC, N.O.S.
	organometallic	S5	3392 ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC 3391 ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC 3400 ORGANOMETALLIC SUBSTANCE, SOLID, SELF-HEATING
Water-reactive		SW	3394 ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE 3393 ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC, WATER-REACTIVE
Oxidizing		SO	3127 SELF-HEATING SOLID, OXIDIZING, N.O.S. (not allowed, see 2.2.42.2)
Toxic	organic	liquid ST1	3184 SELF-HEATING LIQUID, TOXIC, ORGANIC, N.O.S.
		solid ST2	3128 SELF-HEATING SOLID, TOXIC, ORGANIC, N.O.S.
ST	inorganic	liquid ST3	3187 SELF-HEATING LIQUID, TOXIC, INORGANIC, N.O.S.
		solid ST4	3191 SELF-HEATING SOLID, TOXIC, INORGANIC, N.O.S.
Corrosive	organic	liquid SC1	3185 SELF-HEATING LIQUID, CORROSIVE, ORGANIC, N.O.S.
		solid SC2	3126 SELF-HEATING SOLID, CORROSIVE, ORGANIC, N.O.S.
SC	inorganic	liquid SC3	3188 SELF-HEATING LIQUID, CORROSIVE, INORGANIC, N.O.S.
		solid SC4	3206 ALKALI METAL ALCOHOLATES, SELF-HEATING, CORROSIVE, N.O.S. 3192 SELF-HEATING SOLID, CORROSIVE, INORGANIC, N.O.S.

^a *Dust and powder of metals, non toxic in a non-spontaneous combustible form which nevertheless, in contact with water, emit flammable gases, are substances of Class 4.3.*

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2.2.43 Class 4.3 Substances which, in contact with water, emit flammable gases

2.2.43.1 Criteria

2.2.43.1.1 The heading of Class 4.3 covers substances which react with water to emit flammable gases liable to form explosive mixtures with air, and articles containing such substances.

2.2.43.1.2 Substances and articles of Class 4.3 are subdivided as follows:

W Substances which, in contact with water, emit flammable gases, without subsidiary risk, and articles containing such substances:

- W1 Liquid;
- W2 Solid;
- W3 Articles;

WF1 Substances which, in contact with water, emit flammable gases, liquid, flammable;

WF2 Substances which, in contact with water, emit flammable gases, solid, flammable;

WS Substances which, in contact with water, emit flammable gases, solid, self-heating;

WO Substances which, in contact with water, emit flammable gases, oxidizing, solid;

WT Substances which, in contact with water, emit flammable gases, toxic:

- WT1 Liquid;
- WT2 Solid;

WC Substances which, in contact with water, emit flammable gases, corrosive:

- WC1 Liquid;
- WC2 Solid;

WFC Substances which, in contact with water, emit flammable gases, flammable, corrosive.

Properties

2.2.43.1.3 Certain substances in contact with water may emit flammable gases that can form explosive mixtures with air. Such mixtures are easily ignited by all ordinary sources of ignition, for example naked lights, sparking handtools or unprotected light bulbs. The resulting blast wave and flames may endanger people and the environment. The test method referred to in 2.2.43.1.4 below is used to determine whether the reaction of a substance with water leads to the development of a dangerous amount of gases which may be flammable. This test method shall not be applied to pyrophoric substances.

Classification

2.2.43.1.4 Substances and articles classified in Class 4.3 are listed in Table A of Chapter 3.2. The assignment of substances and articles not mentioned by name in Table A of Chapter 3.2 to the relevant entry of 2.2.43.3 in accordance with the provisions of Chapter 2.1 shall be based on the results of the test procedure in accordance with the Manual of Tests and Criteria, Part III, Section 33.4; experience shall also be taken into account when it leads to a more stringent assignment.

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2.2.43.1.5 When substances not mentioned by name are assigned to one of the entries listed in 2.2.43.3 on the basis of the test procedure in accordance with the Manual of Tests and Criteria, Part III, Section 33.4, the following criteria shall apply:

A substance shall be assigned to Class 4.3 if:

- (a) spontaneous ignition of the gas emitted takes place in any step of the test procedure; or
- (b) there is an evolution of flammable gas at a rate greater than 1 litre per kilogram of the substance to be tested per hour.

NOTE: *Since organometallic substances can be classified in Class 4.2 or 4.3 with additional subsidiary risks, depending on their properties, a specific classification flow chart for these substances is given in 2.3.5.*

2.2.43.1.6 If substances of Class 4.3, as a result of admixtures, come into different categories of risk from those to which the substances mentioned by name in Table A of Chapter 3.2 belong, these mixtures shall be assigned to the entries to which they belong on the basis of their actual degree of danger.

NOTE: *For the classification of solutions and mixtures (such as preparations and wastes) see also 2.1.3.*

2.2.43.1.7 On the basis of the test procedures in accordance with the Manual of Tests and Criteria, Part III, Section 33.4, and the criteria set out in paragraph 2.2.43.1.5, it may also be determined whether the nature of a substance mentioned by name is such that the substance is not subject to the provisions for this Class.

Assignment of packing groups

2.2.43.1.8 Substances and articles classified under the various entries in Table A of Chapter 3.2 shall be assigned to packing groups I, II or III on the basis of test procedures of the Manual of Tests and Criteria, Part III, section 33.4, in accordance with the following criteria:

- (a) Packing group I shall be assigned to any substance which reacts vigorously with water at ambient temperature and generally demonstrates a tendency for the gas produced to ignite spontaneously, or one which reacts readily with water at ambient temperatures such that the rate of evolution of flammable gas is equal to or greater than 10 litres per kilogram of substance over any one minute period;
- (b) Packing group II shall be assigned to any substance which reacts readily with water at ambient temperature such that the maximum rate of evolution of flammable gas is equal to or greater than 20 litres per kilogram of substance per hour, and which does not meet the criteria of packing group I;
- (c) Packing group III shall be assigned to any substance which reacts slowly with water at ambient temperature such that the maximum rate of evolution of flammable gas is greater than 1 litre per kilogram of substance per hour, and which does not meet the criteria of packing groups I or II.

2.2.43.2 *Substances not accepted for carriage*

Water-reactive solids, oxidizing, assigned to UN No. 3133 shall not be accepted for carriage unless they meet the requirements for Class 1 (see also 2.1.3.7).

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2.2.43.3 *List of collective entries*

Substances which, in contact with water, emit flammable gases	liquid	W1	1389 ALKALI METAL AMALGAM, LIQUID 1391 ALKALI METAL DISPERSION or 1391 ALKALINE EARTH METAL DISPERSION 1392 ALKALINE EARTH METAL AMALGAM, LIQUID 1420 POTASSIUM METAL ALLOYS, LIQUID 1421 ALKALI METAL ALLOY, LIQUID, N.O.S. 1422 POTASSIUM SODIUM ALLOYS, LIQUID 3398 ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE 3148 WATER-REACTIVE LIQUID, N.O.S.
	solid	W2 ^a	1390 ALKALI METAL AMIDES 3401 ALKALI METAL AMALGAM, SOLID 3402 ALKALINE EARTH METAL AMALGAM, SOLID 3170 ALUMINIUM SMELTING BY-PRODUCTS or 3170 ALUMINIUM REMELTING BY-PRODUCTS 3403 POTASSIUM METAL ALLOYS, SOLID 3404 POTASSIUM SODIUM ALLOYS, SOLID 1393 ALKALINE EARTH METAL ALLOY, N.O.S. 1409 METAL HYDRIDES, WATER-REACTIVE, N.O.S. 3208 METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S. 3395 ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE 2813 WATER-REACTIVE SOLID, N.O.S.
Without subsidiary risk W	articles	W3	3292 BATTERIES, CONTAINING SODIUM or 3292 CELLS, CONTAINING SODIUM
Liquid, flammable		WF1	3482 ALKALI METAL DISPERSION, FLAMMABLE or 3482 ALKALINE EARTH METAL DISPERSION, FLAMMABLE 3399 ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
Solid, flammable		WF2	3396 ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, FLAMMABLE 3132 WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.
Solid, self-heating		WS ^b	3397 ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, SELF-HEATING 3209 METALLIC SUBSTANCE, WATER-REACTIVE, SELF-HEATING, N.O.S. 3135 WATER-REACTIVE SOLID, SELF-HEATING, N.O.S.
Solid, oxidizing		WO	3133 WATER-REACTIVE SOLID, OXIDIZING, N.O.S. (not allowed, see 2.2.43.2)
Toxic WT	liquid	WT1	3130 WATER-REACTIVE LIQUID, TOXIC, N.O.S.
	solid	WT2	3134 WATER-REACTIVE SOLID, TOXIC, N.O.S.
Corrosive WC	liquid	WC1	3129 WATER-REACTIVE LIQUID, CORROSIVE, N.O.S.
	solid	WC2	3131 WATER-REACTIVE SOLID, CORROSIVE, N.O.S.
Flammable, corrosive		WFC ^c	2988 CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, NO.S. (No other collective entry with this classification code available, if need be, classification under a collective entry with a classification code to be determined according to the table of precedence of hazard in 2.1.3.10.)

^a *Metals and metal alloys which, in contact with water, do not emit flammable gases and are not pyrophoric or self-heating, but which are readily flammable, are substances of Class 4.1. Alkaline-earth metals and alkaline-earth metal alloys in pyrophoric form are substances of Class 4.2 Dust and powders of metals in pyrophoric form are substances of Class 4.2. Metals and metal alloys in pyrophoric form are substances of Class 4.2. Compounds of phosphorus with heavy metals such as iron, copper, etc. are not subject to the provisions of ADR.*

^b *Metals and metal alloys in pyrophoric form are substances of Class 4.2.*

^c *Chlorosilanes, having a flash-point of less than 23 °C and which, in contact with water, do not emit flammable gases, are substances of Class 3. Chlorosilanes, having a flash-point equal to or greater than 23 °C and which, in contact with water, do not emit flammable gases, are substances of Class 8.*

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2.2.51 Class 5.1 Oxidizing substances

2.2.51.1 Criteria

2.2.51.1.1 The heading of Class 5.1 covers substances which, while in themselves not necessarily combustible, may, generally by yielding oxygen, cause or contribute to the combustion of other material, and articles containing such substances.

2.2.51.1.2 The substances of Class 5.1 and articles containing such substances are subdivided as follows:

O Oxidizing substances without subsidiary risk or articles containing such substances:

- O1 Liquid;
- O2 Solid;
- O3 Articles;

OF Oxidizing substances, solid, flammable;

OS Oxidizing substances, solid, self-heating;

OW Oxidizing substances, solid which, in contact with water, emit flammable gases;

OT Oxidizing substances, toxic:

- OT1 Liquid;
- OT2 Solid;

OC Oxidizing substances, corrosive:

- OC1 Liquid;
- OC2 Solid;

OTC Oxidizing substances, toxic, corrosive.

2.2.51.1.3 Substances and articles classified in Class 5.1 are listed in Table A of Chapter 3.2. The assignment of substances and articles not mentioned by name in Table A of Chapter 3.2 to the relevant entry of 2.2.51.3 in accordance with the provisions of Chapter 2.1 can be based on the tests, methods and criteria in paragraphs 2.2.51.1.6-2.2.51.1.9 below and the Manual of Tests and Criteria, Part III, Section 34.4. In the event of divergence between test results and known experience, judgement based on known experience shall take precedence over test results.

2.2.51.1.4 If substances of Class 5.1, as a result of admixtures, come into different categories of risk from those to which the substances mentioned by name in Table A of Chapter 3.2 belong, these mixtures or solutions shall be assigned to the entries to which they belong on the basis of their actual degree of danger.

***NOTE:** For the classification of solutions and mixtures (such as preparations and wastes), see also Section 2.1.3.*

2.2.51.1.5 On the basis of the test procedures in the Manual of Tests and Criteria, Part III, Section 34.4 and the criteria set out in 2.2.51.1.6 to 2.2.51.1.9 it may also be determined whether the nature of a substance mentioned by name in Table A of Chapter 3.2 is such that the substance is not subject to the provisions for this class.

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Oxidizing solids

Classification

2.2.51.1.6 When oxidizing solid substances not mentioned by name in Table A of Chapter 3.2 are assigned to one of the entries listed in 2.2.51.3 on the basis of the test procedure in accordance with the Manual of Tests and Criteria, Part III, sub-section 34.4.1, the following criteria shall apply:

A solid substance shall be assigned to Class 5.1 if, in the 4:1 or the 1:1 sample-to-cellulose ratio (by mass) tested, it ignites or burns or exhibits mean burning times equal to or less than that of a 3:7 mixture (by mass) of potassium bromate and cellulose.

Assignment of packing groups

2.2.51.1.7 Oxidizing solids classified under the various entries in Table A of Chapter 3.2 shall be assigned to packing groups I, II or III on the basis of test procedures of the Manual of Tests and Criteria, Part III, sub-section 34.4.1, in accordance with the following criteria:

- (a) Packing group I: any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning time less than the mean burning time of a 3:2 mixture, by mass, of potassium bromate and cellulose;
- (b) Packing group II: any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning time equal to or less than the mean burning time of a 2:3 mixture (by mass) of potassium bromate and cellulose and the criteria for packing group I are not met;
- (c) Packing group III: any substance which, in the 4:1 or 1:1 sample-to-cellulose ratio (by mass) tested, exhibits a mean burning time equal to or less than the mean burning time of a 3:7 mixture (by mass) of potassium bromate and cellulose and the criteria for packing groups I and II are not met.

Oxidizing liquids

Classification

2.2.51.1.8 When oxidizing liquid substances not mentioned by name in Table A of Chapter 3.2 are assigned to one of the entries listed in sub-section 2.2.51.3 on the basis of the test procedure in accordance with the Manual of Tests and Criteria, Part III, sub-section 34.4.2, the following criteria shall apply:

A liquid substance shall be assigned to Class 5.1 if, in the 1:1 mixture, by mass, of substance and cellulose tested, it exhibits a pressure rise of 2070 kPa gauge or more and a mean pressure rise time equal to or less than the mean pressure rise time of a 1:1 mixture, by mass, of 65% aqueous nitric acid and cellulose.

Assignment of packing groups

2.2.51.1.9 Oxidizing liquids classified under the various entries in Table A of Chapter 3.2 shall be assigned to packing groups I, II or III on the basis of test procedures of the Manual of Tests and Criteria, Part III, section 34.4.2, in accordance with the following criteria:

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- (a) Packing group I: any substance which, in the 1:1 mixture, by mass, of substance and cellulose tested, spontaneously ignites; or the mean pressure rise time of a 1:1 mixture, by mass, of substance and cellulose is less than that of a 1:1 mixture, by mass, of 50% perchloric acid and cellulose;
- (b) Packing group II: any substance which, in the 1:1 mixture, by mass, of substance and cellulose tested, exhibits a mean pressure rise time less than or equal to the mean pressure rise time of a 1:1 mixture, by mass, of 40% aqueous sodium chlorate solution and cellulose; and the criteria for packing group I are not met;
- (c) Packing group III: any substance which, in the 1:1 mixture, by mass, of substance and cellulose tested, exhibits a mean pressure rise time less than or equal to the mean pressure rise time of a 1:1 mixture, by mass, of 65% aqueous nitric acid and cellulose; and the criteria for packing groups I and II are not met.

2.2.51.2 Substances not accepted for carriage

2.2.51.2.1 The chemically unstable substances of Class 5.1 shall not be accepted for carriage unless the necessary steps have been taken to prevent their dangerous decomposition or polymerization during carriage. To this end it shall in particular be ensured that receptacles and tanks do not contain any material liable to promote these reactions.

2.2.51.2.2 The following substances and mixtures shall not be accepted for carriage:

- oxidizing solids, self-heating, assigned to UN No. 3100, oxidizing solids, water-reactive, assigned to UN No. 3121 and oxidizing solids, flammable, assigned to UN No. 3137, unless they meet the requirements for Class 1 (see also 2.1.3.7);
- hydrogen peroxide, not stabilized or hydrogen peroxide, aqueous solutions, not stabilized containing more than 60% hydrogen peroxide;
- tetranitromethane not free from combustible impurities;
- perchloric acid solutions containing more than 72% (mass) acid, or mixtures of perchloric acid with any liquid other than water;
- chloric acid solution containing more than 10% chloric acid or mixtures of chloric acid with any liquid other than water;
- halogenated fluor compounds other than UN Nos. 1745 BROMINE PENTAFLUORIDE; 1746 BROMINE TRIFLUORIDE and 2495 IODINE PENTAFLUORIDE of Class 5.1 as well as UN Nos. 1749 CHLORINE TRIFLUORIDE and 2548 CHLORINE PENTAFLUORIDE of Class 2;
- ammonium chlorate and its aqueous solutions and mixtures of a chlorate with an ammonium salt;
- ammonium chlorite and its aqueous solutions and mixtures of a chlorite with an ammonium salt;
- mixtures of a hypochlorite with an ammonium salt;
- ammonium bromate and its aqueous solutions and mixtures of a bromate with an ammonium salt;

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- ammonium permanganate and its aqueous solutions and mixtures of a permanganate with an ammonium salt;
- ammonium nitrate containing more than 0.2% combustible substances (including any organic substance calculated as carbon) unless it is a constituent of a substance or article of Class 1;
- fertilizers having an ammonium nitrate content (in determining the ammonium nitrate content, all nitrate ions for which a molecular equivalent of ammonium ions is present in the mixture shall be calculated as ammonium nitrate) or a content in combustible substances exceeding the values specified in special provision 307 except under the conditions applicable to Class 1;
- ammonium nitrite and its aqueous solutions and mixtures of an inorganic nitrite with an ammonium salt;
- mixtures of potassium nitrate, sodium nitrite and an ammonium salt.

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2.2.51.3 *List of collective entries*

Oxidizing substances and articles containing such substances	liquid	O1	3210 CHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S. 3211 PERCHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S. 3213 BROMATES, INORGANIC, AQUEOUS SOLUTION, N.O.S. 3214 PERMANGANATES, INORGANIC, AQUEOUS SOLUTION, N.O.S. 3216 PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S. 3218 NITRATES, INORGANIC, AQUEOUS SOLUTION, N.O.S. 3219 NITRITES, INORGANIC, AQUEOUS SOLUTION, N.O.S. 3139 OXIDIZING LIQUID, N.O.S.
			1450 BROMATES, INORGANIC, N.O.S. 1461 CHLORATES, INORGANIC, N.O.S. 1462 CHLORITES, INORGANIC, N.O.S. 1477 NITRATES, INORGANIC, N.O.S. 1481 PERCHLORATES, INORGANIC, N.O.S. 1482 PERMANGANATES, INORGANIC, N.O.S. 1483 PEROXIDES, INORGANIC, N.O.S. 2627 NITRITES, INORGANIC, N.O.S. 3212 HYPOCHLORITES, INORGANIC, N.O.S. 3215 PERSULPHATES, INORGANIC, N.O.S. 1479 OXIDIZING SOLID, N.O.S.
Without subsidiary risk	solid	O2	
O			
	articles	O3	3356 OXYGEN GENERATOR, CHEMICAL
Solid, flammable		OF	3137 OXIDIZING SOLID, FLAMMABLE, N.O.S. (not allowed, see 2.2.51.2)
Solid, self-heating		OS	3100 OXIDIZING SOLID, SELF-HEATING, N.O.S. (not allowed, see 2.2.51.2)
Solid, water reactive		OW	3121 OXIDIZING SOLID, WATER REACTIVE, N.O.S. (not allowed, see 2.2.51.2)
Toxic	liquid	OT1	3099 OXIDIZING LIQUID, TOXIC, N.O.S.
	solid	OT2	3087 OXIDIZING SOLID, TOXIC, N.O.S.
Corrosive	liquid	OC1	3098 OXIDIZING LIQUID, CORROSIVE, N.O.S.
	solid	OC2	3085 OXIDIZING SOLID, CORROSIVE, N.O.S.
Toxic, corrosive		OTC	(No collective entry with this classification code available; if need be, classification under a collective entry with a classification code to be determined according to the table of precedence of hazard in 2.1.3.10.)

2.2.52 **Class 5.2** **Organic peroxides****2.2.52.1** *Criteria*

2.2.52.1.1 The heading of Class 5.2 covers organic peroxides and formulations of organic peroxides.

2.2.52.1.2 The substances of Class 5.2 are subdivided as follows:

- P1 Organic peroxides, not requiring temperature control;
- P2 Organic peroxides, requiring temperature control.

*Definition*2.2.52.1.3 *Organic peroxides* are organic substances which contain the bivalent -O-O- structure and may be considered derivatives of hydrogen peroxide, where one or both of the hydrogen atoms have been replaced by organic radicals.

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Properties

- 2.2.52.1.4 Organic peroxides are liable to exothermic decomposition at normal or elevated temperatures. The decomposition can be initiated by heat, contact with impurities (e.g. acids, heavy-metal compounds, amines), friction or impact. The rate of decomposition increases with temperature and varies with the organic peroxide formulation. Decomposition may result in the evolution of harmful, or flammable, gases or vapours. For certain organic peroxides the temperature shall be controlled during carriage. Some organic peroxides may decompose explosively, particularly if confined. This characteristic may be modified by the addition of diluents or by the use of appropriate packagings. Many organic peroxides burn vigorously. Contact of organic peroxides with the eyes is to be avoided. Some organic peroxides will cause serious injury to the cornea, even after brief contact, or will be corrosive to the skin.

NOTE: *Test methods for determining the flammability of organic peroxides are set out in the Manual of Tests and Criteria, Part III, sub-section 32.4. Because organic peroxides may react vigorously when heated, it is recommended to determine their flash-point using small sample sizes such as described in ISO 3679:1983.*

Classification

- 2.2.52.1.5 Any organic peroxide shall be considered for classification in Class 5.2 unless the organic peroxide formulation contains:
- Not more than 1.0% available oxygen from the organic peroxides when containing not more than 1.0% hydrogen peroxide;
 - Not more than 0.5% available oxygen from the organic peroxides when containing more than 1.0% but not more than 7.0% hydrogen peroxide.

NOTE: *The available oxygen content (%) of an organic peroxide formulation is given by the formula*

$$16 \times \sum (n_i \times c_i / m_i)$$

where:

- n_i = number of peroxygen groups per molecule of organic peroxide i ;
 c_i = concentration (mass %) of organic peroxide i ; and
 m_i = molecular mass of organic peroxide i .

- 2.2.52.1.6 Organic peroxides are classified into seven types according to the degree of danger they present. The types of organic peroxide range from type A, which is not accepted for carriage in the packaging in which it is tested, to type G, which is not subject to the provisions of Class 5.2. The classification of types B to F is directly related to the maximum quantity allowed in one packaging. The principles to be applied to the classification of substances not listed in 2.2.52.4 are set out in the Manual of Tests and Criteria, Part II.
- 2.2.52.1.7 Organic peroxides which have already been classified and are already permitted for carriage in packagings are listed in 2.2.52.4, those already permitted for carriage in IBCs are listed in 4.1.4.2, packing instruction IBC520 and those already permitted for carriage in tanks in accordance with Chapters 4.2 and 4.3 are listed in 4.2.5.2, portable tank instruction T23. Each permitted substance listed is assigned to a generic entry of Table A of Chapter 3.2 (UN Nos. 3101 to 3120) and appropriate subsidiary risks and remarks providing relevant transport information are given.

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These generic entries specify:

- the type (B to F) of organic peroxide (see 2.2.52.1.6 above);
- physical state (liquid/solid); and
- temperature control (when required), see 2.2.52.1.15 to 2.2.52.1.18.

Mixtures of these formulations may be classified as the same type of organic peroxide as that of the most dangerous component and be carried under the conditions of carriage given for this type. However, as two stable components can form a thermally less stable mixture, the self-accelerating decomposition temperature (SADT) of the mixture shall be determined and, if necessary, the control and emergency temperatures derived from the SADT in accordance with 2.2.52.1.16.

2.2.52.1.8 Classification of organic peroxides, formulations or mixtures of organic peroxides not listed in 2.2.52.4, 4.1.4.2 packing instruction IBC520 or 4.2.5.2, portable tank instruction T23, and assignment to a collective entry shall be made by the competent authority of the country of origin. The statement of approval shall contain the classification and the relevant conditions of carriage. If the country of origin is not a Contracting Party to ADR, the classification and conditions of carriage shall be recognized by the competent authority of the first country Contracting Party to ADR reached by the consignment.

2.2.52.1.9 Samples of organic peroxides or formulations of organic peroxides not listed in 2.2.52.4, for which a complete set of test results is not available and which are to be carried for further testing or evaluation, shall be assigned to one of the appropriate entries for organic peroxides type C provided the following conditions are met:

- the available data indicate that the sample would be no more dangerous than organic peroxides type B;
- the sample is packaged in accordance with packing method OP2 and the quantity per transport unit is limited to 10 kg;
- the available data indicate that the control temperature, if any, is sufficiently low to prevent any dangerous decomposition and sufficiently high to prevent any dangerous phase separation.

Desensitization of organic peroxides

2.2.52.1.10 In order to ensure safety during carriage, organic peroxides are in many cases desensitized by organic liquids or solids, inorganic solids or water. Where a percentage of a substance is stipulated, this refers to the percentage by mass, rounded to the nearest whole number. In general, desensitization shall be such that, in case of spillage, the organic peroxide will not concentrate to a dangerous extent.

2.2.52.1.11 Unless otherwise stated for the individual organic peroxide formulation, the following definition(s) shall apply to diluents used for desensitization:

- diluents type A are organic liquids which are compatible with the organic peroxide and which have a boiling point of not less than 150 °C. Type A diluents may be used for desensitizing all organic peroxides;
- diluents type B are organic liquids which are compatible with the organic peroxide and which have a boiling point of less than 150 °C but not less than 60 °C and a flash-point of not less than 5 °C.

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Type B diluents may be used for desensitization of all organic peroxides provided that the boiling point of the liquid is at least 60 °C higher than the SADT in a 50 kg package.

- 2.2.52.1.12 Diluents, other than type A or type B, may be added to organic peroxide formulations as listed in 2.2.52.4 provided that they are compatible. However, replacement of all or part of a type A or type B diluent by another diluent with differing properties requires that the organic peroxide formulation be re-assessed in accordance with the normal acceptance procedure for Class 5.2.
- 2.2.52.1.13 Water may only be used for the desensitization of organic peroxides which are listed in 2.2.52.4 or in the competent authority decision according to 2.2.52.1.8 as being "with water" or "as a stable dispersion in water". Samples of organic peroxides or formulations of organic peroxides not listed in 2.2.52.4 may also be desensitized with water provided the requirements of 2.2.52.1.9 are met.
- 2.2.52.1.14 Organic and inorganic solids may be used for desensitization of organic peroxides provided that they are compatible. Compatible liquids and solids are those which have no detrimental influence on the thermal stability and hazard type of the organic peroxide formulation.

Temperature control requirements

- 2.2.52.1.15 Certain organic peroxides may only be carried under temperature-controlled conditions. The control temperature is the maximum temperature at which the organic peroxide can be safely carried. It is assumed that the temperature of the immediate surroundings of a package only exceeds 55 °C during carriage for a relatively short time in a 24 hour period. In the event of loss of temperature control, it may be necessary to implement emergency procedures. The emergency temperature is the temperature at which such procedures shall be implemented.
- 2.2.52.1.16 The control and emergency temperatures are derived from the SADT which is defined as the lowest temperature at which self-accelerating decomposition may occur with a substance in the packaging as used during carriage (see Table 1). The SADT shall be determined in order to decide whether a substance shall be subjected to temperature control during carriage. Provisions for the determination of the SADT are given in the Manual of Tests and Criteria, Part II, Sections 20 and 28.4.

Table 1: Derivation of control and emergency temperatures

Type of receptacle	SADT ^a	Control temperature	Emergency temperature
Single packagings and IBCs	20 °C or less	20 °C below SADT	10 °C below SADT
	over 20 °C to 35 °C	15 °C below SADT	10 °C below SADT
	over 35 °C	10 °C below SADT	5 °C below SADT
Tanks	not greater than 50 °C	10 °C below SADT	5 °C below SADT

^a SADT of the substance as packaged for carriage

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2.2.52.1.17 The following organic peroxides shall be subject to temperature control during carriage:

- organic peroxides types B and C with an SADT ≤ 50 °C;
- organic peroxides type D showing a medium effect when heated under confinement with an SADT ≤ 50 °C or showing a low or no effect when heated under confinement with an SADT ≤ 45 °C; and
- organic peroxides types E and F with an SADT ≤ 45 °C.

NOTE: Provisions for the determination of the effects of heating under confinement are given in the Manual of Tests and Criteria, Part II, Section 20 and Sub-section 28.4.

2.2.52.1.18 Where applicable, control and emergency temperatures are listed in 2.2.52.4. The actual temperature during carriage may be lower than the control temperature but shall be selected so as to avoid dangerous separation of phases.

2.2.52.2 *Substances not accepted for carriage*

Organic peroxides, type A, shall not be accepted for carriage under the provisions of Class 5.2 (see Manual of Tests and Criteria, Part II, paragraph 20.4.3 (a)).

ORGANIC PEROXIDE	Concentration (%)	Diluent type A (%)	Diluent type B (%) 1)	Inert solid (%)	Water	Packing Method	Control temperature (°C)	Emergency temperature (°C)	Number (Generic entry)	Subsidiary risks and remarks
ACETYL ACETONE PEROXIDE	≤ 42	≥ 48			≥ 8	OP7			3105	2)
"	≤ 32 as a paste					OP7			3106	20)
ACETYL CYCLOHEXANESULPHONYL PEROXIDE	≤ 82				≥ 12	OP4	-10	0	3112	3)
"	≤ 32		≥ 68			OP7	-10	0	3115	
tert-AMYL HYDROPEROXIDE	≤ 88	≥ 6			≥ 6	OP8			3107	
tert-AMYL PEROXYACETATE	≤ 62	≥ 38				OP7			3105	
tert-AMYL PEROXYBENZOATE	≤ 100					OP5			3103	
tert-AMYL PEROXY-2-ETHYLHEXANOATE	≤ 100					OP7	+20	+25	3115	
tert-AMYL PEROXY-2-ETHYLHEXYL CARBONATE	≤ 100					OP7			3105	
tert-AMYL PEROXY ISOPROPYL CARBONATE	≤ 77	≥ 23				OP5			3103	
tert-AMYL PEROXYNEODECANOATE	≤ 77	≥ 23				OP7	0	+10	3115	
"	≤ 47	≥ 53				OP8	0	+10	3119	
tert-AMYL PEROXYPIVALATE	≤ 77		≥ 23			OP5	+10	+15	3113	
tert-AMYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	≤ 100					OP7			3105	
tert-BUTYL CUMYL PEROXIDE	> 42 - 100					OP8			3107	
"	≤ 52			≥ 48		OP8			3108	
n-BUTYL-4,4-DI-(tert-BUTYLPEROXY)VALERATE	> 52 - 100					OP5			3103	
"	≤ 52			≥ 48		OP8			3108	
tert-BUTYL HYDROPEROXIDE	> 79 - 90				≥ 10	OP5			3103	13)
"	≤ 80	≥ 20				OP7			3105	4) 13)
"	≤ 79				> 14	OP8			3107	13) 23)
"	≤ 72				≥ 28	OP8			3109	13)
tert-BUTYL HYDROPEROXIDE + DI-tert-BUTYL PEROXIDE	< 82 + > 9				≥ 7	OP5			3103	13)

ORGANIC PEROXIDE	Concentration (%)	Diluent type A (%)	Diluent type B (% 1)	Inert solid (%)	Water	Packing Method	Control temperature (°C)	Emergency temperature (°C)	Number (Generic entry)	Subsidiary risks and remarks
tert-BUTYL MONOPEROXYMALEATE	> 52 - 100					OP5			3102	3)
"	≤ 52	≥ 48				OP6			3103	
"	≤ 52			≥ 48		OP8			3108	
"	≤ 52 as a paste					OP8			3108	
tert-BUTYL PEROXYACETATE	> 52 - 77	≥ 23				OP5			3101	3)
"	> 32 - 52	≥ 48				OP6			3103	
"	≤ 32		≥ 68			OP8			3109	
tert-BUTYL PEROXYBENZOATE	> 77 - 100					OP5			3103	
"	> 52 - 77	≥ 23				OP7			3105	
"	≤ 52			≥ 48		OP7			3106	
tert-BUTYL PEROXYBUTYL FUMARATE	≤ 52	≥ 48				OP7			3105	
tert-BUTYL PEROXYCROTONATE	≤ 77	≥ 23				OP7			3105	
tert-BUTYL PEROXYDIETHYLACETATE	≤ 100					OP5	+20	+25	3113	
tert-BUTYL PEROXY-2-ETHYLHEXANOATE	> 52 - 100					OP6	+20	+25	3113	
"	> 32 - 52		≥ 48			OP8	+30	+35	3117	
"	≤ 52			≥ 48		OP8	+20	+25	3118	
"	≤ 32		≥ 68			OP8	+40	+45	3119	
tert-BUTYL PEROXY-2-ETHYLHEXANOATE + 2,2-DI-(tert-BUTYLPEROXY)BUTANE	≤ 12 + ≤ 14	≥ 14		≥ 60		OP7			3106	
"	≤ 31 + ≤ 36		≥ 33			OP7	+35	+40	3115	
tert-BUTYL PEROXY-2-ETHYLHEXYLCARBONATE	≤ 100					OP7			3105	
tert-BUTYL PEROXYISOBUTYRATE	> 52 - 77		≥ 23			OP5	+15	+20	3111	3)
"	≤ 52		≥ 48			OP7	+15	+20	3115	
tert-BUTYLPEROXY ISOPROPYLCARBONATE	≤ 77	≥ 23				OP5			3103	

ORGANIC PEROXIDE	Concentration (%)	Diluent type A (%)	Diluent type B (%) 1)	Inert solid (%)	Water	Packing Method	Control temperature (°C)	Emergency temperature (°C)	Number (Generic entry)	Subsidiary risks and remarks
1-(2-tert-BUTYLPEROXY ISOPROPYL)-3-ISOPROPENYLBENZENE	≤ 77	≥ 23				OP7			3105	
"	≤ 42			≥ 58		OP8			3108	
tert-BUTYL PEROXY-2-METHYLBENZOATE	≤ 100					OP5			3103	
tert-BUTYL PEROXYNEODECANOATE	> 77 - 100					OP7	-5	+5	3115	
"	≤ 77	≥ 23				OP7	0	+10	3115	
"	≤ 52 as a stable dispersion in water					OP8	0	+10	3119	
"	≤ 42 as a stable dispersion in water (frozen)					OP8	0	+10	3118	
"	≤ 32	≥ 68				OP8	0	+10	3119	
tert-BUTYL PEROXYNEOHEPTANOATE	≤ 77	≥ 23				OP7	0	+10	3115	
"	≤ 42 as a stable dispersion in water					OP8	0	+10	3117	
tert-BUTYL PEROXYPIVALATE	> 67 - 77	≥ 23				OP5	0	+10	3113	
"	> 27 - 67	≥ 33				OP7	0	+10	3115	
"	≤ 27	≥ 73				OP8	+30	+35	3119	
tert-BUTYLPEROXY STEARYLCARBONATE	≤ 100					OP7			3106	
tert-BUTYL PEROXY-3,5,5-TRIMETHYLHEXANOATE	> 32 - 100					OP7			3105	
"	≤ 42			≥ 58		OP7			3106	
"	≤ 32	≥ 68				OP8			3109	
3-CHLOROPEROXYBENZOIC ACID	> 57 - 86			≥ 14		OP1			3102	3)
"	≤ 57			≥ 3	≥ 40	OP7			3106	
"	≤ 77			≥ 6	≥ 17	OP7			3106	
CUMYL HYDROPEROXIDE	> 90 - 98	≤ 10				OP8			3107	13)
"	≤ 90	≥ 10				OP8			3109	13) 18)
CUMYL PEROXYNEODECANOATE	≤ 87	≥ 13				OP7	-10	0	3115	

ORGANIC PEROXIDE	Concentration (%)	Diluent type A (%)	Diluent type B (% 1)	Inert solid (%)	Water	Packing Method	Control temperature (°C)	Emergency temperature (°C)	Number (Generic entry)	Subsidiary risks and remarks
"	≤ 77		≥ 23			OP7	-10	0	3115	
"	≤ 52 as a stable dispersion in water					OP8	-10	0	3119	
CUMYL PEROXYNEOHEPTANOATE	≤ 77	≥ 23				OP7	-10	0	3115	
CUMYL PEROXYPIVALATE	≤ 77		≥ 23			OP7	-5	+5	3115	
CYCLOHEXANONE PEROXIDE(S)	≤ 91				≥ 9	OP6			3104	13)
"	≤ 72	≥ 28				OP7			3105	5)
"	≤ 72 as a paste					OP7			3106	5) 20)
"	≤ 32			≥ 68					Exempt	29)
{[3R-(3R,5aS,6S,8aS,9R,10R,12S,12aR**)]-DECAHYDRO-10-METHOXY-3,6,9-TRIMETHYL-3,12-EPOXY-12H-PYRANO[4,3-j]-1,2-BENZODIOXEPIN}	≤ 100					OP7			3106	
DIACETONE ALCOHOL PEROXIDES	≤ 57		≥ 26		≥ 8	OP7	+40	+45	3115	6)
DIACETYL PEROXIDE	≤ 27		≥ 73			OP7	+20	+25	3115	7) 13)
DI-tert-AMYL PEROXIDE	≤ 100					OP8			3107	
2,2-DI-(tert-AMYLPEROXY)BUTANE	≤ 57	≥ 43				OP7			3105	
1,1-DI-(tert-AMYLPEROXY)CYCLOHEXANE	≤ 82	≥ 18				OP6			3103	
DIBENZOYL PEROXIDE	> 51 - 100			≤ 48		OP2			3102	3)
"	> 77 - 94				≥ 6	OP4			3102	3)
"	≤ 77				≥ 23	OP6			3104	
"	≤ 62			≥ 28	≥ 10	OP7			3106	
"	> 52 - 62 as a paste					OP7			3106	20)
"	> 35 - 52			≥ 48		OP7			3106	
"	> 36 - 42	≥ 18			≤ 40	OP8			3107	
"	≤ 56.5 as a paste				≥ 15	OP8			3108	
"	≤ 52 as a paste					OP8			3108	20)
"	≤ 42 as a stable dispersion in water					OP8			3109	
"	≤ 35			≥ 65					Exempt	29)

ORGANIC PEROXIDE	Concentration (%)	Diluent type A (%)	Diluent type B (%) 1)	Inert solid (%)	Water	Packing Method	Control temperature (°C)	Emergency temperature (°C)	Number (Generic entry)	Subsidiary risks and remarks
DI-(4-tert-BUTYL-CYCLOHEXYL) PEROXYDICARBONATE	≤ 100					OP6	+30	+35	3114	
"	≤ 42 as a stable dispersion in water					OP8	+30	+35	3119	
DI-tert-BUTYL PEROXIDE	> 52 - 100					OP8			3107	
"	≤ 52	≥ 48	≥ 48			OP8			3109	25)
DI-tert-BUTYL PEROXYAZELATE	≤ 52	≥ 48				OP7			3105	
2,2-DI-(tert-BUTYLPEROXY)BUTANE	≤ 52	≥ 48				OP6			3103	
1,6-DI-(tert-BUTYLPEROXYCARBONYLOXY) HEXANE	≤ 72	≥ 28				OP5			3103	
1,1-DI-(tert-BUTYLPEROXY) CYCLOHEXANE	> 80 - 100					OP5			3101	3)
"	≤ 72	≥ 28				OP5			3103	30)
"	> 52 - 80	≥ 20				OP5			3103	
"	> 42 - 52	≥ 48				OP7			3105	
"	≤ 42	≥ 13		≥ 45		OP7			3106	
"	≤ 42	≥ 58				OP8			3109	
"	≤ 27	≥ 25				OP8			3107	21)
"	≤ 13	≥ 13	≥ 74			OP8			3109	
1,1-DI-(tert-BUTYLPEROXY) CYCLOHEXANE + tert-BUTYL PEROXY-2-ETHYLHEXANOATE	≤ 43 + ≤ 16	≥ 41				OP 7			3105	
DI-n-BUTYL PEROXYDICARBONATE	> 27 - 52	≥ 48				OP7	-15	-5	3115	
"	≤ 27	≥ 73				OP8	-10	0	3117	
"	≤ 42 as a stable dispersion in water (frozen)					OP8	-15	-5	3118	
DI-sec-BUTYL PEROXYDICARBONATE	> 52 - 100					OP4	-20	-10	3113	
"	≤ 52	≥ 48				OP7	-15	-5	3115	

ORGANIC PEROXIDE	Concentration (%)	Diluent type A (%)	Diluent type B (% 1)	Inert solid (%)	Water	Packing Method	Control temperature (°C)	Emergency temperature (°C)	Number (Generic entry)	Subsidiary risks and remarks
DI-(tert-BUTYLPEROXYISOPROPYL)BENZENE(S)	> 42 - 100 ≤ 42			≤ 57 ≥ 58		OP7			3106 Exempt	29)
DI-(tert-BUTYLPEROXY) PHTHALATE	> 42 - 52 ≤ 52 as a paste	≥ 48				OP7 OP7 OP8			3105 3106 3107	20)
2,2-DI-(tert-BUTYLPEROXY)PROPANE	≤ 52 ≤ 42	≥ 48 ≥ 13		≥ 45		OP7 OP7			3105 3106	
1,1-DI-(tert-BUTYLPEROXY)-3,3,5-TRIMETHYLCYCLOHEXANE	> 90 - 100 ≤ 90 > 57 - 90 ≤ 77		≥ 10 ≥ 10 ≥ 23			OP5 OP5 OP5			3101 3103 3103 3103	3) 30)
"	≤ 57	≥ 43		≥ 43		OP8			3110	
"	≤ 57	≥ 43				OP8			3107	
"	≤ 32	≥ 26	≥ 42			OP8			3107	
DICETYL PEROXYDICARBONATE	≤ 100 ≤ 42 as a stable dispersion in water					OP7 OP8	+30 +30	+35 +35	3116 3119	
DI-4-CHLOROBENZOYL PEROXIDE	≤ 77 ≤ 52 as a paste				≥ 23	OP5 OP7			3102 3106	3) 20)
"	≤ 32			≥ 68					Exempt	29)
DICUMYL PEROXIDE	> 52 - 100			≥ 48		OP8			3110	12)
"	≤ 52								Exempt	29)
DICYCLOHEXYL PEROXYDICARBONATE	> 91 - 100					OP3	+10	+15	3112	3)
"	≤ 91				≥ 9	OP5	+10	+15	3114	
"	≤ 42 as a stable dispersion in water					OP8	+15	+20	3119	

ORGANIC PEROXIDE	Concentration (%)	Diluent type A (%)	Diluent type B (%) 1)	Inert solid (%)	Water	Packing Method	Control temperature (°C)	Emergency temperature (°C)	Number (Generic entry)	Subsidiary risks and remarks
DIDECANOYL PEROXIDE	≤ 100					OP6	+30	+35	3114	
2,2-DI(4,4-DI (tet-BUTYLPEROXY) CYCLOHEXYL) PROPANE	≤ 42			≥ 58		OP7			3106	
"	≤ 22		≥ 78			OP8			3107	
DI-2,4-DICHLOROBENZOYL PEROXIDE	≤ 77				≥ 23	OP5			3102	3)
"	≤ 52 as a paste					OP8	+20	+25	3118	
"	≤ 52 as a paste with silicon oil					OP7			3106	
DI-(2-ETHOXYETHYL) PEROXYDICARBONATE	≤ 52		≥ 48			OP7	-10	0	3115	
DI-(2-ETHYLHEXYL) PEROXYDICARBONATE	> 77 – 100					OP5	-20	-10	3113	
"	≤ 77		≥ 23			OP7	-15	-5	3115	
"	≤ 62 as a stable dispersion in water					OP8	-15	-5	3119	
"	≤ 52 as a stable dispersion in water (frozen)					OP8	-15	-5	3120	
2,2-DIHYDROPEROXYPROPANE	≤ 27			≥ 73		OP5			3102	3)
DI-(1-HYDROXYCYCLOHEXYL) PEROXIDE	≤ 100					OP7			3106	
DIISOBUTYRYL PEROXIDE	> 32 – 52		≥ 48			OP5	-20	-10	3111	3)
"	≤ 32		≥ 68			OP7	-20	-10	3115	
DIISOPROPYLBENZENE DIHYDROPEROXIDE	≤ 82		≥ 5		≥ 5	OP7			3106	24)
DIISOPROPYL PEROXYDICARBONATE	> 52-100					OP2	-15	-5	3112	3)
"	≤ 52		≥ 48			OP7	-20	-10	3115	
"	≤ 32		≥ 68			OP7	-15	-5	3115	
DI-LAUROYL PEROXIDE	≤ 100					OP7			3106	
"	≤ 42 as a stable dispersion in water					OP8			3109	
DI-(3-METHOXYBUTYL) PEROXYDICARBONATE	≤ 52		≥ 48			OP7	-5	+5	3115	
DI-(2-METHYLBENZOYL) PEROXIDE	≤ 87				≥ 13	OP5	+30	+35	3112	3)

ORGANIC PEROXIDE	Concentration (%)	Diluent type A (%)	Diluent type B (%/1)	Inert solid (%)	Water	Packing Method	Control temperature (°C)	Emergency temperature (°C)	Number (Generic entry)	Subsidiary risks and remarks
DI-(3-METHYLBENZOYL) PEROXIDE + BENZOYL (3-METHYLBENZOYL) PEROXIDE + DIBENZOYL PEROXIDE	≤ 20 + ≤ 18 + ≤ 4		≥ 58			OP7	+35	+40	3115	
DI-(4-METHYLBENZOYL) PEROXIDE□	≤ 52 as a paste with silicon oil					OP7			3106	
2,5-DIMETHYL-2,5-DI-(BENZOYL)PEROXYHEXANE	> 82-100					OP5			3102	3)
"	≤ 82			≥ 18		OP7			3106	
"	≤ 82			≥ 18	≥ 18	OP5			3104	
2,5-DIMETHYL-2,5-DI-(tert-BUTYL)PEROXYHEXANE	> 90 - 100					OP5			3103	
"	> 52 - 90	≥ 10				OP7			3105	
"	≤ 77			≥ 23		OP8			3108	
"	≤ 52	≥ 48				OP8			3109	
"	≤ 47 as a paste					OP8			3108	
2,5-DIMETHYL-2,5-DI-(tert-BUTYL)PEROXYHEXYNE-3	> 86-100					OP5			3101	3)
"	> 52-86	≥ 14				OP5			3103	26)
"	≤ 52			≥ 48		OP7			3106	
2,5-DIMETHYL-2,5-DI-(2-ETHYLHEXANOYL)PEROXY)HEXANE□	≤ 100					OP5	+20	+25	3113	
2,5-DIMETHYL-2,5-DIHYDROPEROXYHEXANE□	≤ 82				≥ 18	OP6			3104	
2,5-DIMETHYL-2,5-DI-(3,5,5-TRIMETHYLHEXANOYL)PEROXY)HEXANE	≤ 77	≥ 23				OP7			3105	
1,1-DIMETHYL-3-HYDROXYBUTYL PEROXYNEOHEPTANOATE	≤ 52	≥ 48				OP8	0	+10	3117	
DIMYRISTYL PEROXYDICARBONATE	≤ 100					OP7	+20	+25	3116	
"	≤ 42 as a stable dispersion in water					OP8	+20	+25	3119	
DI-(2-NEODECANOYL)PEROXYISOPROPYL) BENZENE	≤ 52	≥ 48				OP7	-10	0	3115	

ORGANIC PEROXIDE	Concentration (%)	Diluent type A (%)	Diluent type B (% 1)	Inert solid (%)	Water	Packing Method	Control temperature (°C)	Emergency temperature (°C)	Number (Generic entry)	Subsidiary risks and remarks
DI-n-NONANOYL PEROXIDE	≤ 100					OP7	0	+10	3116	
DI-n-OCTANOYL PEROXIDE	≤ 100					OP5	+10	+15	3114	
DI-(2-PHENOXYETHYL) PEROXYDICARBONATE	>85-100					OP5			3102	3)
"	≤ 85				≥ 15	OP7			3106	
DIPROPIONYL PEROXIDE	≤ 27		≥ 73			OP8	+15	+20	3117	
DI-n-PROPYL PEROXYDICARBONATE	≤ 100					OP3	-25	-15	3113	
"	≤ 77		≥ 23			OP5	-20	-10	3113	
DISUCCINIC ACID PEROXIDE	> 72-100					OP4			3102	3) 17)
"	≤ 72				≥ 28	OP7	+10	+15	3116	
DI-(3,5-TRIMETHYLHEXANOYL) PEROXIDE	> 52-82	≥ 18				OP7	0	+10	3115	
"	≤ 52 as a stable dispersion in water					OP8	+10	+15	3119	
"	> 38-52	≥ 48				OP8	+10	+15	3119	
"	≤ 38	≥ 62				OP8	+20	+25	3119	
ETHYL 3,3-DI-(tert-AMYLPEROXY)BUTYRATE	≤ 67	≥ 33				OP7			3105	
ETHYL 3,3-DI-(tert-BUTYLPEROXY)BUTYRATE	> 77 - 100					OP5			3103	
"	≤ 77	≥ 23				OP7			3105	
"	≤ 52			≥ 48		OP7			3106	
1-(2-ETHYLHEXANOYLPEROXY)-1,3-DIMETHYLBUTYL PEROXYPIVALATE	≤ 52	≥ 45	≥ 10			OP7	-20	-10	3115	
tert-HEXYL PEROXYNEODECANOATE	≤ 71	≥ 29				OP7	0	+10	3115	
tert-HEXYL PEROXYPIVALATE	≤ 72		≥ 28			OP7	+10	+15	3115	
3-HYDROXY-1,1-DIMETHYLBUTYL PEROXYNEODECANOATE	≤ 77	≥ 23				OP 7	- 5	+ 5	3115	
"	≤ 52	≥ 48				OP 8	- 5	+ 5	3117	
"	≤ 52 as a stable dispersion in water					OP 8	- 5	+ 5	3119	

ORGANIC PEROXIDE	Concentration (%)	Diluent type A (%)	Diluent type B (%) 1)	Inert solid (%)	Water	Packing Method	Control temperature (°C)	Emergency temperature (°C)	Number (Generic entry)	Subsidiary risks and remarks
ISOPROPYL sec-BUTYL PEROXYDICARBONATE +DI-sec-BUTYL PEROXYDICARBONATE +DI-ISOPROPYL PEROXYDICARBONATE	≤ 32 + ≤ 15 – 18 ≤ 12 – 15 ≤ 52 + ≤ 28 + ≤ 22	≥ 38				OP7	-20	-10	3115	
"						OP5	-20	-10	3111	3)
ISOPROPYLCUMYL HYDROPEROXIDE	≤ 72	≥ 28				OP8			3109	13)
p-MENTHYL HYDROPEROXIDE	> 72 - 100					OP7			3105	13)
"	≤ 72	≥ 28				OP8			3109	27)
METHYLCYCLOHEXANONE PEROXIDE(S)	≤ 67	≥ 33				OP7	+35	+40	3115	
METHYL ETHYL KETONE PEROXIDE(S)	see remark 8)	≥ 48				OP5			3101	3) 8) 13)
"	see remark 9)	≥ 55				OP7			3105	9)
"	see remark 10)	≥ 60				OP8			3107	10)
METHYL ISOBUTYL KETONE PEROXIDE(S)	≤ 62	≥ 19				OP7			3105	22)
METHYL ISOPROPYL KETONE PEROXIDE(S)	see remark 31)	≥ 70				OP8			3109	31)
ORGANIC PEROXIDE, LIQUID, SAMPLE						OP2			3103	11)
ORGANIC PEROXIDE, LIQUID, SAMPLE, TEMPERATURE CONTROLLED						OP2			3113	11)
ORGANIC PEROXIDE, SOLID, SAMPLE						OP2			3104	11)
ORGANIC PEROXIDE, SOLID, SAMPLE, TEMPERATURE CONTROLLED						OP2			3114	11)
3,3,5,7-PENTAMETHYL-1,2,4-TRIOXEPANE	≤ 100					OP8			3107	
PEROXYACETIC ACID, TYPE D, stabilized	≤ 43					OP7			3105	13) 14) 19)
PEROXYACETIC ACID, TYPE E, stabilized	≤ 43					OP8			3107	13) 15) 19)
PEROXYACETIC ACID, TYPE F, stabilized	≤ 43					OP8			3109	13) 16) 19)
PEROXYLAURIC ACID	≤ 100					OP8	+35	+40	3118	
PINANYL HYDROPEROXIDE	> 56 – 100					OP7			3105	13)
"	≤ 56	≥ 44				OP8			3109	
POLYETHER POLY-tet-BUTYLPEROXY-CARBONATE	≤ 52		≥ 48			OP8			3107	

ORGANIC PEROXIDE	Concentration (%)	Diluent type A (%)	Diluent type B (% 1)	Inert solid (%)	Water	Packing Method	Control temperature (°C)	Emergency temperature (°C)	Number (Generic entry)	Subsidiary risks and remarks
1,1,3,3-TETRAMETHYLBUTYL HYDROPEROXIDE	≤ 100					OP7			3105	
1,1,3,3-TETRAMETHYLBUTYL PEROXY-2-ETHYLHEXANOATE	≤ 100					OP7	+15	+20	3115	
1,1,3,3-TETRAMETHYLBUTYL PEROXYNEODECANOATE	≤ 72		≥ 28			OP7	-5	+5	3115	
"	≤ 52 as a stable dispersion in water					OP8	-5	+5	3119	
1,1,3,3-TETRAMETHYLBUTYL PEROXYPIVALATE	≤ 77	≥ 23				OP7	0	+10	3115	
3,6,9-TRIETHYL-3,6,9-TRIMETHYL-1,4,7-TRIPEROXONANE	≤ 17	≥ 18		≥ 65		OP8			3110	
3,6,9-TRIETHYL-3,6,9-TRIMETHYL-1,4,7-TRIPEROXONANE	≤ 42	≥ 58				OP7			3105	28)

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Remarks (refer to the last column of the Table in 2.2.52.4):

- 1) *Diluent type B may always be replaced by diluent type A. The boiling point of diluent type B shall be at least 60°C higher than the SADT of the organic peroxide.*
- 2) *Available oxygen ≤ 4.7%.*
- 3) *"EXPLOSIVE" subsidiary risk label required (Model No.1, see 5.2.2.2.2).*
- 4) *Diluent may be replaced by di-tert-butyl peroxide.*
- 5) *Available oxygen ≤ 9%.*
- 6) *With ≤ 9% hydrogen peroxide; available oxygen ≤ 10%.*
- 7) *Only non-metallic packagings allowed.*
- 8) *Available oxygen > 10% and ≤ 10.7%, with or without water.*
- 9) *Available oxygen ≤ 10% , with or without water.*
- 10) *Available oxygen ≤ 8.2% , with or without water.*
- 11) *See 2.2.52.1.9.*
- 12) *Up to 2000 kg per receptacle assigned to ORGANIC PEROXIDE TYPE F on the basis of large scale trials.*
- 13) *"CORROSIVE" subsidiary risk label required (Model No.8, see 5.2.2.2.2).*
- 14) *Peroxyacetic acid formulations which fulfil the criteria of the Manual of Tests and Criteria, paragraph 20.4.3 (d).*
- 15) *Peroxyacetic acid formulations which fulfil the criteria of the Manual of Tests and Criteria, paragraph 20.4.3 (e).*
- 16) *Peroxyacetic acid formulations which fulfil the criteria of the Manual of Tests and Criteria, paragraph 20.4.3 (f).*
- 17) *Addition of water to this organic peroxide will decrease its thermal stability.*
- 18) *No "CORROSIVE" subsidiary risk label (Model No.8, see 5.2.2.2.2) required for concentrations below 80%.*
- 19) *Mixtures with hydrogen peroxide, water and acid(s).*
- 20) *With diluent type A, with or without water.*
- 21) *With ≥ 25% diluent type A by mass, and in addition ethylbenzene.*
- 22) *With ≥ 19%, diluent type A by mass, and in addition methyl isobutyl ketone.*
- 23) *With < 6% di-tert-butyl peroxide.*
- 24) *With ≤ 8% 1-isopropylhydroperoxy-4-isopropylhydroxybenzene.*
- 25) *Diluent type B with boiling point > 110 °C.*
- 26) *With < 0.5% hydroperoxides content.*
- 27) *For concentrations more than 56%, "CORROSIVE" subsidiary risk label required (Model No.8, see 5.2.2.2.2).*
- 28) *Available active oxygen ≤ 7.6% in diluent type A having a 95% boil-off point in the range of 200 - 260 °C.*
- 29) *Not subject to the requirements of ADR for Class 5.2.*
- 30) *Diluent type B with boiling point > 130 °C.*
- 31) *Active oxygen ≤ 6.7%.*

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2.2.61 Class 6.1 Toxic substances

2.2.61.1 Criteria

2.2.61.1.1 The heading of Class 6.1 covers substances of which it is known by experience or regarding which it is presumed from experiments on animals that in relatively small quantities they are able by a single action or by action of short duration to cause damage to human health, or death, by inhalation, by cutaneous absorption or by ingestion.

NOTE: Genetically modified microorganisms and organisms shall be assigned to this Class if they meet the conditions for this Class.

2.2.61.1.2 Substances of Class 6.1 are subdivided as follows:

T Toxic substances without subsidiary risk:

- T1 Organic, liquid;
- T2 Organic, solid;
- T3 Organometallic substances;
- T4 Inorganic, liquid;
- T5 Inorganic, solid;
- T6 Liquid, used as pesticides;
- T7 Solid, used as pesticides;
- T8 Samples;
- T9 Other toxic substances;

TF Toxic substances, flammable:

- TF1 Liquid;
- TF2 Liquid, used as pesticides;
- TF3 Solid;

TS Toxic substances, self-heating, solid;

TW Toxic substances, which, in contact with water, emit flammable gases:

- TW1 Liquid;
- TW2 Solid;

TO Toxic substances, oxidizing:

- TO1 Liquid;
- TO2 Solid;

TC Toxic substances, corrosive:

- TC1 Organic, liquid;
- TC2 Organic, solid;
- TC3 Inorganic, liquid;
- TC4 Inorganic, solid;

TFC Toxic substances, flammable, corrosive;

TFW Toxic substances, flammable, which, in contact with water, emit flammable gases.

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Definitions

2.2.61.1.3 For the purposes of ADR:

LD₅₀ (median lethal dose) for acute oral toxicity is the statistically derived single dose of a substance that can be expected to cause death within 14 days in 50 per cent of young adult albino rats when administered by the oral route. The LD₅₀ value is expressed in terms of mass of test substance per mass of test animal (mg/kg);

LD₅₀ for acute dermal toxicity is that dose of the substance which, administered by continuous contact for 24 hours with the bare skin of albino rabbits, is most likely to cause death within 14 days in one half of the animals tested. The number of animals tested shall be sufficient to give a statistically significant result and be in conformity with good pharmacological practice. The result is expressed in milligrams per kg body mass;

LC₅₀ for acute toxicity on inhalation is that concentration of vapour, mist or dust which, administered by continuous inhalation to both male and female young adult albino rats for one hour, is most likely to cause death within 14 days in one half of the animals tested. A solid substance shall be tested if at least 10% (by mass) of its total mass is likely to be dust in a respirable range, e.g. the aerodynamic diameter of that particle-fraction is 10 µm or less. A liquid substance shall be tested if a mist is likely to be generated in a leakage of the transport containment. Both for solid and liquid substances more than 90% (by mass) of a specimen prepared for inhalation toxicity shall be in the respirable range as defined above. The result is expressed in milligrams per litre of air for dusts and mists or in millilitres per cubic metre of air (parts per million) for vapours.

Classification and assignment of packing groups

2.2.61.1.4 Substances of Class 6.1 shall be classified in three packing groups according to the degree of danger they present for carriage, as follows:

Packing group I:	highly toxic substances
Packing group II:	toxic substances
Packing group III:	slightly toxic substances.

2.2.61.1.5 Substances, mixtures, solutions and articles classified in Class 6.1 are listed in Table A of Chapter 3.2. The assignment of substances, mixtures and solutions not mentioned by name in Table A of Chapter 3.2 to the relevant entry of sub-section 2.2.61.3 and to the relevant packing group in accordance with the provisions of Chapter 2.1, shall be made according to the following criteria in 2.2.61.1.6 to 2.2.61.1.11.

2.2.61.1.6 To assess the degree of toxicity, account shall be taken of human experience of instances of accidental poisoning, as well as special properties possessed by any individual substances: liquid state, high volatility, any special likelihood of cutaneous absorption, and special biological effects.

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2.2.61.1.7 In the absence of observations on humans, the degree of toxicity shall be assessed using the available data from animal experiments in accordance with the table below:

	Packing group	Oral toxicity LD ₅₀ (mg/kg)	Dermal toxicity LD ₅₀ (mg/kg)	Inhalation toxicity by dusts and mists LC ₅₀ (mg/l)
Highly toxic	I	≤ 5	≤ 50	≤ 0.2
Toxic	II	> 5 and ≤ 50	> 50 and ≤ 200	> 0.2 and ≤ 2
Slightly toxic	III ^a	> 50 and ≤ 300	> 200 and ≤ 1 000	> 2 and ≤ 4

^a *Tear gas substances shall be included in packing group II even if data concerning their toxicity correspond to packing group III criteria.*

2.2.61.1.7.1 Where a substance exhibits different degrees of toxicity for two or more kinds of exposure, it shall be classified under the highest such degree of toxicity.

2.2.61.1.7.2 Substances meeting the criteria of Class 8 and with an inhalation toxicity of dusts and mists (LC₅₀) leading to packing group I shall only be accepted for an allocation to Class 6.1 if the toxicity through oral ingestion or dermal contact is at least in the range of packing groups I or II. Otherwise an assignment to Class 8 shall be made if appropriate (see 2.2.8.1.5).

2.2.61.1.7.3 The criteria for inhalation toxicity of dusts and mists are based on LC₅₀ data relating to 1-hour exposure, and where such information is available it shall be used. However, where only LC₅₀ data relating to 4-hour exposure are available, such figures can be multiplied by four and the product substituted in the above criteria, i.e. LC₅₀ value multiplied by four (4 hour) is considered the equivalent of LC₅₀ (1 hour).

Inhalation toxicity of vapours

2.2.61.1.8 Liquids giving off toxic vapours shall be classified into the following groups where "V" is the saturated vapour concentration (in ml/m³ of air) (volatility) at 20 °C and standard atmospheric pressure:

	Packing group	
Highly toxic	I	Where $V \geq 10 LC_{50}$ and $LC_{50} \leq 1\ 000\ \text{ml/m}^3$
Toxic	II	Where $V \geq LC_{50}$ and $LC_{50} \leq 3\ 000\ \text{ml/m}^3$ and the criteria for packing group I are not met
Slightly toxic	III ^a	Where $V \geq 1/5 LC_{50}$ and $LC_{50} \leq 5\ 000\ \text{ml/m}^3$ and the criteria for packing groups I and II are not met

^a *Tear gas substances shall be included in packing group II even if data concerning their toxicity correspond to packing group III criteria.*

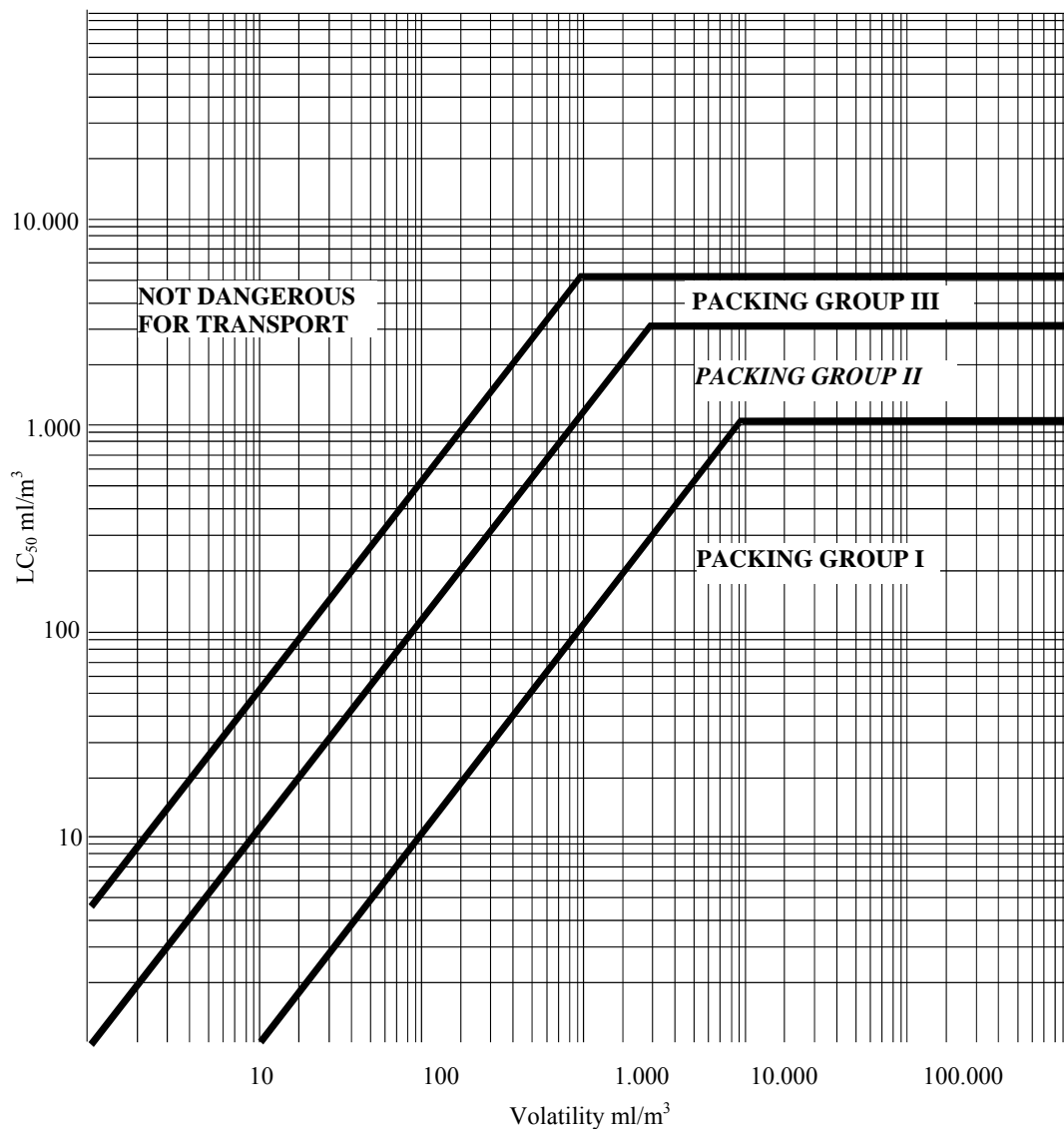
These criteria for inhalation toxicity of vapours are based on LC₅₀ data relating to 1-hour exposure, and where such information is available, it shall be used.

However, where only LC₅₀ data relating to 4-hour exposure to the vapours are available, such figures can be multiplied by two and the product substituted in the above criteria, i.e. LC₅₀ (4 hour) × 2 is considered the equivalent of LC₅₀ (1 hour).

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In this figure, the criteria are expressed in graphical form, as an aid to easy classification. However, due to approximations inherent in the use of graphs, substances falling on or near group borderlines shall be checked using numerical criteria.

GROUP BORDERLINES INHALATION TOXICITY OF VAPOURS



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Mixtures of liquids

2.2.61.1.9 Mixtures of liquids which are toxic on inhalation shall be assigned to packing groups according to the following criteria:

2.2.61.1.9.1 If LC₅₀ is known for each of the toxic substances constituting the mixture, the packing group may be determined as follows:

(a) calculation of the LC₅₀ of the mixture:

$$LC_{50}(\text{mixture}) = \frac{1}{\sum_{i=1}^n \frac{f_i}{LC_{50i}}}$$

where f_i = molar fraction of constituent i of the mixture;

LC_{50i} = average lethal concentration of constituent i in ml/m³.

(b) calculation of volatility of each mixture constituent:

$$V_i = P_i \times \frac{10^6}{101.3} \text{ (ml/m}^3\text{)}$$

where P_i = partial pressure of constituent i in kPa at 20 °C and at standard atmospheric pressure.

(c) calculation of the ratio of volatility to LC₅₀:

$$R = \sum_{i=1}^n \frac{V_i}{LC_{50i}}$$

(d) the values calculated for LC₅₀ (mixture) and R are then used to determine the packing group of the mixture:

Packing group I $R \geq 10$ and $LC_{50}(\text{mixture}) \leq 1\,000 \text{ ml/m}^3$;

Packing group II $R \geq 1$ and $LC_{50}(\text{mixture}) \leq 3\,000 \text{ ml/m}^3$, if the mixture does not meet the criteria for packing group I;

Packing group III $R \geq 1/5$ and $LC_{50}(\text{mixture}) \leq 5\,000 \text{ ml/m}^3$, if the mixture does not meet the criteria of packing groups I or II.

2.2.61.1.9.2 In the absence of LC₅₀ data on the toxic constituent substances, the mixture may be assigned to a group based on the following simplified threshold toxicity tests. When these threshold tests are used, the most restrictive group shall be determined and used for carrying the mixture.

2.2.61.1.9.3 A mixture is assigned to packing group I only if it meets both of the following criteria:

(a) A sample of the liquid mixture is vaporized and diluted with air to create a test atmosphere of 1 000 ml/m³ vaporized mixture in air. Ten albino rats (5 male and 5 female) are exposed to the test atmosphere for 1 hour and observed for 14 days. If five or more of the animals die within the 14-day observation period, the mixture is presumed to have an LC₅₀ equal to or less than 1 000 ml/m³;

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- (b) A sample of vapour in equilibrium with the liquid mixture is diluted with 9 equal volumes of air to form a test atmosphere. Ten albino rats (5 male and 5 female) are exposed to the test atmosphere for 1 hour and observed for 14 days. If five or more of the animals die within the 14-day observation period, the mixture is presumed to have a volatility equal to or greater than 10 times the mixture LC₅₀.

2.2.61.1.9.4 A mixture is assigned to packing group II only if it meets both of the following criteria, and does not meet the criteria for packing group I:

- (a) A sample of the liquid mixture is vaporized and diluted with air to create a test atmosphere of 3 000 ml/m³ vaporized mixture in air. Ten albino rats (5 male and 5 female) are exposed to the test atmosphere for 1 hour and observed for 14 days. If five or more of the animals die within the 14-day observation period, the mixture is presumed to have an LC₅₀ equal to or less than 3 000 ml/m³;
- (b) A sample of the vapour in equilibrium with the liquid mixture is used to form a test atmosphere. Ten albino rats (5 male and 5 female) are exposed to the test atmosphere for 1 hour and observed for 14 days. If five or more of the animals die within the 14-day observation period, the mixture is presumed to have a volatility equal to or greater than the mixture LC₅₀.

2.2.61.1.9.5 A mixture is assigned to packing group III only if it meets both of the following criteria, and does not meet the criteria for packing groups I or II:

- (a) A sample of the liquid mixture is vaporized and diluted with air to create a test atmosphere of 5 000 ml/m³ vaporized mixture in air. Ten albino rats (5 male and 5 female) are exposed to the test atmosphere for 1 hour and observed for 14 days. If five or more of the animals die within the 14-day observation period, the mixture is presumed to have an LC₅₀ equal to or less than 5 000 ml/m³;
- (b) The vapour concentration (volatility) of the liquid mixture is measured and if the vapour concentration is equal to or greater than 1 000 ml/m³, the mixture is presumed to have a volatility equal to or greater than 1/5 the mixture LC₅₀.

Methods for determining oral and dermal toxicity of mixtures

2.2.61.1.10 When classifying and assigning the appropriate packing group to mixtures in Class 6.1 in accordance with the oral and dermal toxicity criteria (see 2.2.61.1.3), it is necessary to determine the acute LD₅₀ of the mixture.

2.2.61.1.10.1 If a mixture contains only one active substance, and the LD₅₀ of that constituent is known, in the absence of reliable acute oral and dermal toxicity data on the actual mixture to be carried, the oral or dermal LD₅₀ may be obtained by the following method:

$$\text{LD}_{50} \text{ value of preparation} = \frac{\text{LD}_{50} \text{ value of active substance} \times 100}{\text{percentage of active substance by mass}}$$

2.2.61.1.10.2 If a mixture contains more than one active constituent, there are three possible approaches that may be used to determine the oral or dermal LD₅₀ of the mixture. The preferred method is to obtain reliable acute oral and dermal toxicity data on the actual mixture to be carried. If reliable, accurate data are not available, then either of the following methods may be performed:

- (a) Classify the formulation according to the most hazardous constituent of the mixture as if that constituent were present in the same concentration as the total concentration of all active constituents; or

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(b) Apply the formula:

$$\frac{C_A}{T_A} + \frac{C_B}{T_B} + \dots + \frac{C_Z}{T_Z} = \frac{100}{T_M}$$

where:

- C = the percentage concentration of constituent A, B, ..., Z in the mixture;
 T = the oral LD₅₀ values of constituent A, B, ... Z;
 T_M = the oral LD₅₀ value of the mixture.

NOTE: This formula can also be used for dermal toxicities provided that this information is available on the same species for all constituents. The use of this formula does not take into account any potentiation or protective phenomena.

Classification of pesticides

2.2.61.1.11 All active pesticide substances and their preparations for which the LC₅₀ and/or LD₅₀ values are known and which are classified in Class 6.1 shall be classified under appropriate packing groups in accordance with the criteria given in 2.2.61.1.6 to 2.2.61.1.9. Substances and preparations which are characterized by subsidiary risks shall be classified according to the precedence of hazard Table in 2.1.3.10 with the assignment of appropriate packing groups.

2.2.61.1.11.1 If the oral or dermal LD₅₀ value for a pesticide preparation is not known, but the LD₅₀ value of its active substance(s) is known, the LD₅₀ value for the preparation may be obtained by applying the procedures in 2.2.61.1.10.

NOTE: LD₅₀ toxicity data for a number of common pesticides may be obtained from the most current edition of the document "The WHO Recommended Classification of Pesticides by Hazard and Guidelines to Classification" available from the International Programme on Chemical Safety, World Health Organisation (WHO), 1211 Geneva 27, Switzerland. While that document may be used as a source of LD₅₀ data for pesticides, its classification system shall not be used for purposes of transport classification of, or assignment of packing groups to, pesticides, which shall be in accordance with the requirements of ADR.

2.2.61.1.11.2 The proper shipping name used in the carriage of the pesticide shall be selected on the basis of the active ingredient, of the physical state of the pesticide and any subsidiary risks it may exhibit (see 3.1.2).

2.2.61.1.12 If substances of Class 6.1, as a result of admixtures, come into categories of risk different from those to which the substances mentioned by name in Table A of Chapter 3.2 belong, these mixtures or solutions shall be assigned to the entries to which they belong on the basis of their actual degree of danger.

NOTE: For the classification of solutions and mixtures (such as preparations and wastes), see also 2.1.3.

2.2.61.1.13 On the basis of the criteria of 2.2.61.1.6 to 2.2.61.1.11, it may also be determined whether the nature of a solution or mixture mentioned by name or containing a substance mentioned by name is such that the solution or mixture is not subject to the requirements for this Class.

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2.2.61.1.14 Substances, solutions and mixtures, with the exception of substances and preparations used as pesticides, which do not meet the criteria of Directives 67/548/EEC³ or 1999/45/EC⁴ as amended and which are not therefore classified as highly toxic, toxic or harmful according to these directives, as amended, may be considered as substances not belonging to Class 6.1.

2.2.61.2 Substances not accepted for carriage

2.2.61.2.1 Chemically unstable substances of Class 6.1 shall not be accepted for carriage unless the necessary steps have been taken to prevent their dangerous decomposition or polymerization during carriage. To this end, it shall in particular be ensured that receptacles and tanks do not contain any substance(s) likely to cause such a reaction.

2.2.61.2.2 The following substances and mixtures shall not be accepted for carriage:

- Hydrogen cyanide, anhydrous or in solution, which do not meet the descriptions of UN Nos. 1051, 1613, 1614 and 3294;
- metal carbonyls, having a flash-point below 23 °C, other than UN Nos. 1259 NICKEL CARBONYL and 1994 IRON PENTACARBONYL;
- 2,3,7,8-TETRACHLORODIBENZO-P-DIOXINE (TCDD) in concentrations considered highly toxic in accordance with the criteria in 2.2.61.1.7;
- UN No. 2249 DICHLORODIMETHYL ETHER, SYMMETRICAL;
- preparations of phosphides without additives inhibiting the emission of toxic flammable gases.

³ Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances (Official Journal of the European Communities No. L 196 of 16.08.1967).

⁴ Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 on the approximation of laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations (Official Journal of the European Communities No. L 200 of 30 July 1999).

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2.2.61.3 *List of collective entries***Toxic substances without subsidiary risk(s)**

Organic	liquid^a	T1	1583 CHLOROPICRIN MIXTURE, N.O.S. 1602 DYE, LIQUID, TOXIC, N.O.S., or 1602 DYE INTERMEDIATE, LIQUID, TOXIC, N.O.S. 1693 TEAR GAS SUBSTANCE, LIQUID, N.O.S. 1851 MEDICINE, LIQUID, TOXIC, N.O.S. 2206 ISOCYANATES, TOXIC, N.O.S. or 2206 ISOCYANATE SOLUTION, TOXIC, N.O.S. 3140 ALKALOIDS, LIQUID, N.O.S. or 3140 ALKALOID SALTS, LIQUID, N.O.S. 3142 DISINFECTANT, LIQUID, TOXIC, N.O.S. 3144 NICOTINE COMPOUND, LIQUID, N.O.S. or 3144 NICOTINE PREPARATION, LIQUID, N.O.S. 3172 TOXINS, EXTRACTED FROM LIVING SOURCES, LIQUID, N.O.S. 3276 NITRILES, LIQUID, TOXIC, N.O.S. 3278 ORGANOPHOSPHORUS COMPOUND, LIQUID, TOXIC, N.O.S. 3381 TOXIC BY INHALATION LIQUID, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀ 3382 TOXIC BY INHALATION LIQUID, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀ 2810 TOXIC LIQUID, ORGANIC, N.O.S.
	solid^{a, b}	T2	1544 ALKALOIDS, SOLID, N.O.S. or 1544 ALKALOID SALTS, SOLID, N.O.S. 1601 DISINFECTANT, SOLID, TOXIC, N.O.S. 1655 NICOTINE COMPOUND, SOLID, N.O.S., or 1655 NICOTINE PREPARATION, SOLID, N.O.S. 3448 TEAR GAS SUBSTANCE, SOLID, N.O.S. 3143 DYE, SOLID, TOXIC, N.O.S. or 3143 DYE INTERMEDIATE, SOLID, TOXIC, N.O.S. 3462 TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S. 3249 MEDICINE, SOLID, TOXIC, N.O.S. 3464 ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S. 3439 NITRILES, SOLID, TOXIC, N.O.S. 2811 TOXIC SOLID, ORGANIC, N.O.S.
Organometallic^{c, d}		T3	2026 PHENYLMERCURIC COMPOUND, N.O.S. 2788 ORGANOTIN COMPOUND, LIQUID, N.O.S. 3146 ORGANOTIN COMPOUND, SOLID, N.O.S. 3280 ORGANOARSENIC COMPOUND, LIQUID, N.O.S. 3465 ORGANOARSENIC COMPOUND, SOLID, N.O.S. 3281 METAL CARBONYLS, LIQUID, N.O.S. 3466 METAL CARBONYLS, SOLID, N.O.S. 3282 ORGANOMETALLIC COMPOUND, LIQUID, TOXIC, N.O.S. 3467 ORGANOMETALLIC COMPOUND, SOLID, TOXIC, N.O.S.

(cont'd on next page)

^a Substances and preparations containing alkaloids or nicotine used as pesticides shall be classified under UN No. 2588 PESTICIDES, SOLID, TOXIC, N.O.S., UN No. 2902 PESTICIDES, LIQUID, TOXIC, N.O.S. or UN No. 2903 PESTICIDES, LIQUID, TOXIC, FLAMMABLE, N.O.S.

^b Active substances and triturations or mixtures of substances intended for laboratories and experiments and for the manufacture of pharmaceutical products with other substances shall be classified according to their toxicity (see 2.2.61.1.7 to 2.2.61.1.11).

^c Self-heating substances, slightly toxic and spontaneously combustible organometallic compounds, are substances of Class 4.2.

^d Water-reactive substances, slightly toxic, and water-reactive organometallic compounds, are substances of Class 4.3.

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2.2.61.3 *List of collective entries (cont'd)***Toxic substances without subsidiary risk(s) (cont'd)**

Inorganic	liquid^e T4	1556 ARSENIC COMPOUND, LIQUID, N.O.S., inorganic including: Arsenates, n.o.s., Arsenites, n.o.s.; and Arsenic sulphides, n.o.s. 1935 CYANIDE SOLUTION, N.O.S. 2024 MERCURY COMPOUND, LIQUID, N.O.S. 3141 ANTIMONY COMPOUND, INORGANIC, LIQUID, N.O.S. 3440 SELENIUM COMPOUND, LIQUID, N.O.S. 3381 TOXIC BY INHALATION LIQUID, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀ 3382 TOXIC BY INHALATION LIQUID, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀ 3287 TOXIC LIQUID, INORGANIC, N.O.S.
	solids^{f,g} T5	1549 ANTIMONY COMPOUND, INORGANIC, SOLID, N.O.S. 1557 ARSENIC COMPOUND, SOLID, N.O.S., including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s. 1564 BARIUM COMPOUND, N.O.S. 1566 BERYLLIUM COMPOUND, N.O.S. 1588 CYANIDES, INORGANIC, SOLID, N.O.S. 1707 THALLIUM COMPOUND, N.O.S. 2025 MERCURY COMPOUND, SOLID, N.O.S. 2291 LEAD COMPOUND, SOLUBLE, N.O.S. 2570 CADMIUM COMPOUND 2630 SELENATES or 2630 SELENITES 2856 FLUOROSILICATES, N.O.S. 3283 SELENIUM COMPOUND, SOLID, N.O.S. 3284 TELLURIUM COMPOUND, N.O.S. 3285 VANADIUM COMPOUND, N.O.S. 3288 TOXIC SOLID, INORGANIC, N.O.S.
Pesticides	liquid^h T6	2992 CARBAMATE PESTICIDE, LIQUID, TOXIC 2994 ARSENICAL PESTICIDE, LIQUID, TOXIC 2996 ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC 2998 TRIAZINE PESTICIDE, LIQUID, TOXIC 3006 THIOCARBAMATE PESTICIDE, LIQUID, TOXIC 3010 COPPER BASED PESTICIDE, LIQUID, TOXIC 3012 MERCURY BASED PESTICIDE, LIQUID, TOXIC 3014 SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC 3016 BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC 3018 ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC 3020 ORGANOTIN PESTICIDE, LIQUID, TOXIC 3026 COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC 3348 PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC 3352 PYRETHROID PESTICIDE, LIQUID, TOXIC 2902 PESTICIDE, LIQUID, TOXIC, N.O.S.

(cont'd on next page)

^e *Mercury fulminate, wetted with not less than 20% water, or mixture of alcohol and water by mass is a substance of Class 1, UN No. 0135.*

^f *Ferricyanides, ferrocyanides, alkaline thiocyanates and ammonium thiocyanates are not subject to the provisions of ADR.*

^g *Lead salts and lead pigments which, when mixed in a ratio of 1:1,000 with 0.07M hydrochloric acid and stirred for one hour at a temperature of 23 °C ± 2 °C, exhibit a solubility of 5% or less, are not subject to the provisions of ADR.*

^h *Articles impregnated with this pesticide, such as fibreboard plates, paper strips, cotton-wool balls, sheets of plastics material, in hermetically closed wrappings, are not subject to the provisions of ADR.*

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2.2.61.3 List of collective entries (cont'd)**Toxic substances without subsidiary risk(s) (cont'd)**

Pesticides (cont'd)			
Solid^h	T7	2757 CARBAMATE PESTICIDE, SOLID, TOXIC 2759 ARSENICAL PESTICIDE, SOLID, TOXIC 2761 ORGANOCHLORINE PESTICIDE, SOLID, TOXIC 2763 TRIAZINE PESTICIDE, SOLID, TOXIC 2771 THIOCARBAMATE PESTICIDE, SOLID, TOXIC 2775 COPPER BASED PESTICIDE, SOLID, TOXIC 2777 MERCURY BASED PESTICIDE, SOLID, TOXIC 2779 SUBSTITUTED NITROPHENOL PESTICIDE, SOLID, TOXIC 2781 BIPYRIDILIUM PESTICIDE, SOLID, TOXIC 2783 ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC 2786 ORGANOTIN PESTICIDE, SOLID, TOXIC 3027 COUMARIN DERIVATIVE PESTICIDE, SOLID, TOXIC 3048 ALUMINIUM PHOSPHIDE PESTICIDE 3345 PHENOXYACETIC ACID DERIVATIVE PESTICIDE, SOLID, TOXIC 3349 PYRETHROID PESTICIDE, SOLID, TOXIC 2588 PESTICIDE, SOLID, TOXIC, N.O.S.	
	Samples	T8	3315 CHEMICAL SAMPLE, TOXIC
	Other toxic substancesⁱ	T9	3243 SOLIDS CONTAINING TOXIC LIQUID, N.O.S.

Toxic substances with subsidiary risk(s)

Liquid^{l,k}	TF1	3071 MERCAPTANS, LIQUID, TOXIC, FLAMMABLE, N.O.S. or 3071 MERCAPTAN MIXTURE, LIQUID, TOXIC, FLAMMABLE, N.O.S. 3080 ISOCYANATES, TOXIC, FLAMMABLE, N.O.S. or 3080 ISOCYANATE SOLUTION, TOXIC, FLAMMABLE, N.O.S. 3275 NITRILES, TOXIC, FLAMMABLE, N.O.S. 3279 ORGANOPHOSPHORUS COMPOUND, TOXIC, FLAMMABLE, N.O.S. 3383 TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀ 3384 TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀ 2929 TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.	
		Flammable	TF

(cont'd on next page)

^h Articles impregnated with this pesticide, such as fibreboard plates, paper strips, cotton-wool balls, sheets of plastics material, in hermetically closed wrappings, are not subject to the provisions of ADR.

ⁱ Mixtures of solids which are not subject to the provisions of ADR and of toxic liquids may be carried under UN No. 3243 without first applying the classification criteria of Class 6.1, provided there is no free liquid visible at the time the substance is loaded or at the time the packaging, container or transport unit is closed. Each packaging shall correspond to a design type that has passed a leakproofness test at the packing group II level. This entry shall not be used for solids containing a packing group I liquid.

^j Highly toxic or toxic, flammable liquids having a flash-point below 23 °C excluding substances which are highly toxic on inhalation, i.e. UN Nos. 1051, 1092, 1098, 1143, 1163, 1182, 1185, 1238, 1239, 1244, 1251, 1259, 1613, 1614, 1695, 1994, 2334, 2382, 2407, 2438, 2480, 2482, 2484, 2485, 2606, 2929, 3279 and 3294 are substances of Class 3.

^k Flammable liquids, slightly toxic, with the exception of substances and preparations used as pesticides, having a flash-point between 23 °C and 60 °C inclusive, are substances of Class 3.

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2.2.61.3 *List of collective entries (cont'd)***Toxic substances with subsidiary risk(s) (cont'd)**

Flammable TF (cont'd)	pesticides, liquid (flash- point not less than 23 °C)	TF2	2991 CARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			2993 ARSENICAL PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			2995 ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			2997 TRIAZINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3005 THIOCARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3009 COPPER BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3011 MERCURY BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3013 SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3015 BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3017 ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3019 ORGANOTIN PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3025 COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3347 PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			3351 PYRETHROID PESTICIDE, LIQUID, TOXIC, FLAMMABLE
			2903 PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S.
	solid	TF3	1700 TEAR GAS CANDLES
			2930 TOXIC SOLID, FLAMMABLE, ORGANIC, N.O.S.
Solid, self-heating^c			3124 TOXIC SOLID, SELF-HEATING, N.O.S.
TS			
	liquid	TW1	3385 TOXIC BY INHALATION LIQUID, WATER-REACTIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀
			3386 TOXIC BY INHALATION LIQUID, WATER-REACTIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀
			3123 TOXIC LIQUID, WATER-REACTIVE, N.O.S.
Water-reactive^d			
TW	solidⁿ	TW2	3125 TOXIC SOLID, WATER-REACTIVE, N.O.S.
	liquid	TO1	3387 TOXIC BY INHALATION LIQUID, OXIDIZING, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀
			3388 TOXIC BY INHALATION LIQUID, OXIDIZING, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀
			3122 TOXIC LIQUID, OXIDIZING, N.O.S.
Oxidizing^l			
TO	solid	TO2	3086 TOXIC SOLID, OXIDIZING, N.O.S.
	liquid	TC1	3277 CHLOROFORMATES, TOXIC, CORROSIVE, N.O.S.
			3361 CHLOROSILANES, TOXIC, CORROSIVE, N.O.S.
			3389 TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀
			3390 TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀
			2927 TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.
Corrosive^m	organic		
TC	solid	TC2	2928 TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.

(cont'd on next page)

^c Self-heating substances, slightly toxic and spontaneously combustible organometallic compounds, are substances of Class 4.2.

^d Water-reactive substances, slightly toxic, and water-reactive organometallic compounds, are substances of Class 4.3.

^l Oxidizing substances, slightly toxic, are substances of Class 5.1.

^m Substances slightly toxic and slightly corrosive, are substances of Class 8.

ⁿ Metal phosphides assigned to UN Nos. 1360, 1397, 1432, 1714, 2011 and 2013 are substances of Class 4.3.

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2.2.61.3 *List of collective entries (cont'd)***Toxic substances with subsidiary risk(s) (cont'd)**

Corrosive^m TC (cont'd)	inorganic	liquid	TC3	3389 TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀
				3390 TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀
				3289 TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S.
		solid	TC4	3290 TOXIC SOLID, CORROSIVE, INORGANIC, N.O.S.
Flammable, corrosive				2742 CHLOROFORMATES, TOXIC, CORROSIVE, FLAMMABLE, N.O.S.
TFC				3362 CHLOROSILANES, TOXIC, CORROSIVE, FLAMMABLE, N.O.S.
				3488 TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀
				3489 TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀
Flammable, water-reactive				3490 TOXIC BY INHALATION LIQUID, WATER-REACTIVE, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀
TFW				3491 TOXIC BY INHALATION LIQUID, WATER-REACTIVE, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀

2.2.62 **Class 6.2** **Infectious substances****2.2.62.1** **Criteria**

2.2.62.1.1 The heading of Class 6.2 covers infectious substances. For the purposes of ADR, infectious substances are substances which are known or are reasonably expected to contain pathogens. Pathogens are defined as microorganisms (including bacteria, viruses, rickettsiae, parasites, fungi) and other agents such as prions, which can cause disease in humans or animals.

NOTE 1: Genetically modified microorganisms and organisms, biological products, diagnostic specimens and infected live animals shall be assigned to this Class if they meet the conditions for this class.

NOTE 2: Toxins from plant, animal or bacterial sources which do not contain any infectious substances or organisms or which are not contained in them are substances of Class 6.1, UN Nos. 3172 or 3462.

2.2.62.1.2 Substances of Class 6.2 are subdivided as follows:

- 11 Infectious substances affecting humans;
- 12 Infectious substances affecting animals only;
- 13 Clinical waste;
- 14 Biological substances.

Definitions

^m Substances slightly toxic and slightly corrosive, are substances of Class 8.

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2.2.62.1.3 For the purposes of ADR,

"Biological products" are those products derived from living organisms which are manufactured and distributed in accordance with the requirements of appropriate national authorities, which may have special licensing requirements, and are used either for prevention, treatment, or diagnosis of disease in humans or animals, or for development, experimental or investigational purposes related thereto. They include, but are not limited to, finished or unfinished products such as vaccines;

"Cultures" are the result of a process by which pathogens are intentionally propagated. This definition does not include human or animal patient specimens as defined in this paragraph;

"Medical or clinical wastes" are wastes derived from the medical treatment of animals or humans or from bio-research;

"Patient specimens" are human or animal materials, collected directly from humans or animals, including, but not limited to, excreta, secreta, blood and its components, tissue and tissue fluid swabs, and body parts being carried for purposes such as research, diagnosis, investigational activities, disease treatment and prevention.

Classification

2.2.62.1.4 Infectious substances shall be classified in Class 6.2 and assigned to UN Nos. 2814, 2900, 3291 or 3373, as appropriate.

Infectious substances are divided into the following categories:

2.2.62.1.4.1 Category A: An infectious substance which is carried in a form that, when exposure to it occurs, is capable of causing permanent disability, life-threatening or fatal disease in otherwise healthy humans or animals. Indicative examples of substances that meet these criteria are given in the table in this paragraph.

NOTE: *An exposure occurs when an infectious substance is released outside of the protective packaging, resulting in physical contact with humans or animals.*

- (a) Infectious substances meeting these criteria which cause disease in humans or both in humans and animals shall be assigned to UN No. 2814. Infectious substances which cause disease only in animals shall be assigned to UN No. 2900;
- (b) Assignment to UN No. 2814 or UN No. 2900 shall be based on the known medical history and symptoms of the source human or animal, endemic local conditions, or professional judgement concerning individual circumstances of the source human or animal.

NOTE 1: *The proper shipping name for UN No. 2814 is "INFECTIOUS SUBSTANCE, AFFECTING HUMANS". The proper shipping name for UN No. 2900 is "INFECTIOUS SUBSTANCE, AFFECTING ANIMALS only".*

NOTE 2: *The following table is not exhaustive. Infectious substances, including new or emerging pathogens, which do not appear in the table but which meet the same criteria shall be assigned to Category A. In addition, if there is doubt as to whether or not a substance meets the criteria it shall be included in Category A.*

NOTE 3: *In the following table, the microorganisms written in italics are bacteria, mycoplasmas, rickettsia or fungi.*

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INDICATIVE EXAMPLES OF INFECTIOUS SUBSTANCES INCLUDED IN CATEGORY A IN ANY FORM UNLESS OTHERWISE INDICATED (2.2.62.1.4.1)	
UN Number and name	Microorganism
UN No. 2814 Infectious substances affecting humans	<i>Bacillus anthracis (cultures only)</i> <i>Brucella abortus (cultures only)</i> <i>Brucella melitensis (cultures only)</i> <i>Brucella suis (cultures only)</i> <i>Burkholderia mallei - Pseudomonas mallei – Glanders (cultures only)</i> <i>Burkholderia pseudomallei – Pseudomonas pseudomallei (cultures only)</i> <i>Chlamydia psittaci - avian strains (cultures only)</i> <i>Clostridium botulinum (cultures only)</i> <i>Coccidioides immitis (cultures only)</i> <i>Coxiella burnetii (cultures only)</i> Crimean-Congo haemorrhagic fever virus Dengue virus (cultures only) Eastern equine encephalitis virus (cultures only) <i>Escherichia coli, verotoxigenic (cultures only)</i> ^a Ebola virus Flexal virus <i>Francisella tularensis (cultures only)</i> Guanarito virus Hantaan virus Hantavirus causing haemorrhagic fever with renal syndrome Hendra virus Hepatitis B virus (cultures only) Herpes B virus (cultures only) Human immunodeficiency virus (cultures only) Highly pathogenic avian influenza virus (cultures only) Japanese Encephalitis virus (cultures only) Junin virus Kyasanur Forest disease virus Lassa virus Machupo virus Marburg virus Monkeypox virus <i>Mycobacterium tuberculosis (cultures only)</i> ^a Nipah virus Omsk haemorrhagic fever virus Poliovirus (cultures only) Rabies virus (cultures only) <i>Rickettsia prowazekii (cultures only)</i> <i>Rickettsia rickettsii (cultures only)</i> Rift Valley fever virus (cultures only) Russian spring-summer encephalitis virus (cultures only) Sabia virus <i>Shigella dysenteriae type 1 (cultures only)</i> ^a Tick-borne encephalitis virus (cultures only) Variola virus Venezuelan equine encephalitis virus (cultures only) West Nile virus (cultures only) Yellow fever virus (cultures only) <i>Yersinia pestis (cultures only)</i>

^a Nevertheless, when the cultures are intended for diagnostic or clinical purposes, they may be classified as infectious substances of Category B.

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INDICATIVE EXAMPLES OF INFECTIOUS SUBSTANCES INCLUDED IN CATEGORY A IN ANY FORM UNLESS OTHERWISE INDICATED (2.2.62.1.4.1)	
UN Number and name	Microorganism
UN No. 2900 Infectious substances affecting animals only	African swine fever virus (cultures only) Avian paramyxovirus Type 1 - Velogenic Newcastle disease virus (cultures only) Classical swine fever virus (cultures only) Foot and mouth disease virus (cultures only) Lumpy skin disease virus (cultures only) <i>Mycoplasma mycoides</i> - Contagious bovine pleuropneumonia (cultures only) Peste des petits ruminants virus (cultures only) Rinderpest virus (cultures only) Sheep-pox virus (cultures only) Goatpox virus (cultures only) Swine vesicular disease virus (cultures only) Vesicular stomatitis virus (cultures only)

2.2.62.1.4.2 Category B: An infectious substance which does not meet the criteria for inclusion in Category A. Infectious substances in Category B shall be assigned to UN No. 3373.

NOTE: The proper shipping name of UN No. 3373 is "BIOLOGICAL SUBSTANCE, CATEGORY B".

2.2.62.1.5 *Exemptions*

2.2.62.1.5.1 Substances which do not contain infectious substances or substances which are unlikely to cause disease in humans or animals are not subject to the provisions of ADR unless they meet the criteria for inclusion in another class.

2.2.62.1.5.2 Substances containing microorganisms which are non-pathogenic to humans or animals are not subject to ADR unless they meet the criteria for inclusion in another class.

2.2.62.1.5.3 Substances in a form that any present pathogens have been neutralized or inactivated such that they no longer pose a health risk are not subject to ADR unless they meet the criteria for inclusion in another class.

NOTE: Medical equipment which has been drained of free liquid is deemed to meet the requirements of this paragraph and is not subject to the provisions of ADR.

2.2.62.1.5.4 Substances where the concentration of pathogens is at a level naturally encountered (including foodstuff and water samples) and which are not considered to pose a significant risk of infection are not subject to ADR unless they meet the criteria for inclusion in another class.

2.2.62.1.5.5 Dried blood spots, collected by applying a drop of blood onto absorbent material, or faecal occult blood screening tests and blood or blood components which have been collected for the purposes of transfusion or for the preparation of blood products to be used for transfusion or transplantation and any tissues or organs intended for use in transplantation are not subject to the provisions of ADR.

2.2.62.1.5.6 Human or animal specimens for which there is minimal likelihood that pathogens are present are not subject to ADR if the specimen is carried in a packaging which will prevent any leakage and which is marked with the words "Exempt human specimen" or "Exempt animal specimen", as appropriate.

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The packaging is deemed to comply with the above requirements if it meets the following conditions:

- (a) The packaging consists of three components:
 - (i) a leak-proof primary receptacle(s);
 - (ii) a leak-proof secondary packaging; and
 - (iii) an outer packaging of adequate strength for its capacity, mass and intended use, and with at least one surface having minimum dimensions of 100 mm × 100 mm;
- (b) For liquids, absorbent material in sufficient quantity to absorb the entire contents is placed between the primary receptacle(s) and the secondary packaging so that, during carriage, any release or leak of a liquid substance will not reach the outer packaging and will not compromise the integrity of the cushioning material;
- (c) When multiple fragile primary receptacles are placed in a single secondary packaging, they are either individually wrapped or separated to prevent contact between them.

NOTE 1: *An element of professional judgment is required to determine if a substance is exempt under this paragraph. That judgment should be based on the known medical history, symptoms and individual circumstances of the source, human or animal, and endemic local conditions. Examples of specimens which may be carried under this paragraph include the blood or urine tests to monitor cholesterol levels, blood glucose levels, hormone levels, or prostate specific antibodies (PSA); those required to monitor organ function such as heart, liver or kidney function for humans or animals with non-infectious diseases, or for therapeutic drug monitoring; those conducted for insurance or employment purposes and are intended to determine the presence of drugs or alcohol; pregnancy test; biopsies to detect cancer; and antibody detection in humans or animals in the absence of any concern for infection (e.g. evaluation of vaccine induced immunity, diagnosis of autoimmune disease, etc.).*

NOTE 2: *For air transport, packagings for specimens exempted under this paragraph shall meet the conditions in (a) to (c).*

2.2.62.1.5.7 Except for:

- (a) Medical waste (UN No. 3291);
- (b) Medical devices or equipment contaminated with or containing infectious substances in Category A (UN No. 2814 or UN No. 2900); and
- (c) Medical devices or equipment contaminated with or containing other dangerous goods that meet the definition of another class,

medical devices or equipment potentially contaminated with or containing infectious substances which are being carried for disinfection, cleaning, sterilization, repair, or equipment evaluation are not subject to provisions of ADR other than those of this paragraph if packed in packagings designed and constructed in such a way that, under normal conditions of carriage, they cannot break, be punctured or leak their contents. Packagings shall be designed to meet the construction requirements listed in 6.1.4 or 6.6.5.

These packagings shall meet the general packing requirements of 4.1.1.1 and 4.1.1.2 and be capable of retaining the medical devices and equipment when dropped from a height of 1.2 m.

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The packagings shall be marked "USED MEDICAL DEVICE" or "USED MEDICAL EQUIPMENT". When using overpacks, these shall be marked in the same way, except when the inscription remains visible.

2.2.62.1.6 to 2.2.62.1.8 (Reserved)

2.2.62.1.9 *Biological products*

For the purposes of ADR, biological products are divided into the following groups:

- (a) those which are manufactured and packaged in accordance with the requirements of appropriate national authorities and carried for the purposes of final packaging or distribution, and use for personal health care by medical professionals or individuals. Substances in this group are not subject to the provisions of ADR;
- (b) those which do not fall under paragraph (a) and are known or reasonably believed to contain infectious substances and which meet the criteria for inclusion in Category A or Category B. Substances in this group shall be assigned to UN Nos. 2814, 2900 or 3373, as appropriate.

NOTE: *Some licensed biological products may present a biohazard only in certain parts of the world. In that case, competent authorities may require these biological products to be in compliance with local requirements for infectious substances or may impose other restrictions.*

2.2.62.1.10 *Genetically modified microorganisms and organisms*

Genetically modified microorganisms not meeting the definition of infectious substance shall be classified according to section 2.2.9.

2.2.62.1.11 *Medical or clinical wastes*

2.2.62.1.11.1 Medical or clinical wastes containing Category A infectious substances shall be assigned to UN No. 2814 or UN No. 2900 as appropriate. Medical or clinical wastes containing infectious substances in Category B shall be assigned to UN No. 3291.

NOTE: *Medical or clinical wastes assigned to number 18 01 03 (Wastes from human or animal health care and/or related research – wastes from natal care, diagnosis, treatment or prevention of disease in humans – wastes whose collection and disposal is subject to special requirements in order to prevent infection) or 18 02 02 (Wastes from human or animal health care and/or related research – wastes from research, diagnosis, treatment or prevention of disease involving animals – wastes whose collection and disposal is subject to special requirements in order to prevent infection) according to the list of wastes annexed to the Commission Decision 2000/532/EC⁵ as amended, shall be classified according to the provisions set out in this paragraph, based on the medical or veterinary diagnosis concerning the patient or the animal.*

2.2.62.1.11.2 Medical or clinical wastes which are reasonably believed to have a low probability of containing infectious substances shall be assigned to UN No. 3291. For the assignment, international, regional or national waste catalogues may be taken into account.

⁵ Commission Decision 2000/532/EC of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste (replaced by the Directive 2006/12/EC of the European Parliament and of the Council (Official Journal of the European Union No. L 114 of 27 April 2006, page 9)) and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste (Official Journal of the European Communities No. L 226 of 6 September 2000, page 3).

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NOTE 1: *The proper shipping name for UN No. 3291 is "CLINICAL WASTE, UNSPECIFIED, N.O.S." or "(BIO) MEDICAL WASTE, N.O.S". or "REGULATED MEDICAL WASTE, N.O.S."*.

NOTE 2: *Notwithstanding the classification criteria set out above, medical or clinical wastes assigned to number 18 01 04 (Wastes from human or animal health care and/or related research – wastes from natal care, diagnosis, treatment or prevention of disease in humans – wastes whose collection and disposal is not subject to special requirements in order to prevent infection) or 18 02 03 (Wastes from human or animal health care and/or related research – wastes from research, diagnosis, treatment or prevention of disease involving animals – wastes whose collection and disposal is not subject to special requirements in order to prevent infection) according to the list of wastes annexed to the Commission Decision 2000/532/EC⁵ as amended, are not subject to the provisions of ADR.*

- 2.2.62.1.11.3 Decontaminated medical or clinical wastes which previously contained infectious substances are not subject to the provisions of ADR unless they meet the criteria for inclusion in another class.
- 2.2.62.1.11.4 Medical or clinical wastes assigned to UN No. 3291 are assigned to packing group II.
- 2.2.62.1.12 *Infected animals*
- 2.2.62.1.12.1 Unless an infectious substance cannot be consigned by any other means, live animals shall not be used to consign such a substance. A live animal which has been intentionally infected and is known or suspected to contain an infectious substance shall only be carried under terms and conditions approved by the competent authority⁶.
- 2.2.62.1.12.2 Animal material affected by pathogens of Category A or by pathogens which would be assigned to Category A in cultures only, shall be assigned to UN 2814 or UN 2900 as appropriate. Animal material affected by pathogens of Category B, other than those which would be assigned to Category A if they were in cultures, shall be assigned to UN 3373.

⁵ Commission Decision 2000/532/EC of 3 May 2000 replacing Decision 94/3/EC establishing a list of wastes pursuant to Article 1(a) of Council Directive 75/442/EEC on waste (replaced by the Directive 2006/12/EC of the European Parliament and of the Council (Official Journal of the European Union No. L 114 of 27 April 2006, page 9)) and Council Decision 94/904/EC establishing a list of hazardous waste pursuant to Article 1(4) of Council Directive 91/689/EEC on hazardous waste (Official Journal of the European Communities No. L 226 of 6 September 2000, page 3).

⁶ Regulations governing the carriage of live animals are contained in, e.g. Directive 91/628/EEC of 19 November 1991 on the protection of animals during transport (Official Journal of the European Communities No. L 340 of 11.12.1991, p.17) and in the Recommendations of the Council of Europe (Ministerial Committee) on the carriage of certain animal species.

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2.2.62.2 *Substances not accepted for carriage*

Live vertebrate or invertebrate animals shall not be used to carry an infectious agent unless the agent cannot be carried by other means or unless this carriage has been approved by the competent authority (see 2.2.62.1.12.1).

2.2.62.3 *List of collective entries*

Effects on humans	I1	2814 INFECTIOUS SUBSTANCE, AFFECTING HUMANS
Effects on animals only	I2	2900 INFECTIOUS SUBSTANCE, AFFECTING ANIMALS only
Clinical waste	I3	3291 CLINICAL WASTE, UNSPECIFIED, N.O.S. or 3291 (BIO) MEDICAL WASTE, N.O.S. or 3291 REGULATED MEDICAL WASTE, N.O.S.
Biological substances	I4	3373 BIOLOGICAL SUBSTANCE, CATEGORY B

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2.2.7 Class 7 Radioactive material

2.2.7.1 Definitions

2.2.7.1.1 *Radioactive material* means any material containing radionuclides where both the activity concentration and the total activity in the consignment exceed the values specified in 2.2.7.2.2.1 to 2.2.7.2.2.6.

2.2.7.1.2 Contamination

Contamination means the presence of a radioactive substance on a surface in quantities in excess of 0.4 Bq/cm² for beta and gamma emitters and low toxicity alpha emitters, or 0.04 Bq/cm² for all other alpha emitters.

Non-fixed contamination means contamination that can be removed from a surface during routine conditions of carriage.

Fixed contamination means contamination other than non-fixed contamination.

2.2.7.1.3 Definitions of specific terms

A₁ and *A₂*

A₁ means the activity value of special form radioactive material which is listed in the Table in 2.2.7.2.2.1 or derived in 2.2.7.2.2.2 and is used to determine the activity limits for the requirements of ADR.

A₂ means the activity value of radioactive material, other than special form radioactive material, which is listed in the Table in 2.2.7.2.2.1 or derived in 2.2.7.2.2.2 and is used to determine the activity limits for the requirements of ADR.

Fissile nuclides means uranium-233, uranium-235, plutonium-239 and plutonium-241. *Fissile material* means a material containing any of the fissile nuclides. Excluded from the definition of fissile material are:

- (a) Natural uranium or depleted uranium which is unirradiated; and
- (b) Natural uranium or depleted uranium which has been irradiated in thermal reactors only.

Low dispersible radioactive material means either a solid radioactive material or a solid radioactive material in a sealed capsule, that has limited dispersibility and is not in powder form.

Low specific activity (LSA) material means radioactive material which by its nature has a limited specific activity, or radioactive material for which limits of estimated average specific activity apply. External shielding materials surrounding the LSA material shall not be considered in determining the estimated average specific activity.

Low toxicity alpha emitters are: natural uranium; depleted uranium; natural thorium; uranium-235 or uranium-238; thorium-232; thorium-228 and thorium-230 when contained in ores or physical and chemical concentrates; or alpha emitters with a half-life of less than 10 days.

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Special form radioactive material means either:

- (a) An indispersible solid radioactive material; or
- (b) A sealed capsule containing radioactive material.

Specific activity of a radionuclide means the activity per unit mass of that nuclide. The specific activity of a material shall mean the activity per unit mass of the material in which the radionuclides are essentially uniformly distributed.

Surface contaminated object (SCO) means a solid object which is not itself radioactive but which has radioactive material distributed on its surfaces.

Unirradiated thorium means thorium containing not more than 10^{-7} g of uranium-233 per gram of thorium-232.

Unirradiated uranium means uranium containing not more than 2×10^3 Bq of plutonium per gram of uranium-235, not more than 9×10^6 Bq of fission products per gram of uranium-235 and not more than 5×10^{-3} g of uranium-236 per gram of uranium-235.

Uranium - natural, depleted, enriched means the following:

Natural uranium means uranium (which may be chemically separated) containing the naturally occurring distribution of uranium isotopes (approximately 99.28% uranium-238, and 0.72% uranium-235 by mass).

Depleted uranium means uranium containing a lesser mass percentage of uranium-235 than in natural uranium.

Enriched uranium means uranium containing a greater mass percentage of uranium-235 than 0.72%.

In all cases, a very small mass percentage of uranium-234 is present.

2.2.7.2 **Classification**

2.2.7.2.1 **General provisions**

- 2.2.7.2.1.1 Radioactive material shall be assigned to one of the UN number specified in Table 2.2.7.2.1.1 depending on the activity level of the radionuclides contained in a package, the fissile or non fissile properties of these radionuclides, the type of package to be presented for carriage, and the nature or form of the contents of the package, or special arrangements governing the carriage operation, in accordance with the provisions laid down in 2.2.7.2.2 to 2.2.7.2.5.

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Table 2.2.7.2.1.1 Assignment of UN numbers

Excepted packages (1.7.1.5)
UN 2908 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - EMPTY PACKAGING
UN 2909 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - ARTICLES MANUFACTURED FROM NATURAL URANIUM or DEPLETED URANIUM or NATURAL THORIUM
UN 2910 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL
UN 2911 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - INSTRUMENTS or ARTICLES
Low specific activity radioactive material (2.2.7.2.3.1)
UN 2912 RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I), non fissile or fissile-excepted
UN 3321 RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II), non fissile or fissile-excepted
UN 3322 RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-III), non fissile or fissile-excepted
UN 3324 RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II), FISSILE
UN 3325 RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, (LSA-III), FISSILE
Surface contaminated objects (2.2.7.2.3.2)
UN 2913 RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I or SCO-II), non fissile or fissile-excepted
UN 3326 RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I or SCO-II), FISSILE
Type A packages (2.2.7.2.4.4)
UN 2915 RADIOACTIVE MATERIAL, TYPE A PACKAGE, non-special form, non fissile or fissile-excepted
UN 3327 RADIOACTIVE MATERIAL, TYPE A PACKAGE, FISSILE, non-special form
UN 3332 RADIOACTIVE MATERIAL, TYPE A PACKAGE, SPECIAL FORM, non fissile or fissile-excepted
UN 3333 RADIOACTIVE MATERIAL, TYPE A PACKAGE, SPECIAL FORM, FISSILE
Type B(U) packages (2.2.7.2.4.6)
UN 2916 RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, non fissile or fissile-excepted
UN 3328 RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, FISSILE
Type B(M) packages (2.2.7.2.4.6)
UN 2917 RADIOACTIVE MATERIAL, TYPE B(M) PACKAGE, non fissile or fissile-excepted
UN 3329 RADIOACTIVE MATERIAL, TYPE B(M) PACKAGE, FISSILE
Type C packages (2.2.7.2.4.6)
UN 3323 RADIOACTIVE MATERIAL, TYPE C PACKAGE, non fissile or fissile-excepted
UN 3330 RADIOACTIVE MATERIAL, TYPE C PACKAGE, FISSILE
Special arrangement (2.2.7.2.5)
UN 2919 RADIOACTIVE MATERIAL, TRANSPORTED UNDER SPECIAL ARRANGEMENT, non fissile or fissile-excepted
UN 3331 RADIOACTIVE MATERIAL, TRANSPORTED UNDER SPECIAL ARRANGEMENT, FISSILE
Uranium hexafluoride (2.2.7.2.4.5)
UN 2977 RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, FISSILE
UN 2978 RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, non fissile or fissile- excepted

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2.2.7.2.2 *Determination of activity level*

2.2.7.2.2.1 The following basic values for individual radionuclides are given in Table 2.2.7.2.2.1:

- (a) A_1 and A_2 in TBq;
- (b) Activity concentration for exempt material in Bq/g; and
- (c) Activity limits for exempt consignments in Bq.

Table 2.2.7.2.2.1: Basic radionuclides values for individual radionuclides

Radionuclide (atomic number)	A_1 (TBq)	A_2 (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Actinium (89)				
Ac-225 (a)	8×10^{-1}	6×10^{-3}	1×10^1	1×10^4
Ac-227 (a)	9×10^{-1}	9×10^{-5}	1×10^{-1}	1×10^3
Ac-228	6×10^{-1}	5×10^{-1}	1×10^1	1×10^6
Silver (47)				
Ag-105	2×10^0	2×10^0	1×10^2	1×10^6
Ag-108m (a)	7×10^{-1}	7×10^{-1}	1×10^1 (b)	1×10^6 (b)
Ag-110m (a)	4×10^{-1}	4×10^{-1}	1×10^1	1×10^6
Ag-111	2×10^0	6×10^{-1}	1×10^3	1×10^6
Aluminium (13)				
Al-26	1×10^{-1}	1×10^{-1}	1×10^1	1×10^5
Americium (95)				
Am-241	1×10^1	1×10^{-3}	1×10^0	1×10^4
Am-242m (a)	1×10^1	1×10^{-3}	1×10^0 (b)	1×10^4 (b)
Am-243 (a)	5×10^0	1×10^{-3}	1×10^0 (b)	1×10^3 (b)
Argon (18)				
Ar-37	4×10^1	4×10^1	1×10^6	1×10^8
Ar-39	4×10^1	2×10^1	1×10^7	1×10^4
Ar-41	3×10^{-1}	3×10^{-1}	1×10^2	1×10^9
Arsenic (33)				
As-72	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
As-73	4×10^1	4×10^1	1×10^3	1×10^7
As-74	1×10^0	9×10^{-1}	1×10^1	1×10^6
As-76	3×10^{-1}	3×10^{-1}	1×10^2	1×10^5

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Radionuclide (atomic number)	A₁ (TBq)	A₂ (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
As-77	2×10^1	7×10^{-1}	1×10^3	1×10^6
Astatine (85)				
At-211 (a)	2×10^1	5×10^{-1}	1×10^3	1×10^7
Gold (79)				
Au-193	7×10^0	2×10^0	1×10^2	1×10^7
Au-194	1×10^0	1×10^0	1×10^1	1×10^6
Au-195	1×10^1	6×10^0	1×10^2	1×10^7
Au-198	1×10^0	6×10^{-1}	1×10^2	1×10^6
Au-199	1×10^1	6×10^{-1}	1×10^2	1×10^6
Barium (56)				
Ba-131 (a)	2×10^0	2×10^0	1×10^2	1×10^6
Ba-133	3×10^0	3×10^0	1×10^2	1×10^6
Ba-133m	2×10^1	6×10^{-1}	1×10^2	1×10^6
Ba-140 (a)	5×10^{-1}	3×10^{-1}	1×10^1 (b)	1×10^5 (b)
Beryllium (4)				
Be-7	2×10^1	2×10^1	1×10^3	1×10^7
Be-10	4×10^1	6×10^{-1}	1×10^4	1×10^6
Bismuth (83)				
Bi-205	7×10^{-1}	7×10^{-1}	1×10^1	1×10^6
Bi-206	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
Bi-207	7×10^{-1}	7×10^{-1}	1×10^1	1×10^6
Bi-210	1×10^0	6×10^{-1}	1×10^3	1×10^6
Bi-210m (a)	6×10^{-1}	2×10^{-2}	1×10^1	1×10^5
Bi-212 (a)	7×10^{-1}	6×10^{-1}	1×10^1 (b)	1×10^5 (b)
Berkelium (97)				
Bk-247	8×10^0	8×10^{-4}	1×10^0	1×10^4
Bk-249 (a)	4×10^1	3×10^{-1}	1×10^3	1×10^6
Bromine (35)				
Br-76	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
Br-77	3×10^0	3×10^0	1×10^2	1×10^6
Br-82	4×10^{-1}	4×10^{-1}	1×10^1	1×10^6

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Radionuclide (atomic number)	A₁ (TBq)	A₂ (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Carbon (6)				
C-11	1×10^0	6×10^{-1}	1×10^1	1×10^6
C-14	4×10^1	3×10^0	1×10^4	1×10^7
Calcium (20)				
Ca-41	Unlimited	Unlimited	1×10^5	1×10^7
Ca-45	4×10^1	1×10^0	1×10^4	1×10^7
Ca-47 (a)	3×10^0	3×10^{-1}	1×10^1	1×10^6
Cadmium (48)				
Cd-109	3×10^1	2×10^0	1×10^4	1×10^6
Cd-113m	4×10^1	5×10^{-1}	1×10^3	1×10^6
Cd-115 (a)	3×10^0	4×10^{-1}	1×10^2	1×10^6
Cd-115m	5×10^{-1}	5×10^{-1}	1×10^3	1×10^6
Cerium (58)				
Ce-139	7×10^0	2×10^0	1×10^2	1×10^6
Ce-141	2×10^1	6×10^{-1}	1×10^2	1×10^7
Ce-143	9×10^{-1}	6×10^{-1}	1×10^2	1×10^6
Ce-144 (a)	2×10^{-1}	2×10^{-1}	1×10^2 (b)	1×10^5 (b)
Californium (98)				
Cf-248	4×10^1	6×10^{-3}	1×10^1	1×10^4
Cf-249	3×10^0	8×10^{-4}	1×10^0	1×10^3
Cf-250	2×10^1	2×10^{-3}	1×10^1	1×10^4
Cf-251	7×10^0	7×10^{-4}	1×10^0	1×10^3
Cf-252	1×10^{-1}	3×10^{-3}	1×10^1	1×10^4
Cf-253 (a)	4×10^1	4×10^{-2}	1×10^2	1×10^5
Cf-254	1×10^{-3}	1×10^{-3}	1×10^0	1×10^3
Chlorine (17)				
Cl-36	1×10^1	6×10^{-1}	1×10^4	1×10^6
Cl-38	2×10^{-1}	2×10^{-1}	1×10^1	1×10^5
Curium (96)				
Cm-240	4×10^1	2×10^{-2}	1×10^2	1×10^5
Cm-241	2×10^0	1×10^0	1×10^2	1×10^6

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Radionuclide (atomic number)	A₁ (TBq)	A₂ (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Cm-242	4×10^1	1×10^{-2}	1×10^2	1×10^5
Cm-243	9×10^0	1×10^{-3}	1×10^0	1×10^4
Cm-244	2×10^1	2×10^{-3}	1×10^1	1×10^4
Cm-245	9×10^0	9×10^{-4}	1×10^0	1×10^3
Cm-246	9×10^0	9×10^{-4}	1×10^0	1×10^3
Cm-247 (a)	3×10^0	1×10^{-3}	1×10^0	1×10^4
Cm-248	2×10^{-2}	3×10^{-4}	1×10^0	1×10^3
Cobalt (27)				
Co-55	5×10^{-1}	5×10^{-1}	1×10^1	1×10^6
Co-56	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
Co-57	1×10^1	1×10^1	1×10^2	1×10^6
Co-58	1×10^0	1×10^0	1×10^1	1×10^6
Co-58m	4×10^1	4×10^1	1×10^4	1×10^7
Co-60	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
Chromium (24)				
Cr-51	3×10^1	3×10^1	1×10^3	1×10^7
Caesium (55)				
Cs-129	4×10^0	4×10^0	1×10^2	1×10^5
Cs-131	3×10^1	3×10^1	1×10^3	1×10^6
Cs-132	1×10^0	1×10^0	1×10^1	1×10^5
Cs-134	7×10^{-1}	7×10^{-1}	1×10^1	1×10^4
Cs-134m	4×10^1	6×10^{-1}	1×10^3	1×10^5
Cs-135	4×10^1	1×10^0	1×10^4	1×10^7
Cs-136	5×10^{-1}	5×10^{-1}	1×10^1	1×10^5
Cs-137 (a)	2×10^0	6×10^{-1}	1×10^1 (b)	1×10^4 (b)
Copper (29)				
Cu-64	6×10^0	1×10^0	1×10^2	1×10^6
Cu-67	1×10^1	7×10^{-1}	1×10^2	1×10^6
Dysprosium (66)				
Dy-159	2×10^1	2×10^1	1×10^3	1×10^7
Dy-165	9×10^{-1}	6×10^{-1}	1×10^3	1×10^6

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Radionuclide (atomic number)	A₁ (TBq)	A₂ (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Dy-166 (a)	9×10^{-1}	3×10^{-1}	1×10^3	1×10^6
Erbium (68)				
Er-169	4×10^1	1×10^0	1×10^4	1×10^7
Er-171	8×10^{-1}	5×10^{-1}	1×10^2	1×10^6
Europium (63)				
Eu-147	2×10^0	2×10^0	1×10^2	1×10^6
Eu-148	5×10^{-1}	5×10^{-1}	1×10^1	1×10^6
Eu-149	2×10^1	2×10^1	1×10^2	1×10^7
Eu-150(short lived)	2×10^0	7×10^{-1}	1×10^3	1×10^6
Eu-150(long lived)	7×10^{-1}	7×10^{-1}	1×10^1	1×10^6
Eu-152	1×10^0	1×10^0	1×10^1	1×10^6
Eu-152m	8×10^{-1}	8×10^{-1}	1×10^2	1×10^6
Eu-154	9×10^{-1}	6×10^{-1}	1×10^1	1×10^6
Eu-155	2×10^1	3×10^0	1×10^2	1×10^7
Eu-156	7×10^{-1}	7×10^{-1}	1×10^1	1×10^6
Fluorine (9)				
F-18	1×10^0	6×10^{-1}	1×10^1	1×10^6
Iron (26)				
Fe-52 (a)	3×10^{-1}	3×10^{-1}	1×10^1	1×10^6
Fe-55	4×10^1	4×10^1	1×10^4	1×10^6
Fe-59	9×10^{-1}	9×10^{-1}	1×10^1	1×10^6
Fe-60 (a)	4×10^1	2×10^{-1}	1×10^2	1×10^5
Gallium (31)				
Ga-67	7×10^0	3×10^0	1×10^2	1×10^6
Ga-68	5×10^{-1}	5×10^{-1}	1×10^1	1×10^5
Ga-72	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
Gadolinium (64)				
Gd-146 (a)	5×10^{-1}	5×10^{-1}	1×10^1	1×10^6
Gd-148	2×10^1	2×10^{-3}	1×10^1	1×10^4
Gd-153	1×10^1	9×10^0	1×10^2	1×10^7
Gd-159	3×10^0	6×10^{-1}	1×10^3	1×10^6

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Radionuclide (atomic number)	A₁ (TBq)	A₂ (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Germanium (32)				
Ge-68 (a)	5×10^{-1}	5×10^{-1}	1×10^1	1×10^5
Ge-71	4×10^1	4×10^1	1×10^4	1×10^8
Ge-77	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
Hafnium (72)				
Hf-172 (a)	6×10^{-1}	6×10^{-1}	1×10^1	1×10^6
Hf-175	3×10^0	3×10^0	1×10^2	1×10^6
Hf-181	2×10^0	5×10^{-1}	1×10^1	1×10^6
Hf-182	Unlimited	Unlimited	1×10^2	1×10^6
Mercury (80)				
Hg-194 (a)	1×10^0	1×10^0	1×10^1	1×10^6
Hg-195m (a)	3×10^0	7×10^{-1}	1×10^2	1×10^6
Hg-197	2×10^1	1×10^1	1×10^2	1×10^7
Hg-197m	1×10^1	4×10^{-1}	1×10^2	1×10^6
Hg-203	5×10^0	1×10^0	1×10^2	1×10^5
Holmium (67)				
Ho-166	4×10^{-1}	4×10^{-1}	1×10^3	1×10^5
Ho-166m	6×10^{-1}	5×10^{-1}	1×10^1	1×10^6
Iodine (53)				
I-123	6×10^0	3×10^0	1×10^2	1×10^7
I-124	1×10^0	1×10^0	1×10^1	1×10^6
I-125	2×10^1	3×10^0	1×10^3	1×10^6
I-126	2×10^0	1×10^0	1×10^2	1×10^6
I-129	Unlimited	Unlimited	1×10^2	1×10^5
I-131	3×10^0	7×10^{-1}	1×10^2	1×10^6
I-132	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
I-133	7×10^{-1}	6×10^{-1}	1×10^1	1×10^6
I-134	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
I-135 (a)	6×10^{-1}	6×10^{-1}	1×10^1	1×10^6

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Radionuclide (atomic number)	A₁ (TBq)	A₂ (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Indium (49)				
In-111	3×10^0	3×10^0	1×10^2	1×10^6
In-113m	4×10^0	2×10^0	1×10^2	1×10^6
In-114m (a)	1×10^1	5×10^{-1}	1×10^2	1×10^6
In-115m	7×10^0	1×10^0	1×10^2	1×10^6
Iridium (77)				
Ir-189 (a)	1×10^1	1×10^1	1×10^2	1×10^7
Ir-190	7×10^{-1}	7×10^{-1}	1×10^1	1×10^6
Ir-192	1×10^0 (c)	6×10^{-1}	1×10^1	1×10^4
Ir-194	3×10^{-1}	3×10^{-1}	1×10^2	1×10^5
Potassium (19)				
K-40	9×10^{-1}	9×10^{-1}	1×10^2	1×10^6
K-42	2×10^{-1}	2×10^{-1}	1×10^2	1×10^6
K-43	7×10^{-1}	6×10^{-1}	1×10^1	1×10^6
Krypton (36)				
Kr-79	4×10^0	2×10^0	1×10^3	1×10^5
Kr-81	4×10^1	4×10^1	1×10^4	1×10^7
Kr-85	1×10^1	1×10^1	1×10^5	1×10^4
Kr-85m	8×10^0	3×10^0	1×10^3	1×10^{10}
Kr-87	2×10^{-1}	2×10^{-1}	1×10^2	1×10^9
Lanthanum (57)				
La-137	3×10^1	6×10^0	1×10^3	1×10^7
La-140	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
Lutetium (71)				
Lu-172	6×10^{-1}	6×10^{-1}	1×10^1	1×10^6
Lu-173	8×10^0	8×10^0	1×10^2	1×10^7
Lu-174	9×10^0	9×10^0	1×10^2	1×10^7
Lu-174m	2×10^1	1×10^1	1×10^2	1×10^7
Lu-177	3×10^1	7×10^{-1}	1×10^3	1×10^7
Magnesium (12)				
Mg-28 (a)	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5

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Radionuclide (atomic number)	A₁ (TBq)	A₂ (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Manganese (25)				
Mn-52	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
Mn-53	Unlimited	Unlimited	1×10^4	1×10^9
Mn-54	1×10^0	1×10^0	1×10^1	1×10^6
Mn-56	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
Molybdenum (42)				
Mo-93	4×10^1	2×10^1	1×10^3	1×10^8
Mo-99 (a)	1×10^0	6×10^{-1}	1×10^2	1×10^6
Nitrogen (7)				
N-13	9×10^{-1}	6×10^{-1}	1×10^2	1×10^9
Sodium (11)				
Na-22	5×10^{-1}	5×10^{-1}	1×10^1	1×10^6
Na-24	2×10^{-1}	2×10^{-1}	1×10^1	1×10^5
Niobium (41)				
Nb-93m	4×10^1	3×10^1	1×10^4	1×10^7
Nb-94	7×10^{-1}	7×10^{-1}	1×10^1	1×10^6
Nb-95	1×10^0	1×10^0	1×10^1	1×10^6
Nb-97	9×10^{-1}	6×10^{-1}	1×10^1	1×10^6
Neodymium (60)				
Nd-147	6×10^0	6×10^{-1}	1×10^2	1×10^6
Nd-149	6×10^{-1}	5×10^{-1}	1×10^2	1×10^6
Nickel (28)				
Ni-59	Unlimited	Unlimited	1×10^4	1×10^8
Ni-63	4×10^1	3×10^1	1×10^5	1×10^8
Ni-65	4×10^{-1}	4×10^{-1}	1×10^1	1×10^6
Neptunium (93)				
Np-235	4×10^1	4×10^1	1×10^3	1×10^7
Np-236(short-lived)	2×10^1	2×10^0	1×10^3	1×10^7
Np-236(long-lived)	9×10^0	2×10^{-2}	1×10^2	1×10^5
Np-237	2×10^1	2×10^{-3}	1×10^0 (b)	1×10^3 (b)
Np-239	7×10^0	4×10^{-1}	1×10^2	1×10^7

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Radionuclide (atomic number)	A₁ (TBq)	A₂ (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Osmium (76)				
Os-185	1×10^0	1×10^0	1×10^1	1×10^6
Os-191	1×10^1	2×10^0	1×10^2	1×10^7
Os-191m	4×10^1	3×10^1	1×10^3	1×10^7
Os-193	2×10^0	6×10^{-1}	1×10^2	1×10^6
Os-194 (a)	3×10^{-1}	3×10^{-1}	1×10^2	1×10^5
Phosphorus (15)				
P-32	5×10^{-1}	5×10^{-1}	1×10^3	1×10^5
P-33	4×10^1	1×10^0	1×10^5	1×10^8
Protactinium (91)				
Pa-230 (a)	2×10^0	7×10^{-2}	1×10^1	1×10^6
Pa-231	4×10^0	4×10^{-4}	1×10^0	1×10^3
Pa-233	5×10^0	7×10^{-1}	1×10^2	1×10^7
Lead (82)				
Pb-201	1×10^0	1×10^0	1×10^1	1×10^6
Pb-202	4×10^1	2×10^1	1×10^3	1×10^6
Pb-203	4×10^0	3×10^0	1×10^2	1×10^6
Pb-205	Unlimited	Unlimited	1×10^4	1×10^7
Pb-210 (a)	1×10^0	5×10^{-2}	1×10^1 (b)	1×10^4 (b)
Pb-212 (a)	7×10^{-1}	2×10^{-1}	1×10^1 (b)	1×10^5 (b)
Palladium (46)				
Pd-103 (a)	4×10^1	4×10^1	1×10^3	1×10^8
Pd-107	Unlimited	Unlimited	1×10^5	1×10^8
Pd-109	2×10^0	5×10^{-1}	1×10^3	1×10^6
Promethium (61)				
Pm-143	3×10^0	3×10^0	1×10^2	1×10^6
Pm-144	7×10^{-1}	7×10^{-1}	1×10^1	1×10^6
Pm-145	3×10^1	1×10^1	1×10^3	1×10^7
Pm-147	4×10^1	2×10^0	1×10^4	1×10^7
Pm-148m (a)	8×10^{-1}	7×10^{-1}	1×10^1	1×10^6
Pm-149	2×10^0	6×10^{-1}	1×10^3	1×10^6

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Radionuclide (atomic number)	A₁ (TBq)	A₂ (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Pm-151	2×10^0	6×10^{-1}	1×10^2	1×10^6
Polonium (84)				
Po-210	4×10^1	2×10^{-2}	1×10^1	1×10^4
Praseodymium (59)				
Pr-142	4×10^{-1}	4×10^{-1}	1×10^2	1×10^5
Pr-143	3×10^0	6×10^{-1}	1×10^4	1×10^6
Platinum (78)				
Pt-188 (a)	1×10^0	8×10^{-1}	1×10^1	1×10^6
Pt-191	4×10^0	3×10^0	1×10^2	1×10^6
Pt-193	4×10^1	4×10^1	1×10^4	1×10^7
Pt-193m	4×10^1	5×10^{-1}	1×10^3	1×10^7
Pt-195m	1×10^1	5×10^{-1}	1×10^2	1×10^6
Pt-197	2×10^1	6×10^{-1}	1×10^3	1×10^6
Pt-197m	1×10^1	6×10^{-1}	1×10^2	1×10^6
Plutonium (94)				
Pu-236	3×10^1	3×10^{-3}	1×10^1	1×10^4
Pu-237	2×10^1	2×10^1	1×10^3	1×10^7
Pu-238	1×10^1	1×10^{-3}	1×10^0	1×10^4
Pu-239	1×10^1	1×10^{-3}	1×10^0	1×10^4
Pu-240	1×10^1	1×10^{-3}	1×10^0	1×10^3
Pu-241 (a)	4×10^1	6×10^{-2}	1×10^2	1×10^5
Pu-242	1×10^1	1×10^{-3}	1×10^0	1×10^4
Pu-244 (a)	4×10^{-1}	1×10^{-3}	1×10^0	1×10^4
Radium (88)				
Ra-223 (a)	4×10^{-1}	7×10^{-3}	1×10^2 (b)	1×10^5 (b)
Ra-224 (a)	4×10^{-1}	2×10^{-2}	1×10^1 (b)	1×10^5 (b)
Ra-225 (a)	2×10^{-1}	4×10^{-3}	1×10^2	1×10^5
Ra-226 (a)	2×10^{-1}	3×10^{-3}	1×10^1 (b)	1×10^4 (b)
Ra-228 (a)	6×10^{-1}	2×10^{-2}	1×10^1 (b)	1×10^5 (b)

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Radionuclide (atomic number)	A₁ (TBq)	A₂ (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Rubidium (37)				
Rb-81	2×10^0	8×10^{-1}	1×10^1	1×10^6
Rb-83 (a)	2×10^0	2×10^0	1×10^2	1×10^6
Rb-84	1×10^0	1×10^0	1×10^1	1×10^6
Rb-86	5×10^{-1}	5×10^{-1}	1×10^2	1×10^5
Rb-87	Unlimited	Unlimited	1×10^4	1×10^7
Rb(nat)	Unlimited	Unlimited	1×10^4	1×10^7
Rhenium (75)				
Re-184	1×10^0	1×10^0	1×10^1	1×10^6
Re-184m	3×10^0	1×10^0	1×10^2	1×10^6
Re-186	2×10^0	6×10^{-1}	1×10^3	1×10^6
Re-187	Unlimited	Unlimited	1×10^6	1×10^9
Re-188	4×10^{-1}	4×10^{-1}	1×10^2	1×10^5
Re-189 (a)	3×10^0	6×10^{-1}	1×10^2	1×10^6
Re(nat)	Unlimited	Unlimited	1×10^6	1×10^9
Rhodium (45)				
Rh-99	2×10^0	2×10^0	1×10^1	1×10^6
Rh-101	4×10^0	3×10^0	1×10^2	1×10^7
Rh-102	5×10^{-1}	5×10^{-1}	1×10^1	1×10^6
Rh-102m	2×10^0	2×10^0	1×10^2	1×10^6
Rh-103m	4×10^1	4×10^1	1×10^4	1×10^8
Rh-105	1×10^1	8×10^{-1}	1×10^2	1×10^7
Radon (86)				
Rn-222 (a)	3×10^{-1}	4×10^{-3}	1×10^1 (b)	1×10^8 (b)
Ruthenium (44)				
Ru-97	5×10^0	5×10^0	1×10^2	1×10^7
Ru-103 (a)	2×10^0	2×10^0	1×10^2	1×10^6
Ru-105	1×10^0	6×10^{-1}	1×10^1	1×10^6
Ru-106 (a)	2×10^{-1}	2×10^{-1}	1×10^2 (b)	1×10^5 (b)
Sulphur (16)				
S-35	4×10^1	3×10^0	1×10^5	1×10^8

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Radionuclide (atomic number)	A₁ (TBq)	A₂ (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Antimony (51)				
Sb-122	4×10^{-1}	4×10^{-1}	1×10^2	1×10^4
Sb-124	6×10^{-1}	6×10^{-1}	1×10^1	1×10^6
Sb-125	2×10^0	1×10^0	1×10^2	1×10^6
Sb-126	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
Scandium (21)				
Sc-44	5×10^{-1}	5×10^{-1}	1×10^1	1×10^5
Sc-46	5×10^{-1}	5×10^{-1}	1×10^1	1×10^6
Sc-47	1×10^1	7×10^{-1}	1×10^2	1×10^6
Sc-48	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
Selenium (34)				
Se-75	3×10^0	3×10^0	1×10^2	1×10^6
Se-79	4×10^1	2×10^0	1×10^4	1×10^7
Silicon (14)				
Si-31	6×10^{-1}	6×10^{-1}	1×10^3	1×10^6
Si-32	4×10^1	5×10^{-1}	1×10^3	1×10^6
Samarium (62)				
Sm-145	1×10^1	1×10^1	1×10^2	1×10^7
Sm-147	Unlimited	Unlimited	1×10^1	1×10^4
Sm-151	4×10^1	1×10^1	1×10^4	1×10^8
Sm-153	9×10^0	6×10^{-1}	1×10^2	1×10^6
Tin (50)				
Sn-113 (a)	4×10^0	2×10^0	1×10^3	1×10^7
Sn-117m	7×10^0	4×10^{-1}	1×10^2	1×10^6
Sn-119m	4×10^1	3×10^1	1×10^3	1×10^7
Sn-121m (a)	4×10^1	9×10^{-1}	1×10^3	1×10^7
Sn-123	8×10^{-1}	6×10^{-1}	1×10^3	1×10^6
Sn-125	4×10^{-1}	4×10^{-1}	1×10^2	1×10^5
Sn-126 (a)	6×10^{-1}	4×10^{-1}	1×10^1	1×10^5

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Radionuclide (atomic number)	A₁ (TBq)	A₂ (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Strontium (38)				
Sr-82 (a)	2×10^{-1}	2×10^{-1}	1×10^1	1×10^5
Sr-85	2×10^0	2×10^0	1×10^2	1×10^6
Sr-85m	5×10^0	5×10^0	1×10^2	1×10^7
Sr-87m	3×10^0	3×10^0	1×10^2	1×10^6
Sr-89	6×10^{-1}	6×10^{-1}	1×10^3	1×10^6
Sr-90 (a)	3×10^{-1}	3×10^{-1}	1×10^2 (b)	1×10^4 (b)
Sr-91 (a)	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
Sr-92 (a)	1×10^0	3×10^{-1}	1×10^1	1×10^6
Tritium (1)				
T(H-3)	4×10^1	4×10^1	1×10^6	1×10^9
Tantalum (73)				
Ta-178(long-lived)	1×10^0	8×10^{-1}	1×10^1	1×10^6
Ta-179	3×10^1	3×10^1	1×10^3	1×10^7
Ta-182	9×10^{-1}	5×10^{-1}	1×10^1	1×10^4
Terbium (65)				
Tb-157	4×10^1	4×10^1	1×10^4	1×10^7
Tb-158	1×10^0	1×10^0	1×10^1	1×10^6
Tb-160	1×10^0	6×10^{-1}	1×10^1	1×10^6
Technetium (43)				
Tc-95m (a)	2×10^0	2×10^0	1×10^1	1×10^6
Tc-96	4×10^{-1}	4×10^{-1}	1×10^1	1×10^6
Tc-96m (a)	4×10^{-1}	4×10^{-1}	1×10^3	1×10^7
Tc-97	Unlimited	Unlimited	1×10^3	1×10^8
Tc-97m	4×10^1	1×10^0	1×10^3	1×10^7
Tc-98	8×10^{-1}	7×10^{-1}	1×10^1	1×10^6
Tc-99	4×10^1	9×10^{-1}	1×10^4	1×10^7
Tc-99m	1×10^1	4×10^0	1×10^2	1×10^7
Tellurium (52)				
Te-121	2×10^0	2×10^0	1×10^1	1×10^6
Te-121m	5×10^0	3×10^0	1×10^2	1×10^6

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Radionuclide (atomic number)	A₁ (TBq)	A₂ (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Te-123m	8×10^0	1×10^0	1×10^2	1×10^7
Te-125m	2×10^1	9×10^{-1}	1×10^3	1×10^7
Te-127	2×10^1	7×10^{-1}	1×10^3	1×10^6
Te-127m (a)	2×10^1	5×10^{-1}	1×10^3	1×10^7
Te-129	7×10^{-1}	6×10^{-1}	1×10^2	1×10^6
Te-129m (a)	8×10^{-1}	4×10^{-1}	1×10^3	1×10^6
Te-131m (a)	7×10^{-1}	5×10^{-1}	1×10^1	1×10^6
Te-132 (a)	5×10^{-1}	4×10^{-1}	1×10^2	1×10^7
Thorium (90)				
Th-227	1×10^1	5×10^{-3}	1×10^1	1×10^4
Th-228 (a)	5×10^{-1}	1×10^{-3}	1×10^0 (b)	1×10^4 (b)
Th-229	5×10^0	5×10^{-4}	1×10^0 (b)	1×10^3 (b)
Th-230	1×10^1	1×10^{-3}	1×10^0	1×10^4
Th-231	4×10^1	2×10^{-2}	1×10^3	1×10^7
Th-232	Unlimited	Unlimited	1×10^1	1×10^4
Th-234 (a)	3×10^{-1}	3×10^{-1}	1×10^3 (b)	1×10^5 (b)
Th(nat)	Unlimited	Unlimited	1×10^0 (b)	1×10^3 (b)
Titanium (22)				
Ti-44 (a)	5×10^{-1}	4×10^{-1}	1×10^1	1×10^5
Thallium (81)				
Tl-200	9×10^{-1}	9×10^{-1}	1×10^1	1×10^6
Tl-201	1×10^1	4×10^0	1×10^2	1×10^6
Tl-202	2×10^0	2×10^0	1×10^2	1×10^6
Tl-204	1×10^1	7×10^{-1}	1×10^4	1×10^4
Thulium (69)				
Tm-167	7×10^0	8×10^{-1}	1×10^2	1×10^6
Tm-170	3×10^0	6×10^{-1}	1×10^3	1×10^6
Tm-171	4×10^1	4×10^1	1×10^4	1×10^8
Uranium (92)				
U-230 (fast lung absorption) (a)(d)	4×10^1	1×10^{-1}	1×10^1 (b)	1×10^5 (b)
U-230 (medium lung absorption) (a)(e)	4×10^1	4×10^{-3}	1×10^1	1×10^4

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Radionuclide (atomic number)	A₁ (TBq)	A₂ (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
U-230 (slow lung absorption) (a)(f)	3×10^1	3×10^{-3}	1×10^1	1×10^4
U-232 (fast lung absorption) (d)	4×10^1	1×10^{-2}	1×10^0 (b)	1×10^3 (b)
U-232 (medium lung absorption) (e)	4×10^1	7×10^{-3}	1×10^1	1×10^4
U-232 (slow lung absorption) (f)	1×10^1	1×10^{-3}	1×10^1	1×10^4
U-233 (fast lung absorption) (d)	4×10^1	9×10^{-2}	1×10^1	1×10^4
U-233 (medium lung absorption) (e)	4×10^1	2×10^{-2}	1×10^2	1×10^5
U-233 (slow lung absorption) (f)	4×10^1	6×10^{-3}	1×10^1	1×10^5
U-234 (fast lung absorption) (d)	4×10^1	9×10^{-2}	1×10^1	1×10^4
U-234 (medium lung absorption) (e)	4×10^1	2×10^{-2}	1×10^2	1×10^5
U-234 (slow lung absorption) (f)	4×10^1	6×10^{-3}	1×10^1	1×10^5
U-235 (all lung absorption types) (a)(d)(e)(f)	Unlimited	Unlimited	1×10^1 (b)	1×10^4 (b)
U-236 (fast lung absorption) (d)	Unlimited	Unlimited	1×10^1	1×10^4
U-236 (medium lung absorption) (e)	4×10^1	2×10^{-2}	1×10^2	1×10^5
U-236 (slow lung absorption) (f)	4×10^1	6×10^{-3}	1×10^1	1×10^4
U-238 (all lung absorption types) (d)(e)(f)	Unlimited	Unlimited	1×10^1 (b)	1×10^4 (b)
U (nat)	Unlimited	Unlimited	1×10^0 (b)	1×10^3 (b)
U (enriched to 20% or less) (g)	Unlimited	Unlimited	1×10^0	1×10^3
U (dep)	Unlimited	Unlimited	1×10^0	1×10^3
Vanadium (23)				
V-48	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
V-49	4×10^1	4×10^1	1×10^4	1×10^7
Tungsten (74)				
W-178 (a)	9×10^0	5×10^0	1×10^1	1×10^6
W-181	3×10^1	3×10^1	1×10^3	1×10^7
W-185	4×10^1	8×10^{-1}	1×10^4	1×10^7
W-187	2×10^0	6×10^{-1}	1×10^2	1×10^6
W-188 (a)	4×10^{-1}	3×10^{-1}	1×10^2	1×10^5
Xenon (54)				
Xe-122 (a)	4×10^{-1}	4×10^{-1}	1×10^2	1×10^9
Xe-123	2×10^0	7×10^{-1}	1×10^2	1×10^9

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Radionuclide (atomic number)	A₁ (TBq)	A₂ (TBq)	Activity concentration for exempt material (Bq/g)	Activity limit for an exempt consignment (Bq)
Xe-127	4×10^0	2×10^0	1×10^3	1×10^5
Xe-131m	4×10^1	4×10^1	1×10^4	1×10^4
Xe-133	2×10^1	1×10^1	1×10^3	1×10^4
Xe-135	3×10^0	2×10^0	1×10^3	1×10^{10}
Yttrium (39)				
Y-87 (a)	1×10^0	1×10^0	1×10^1	1×10^6
Y-88	4×10^{-1}	4×10^{-1}	1×10^1	1×10^6
Y-90	3×10^{-1}	3×10^{-1}	1×10^3	1×10^5
Y-91	6×10^{-1}	6×10^{-1}	1×10^3	1×10^6
Y-91m	2×10^0	2×10^0	1×10^2	1×10^6
Y-92	2×10^{-1}	2×10^{-1}	1×10^2	1×10^5
Y-93	3×10^{-1}	3×10^{-1}	1×10^2	1×10^5
Ytterbium (70)				
Yb-169	4×10^0	1×10^0	1×10^2	1×10^7
Yb-175	3×10^1	9×10^{-1}	1×10^3	1×10^7
Zinc (30)				
Zn-65	2×10^0	2×10^0	1×10^1	1×10^6
Zn-69	3×10^0	6×10^{-1}	1×10^4	1×10^6
Zn-69m (a)	3×10^0	6×10^{-1}	1×10^2	1×10^6
Zirconium (40)				
Zr-88	3×10^0	3×10^0	1×10^2	1×10^6
Zr-93	Unlimited	Unlimited	1×10^3 (b)	1×10^7 (b)
Zr-95 (a)	2×10^0	8×10^{-1}	1×10^1	1×10^6
Zr-97 (a)	4×10^{-1}	4×10^{-1}	1×10^1 (b)	1×10^5 (b)

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- (a) A_1 and/or A_2 values for these parent radionuclides include contributions from daughter radionuclides with half-lives less than 10 days, as listed in the following:

Mg-28	Al-28
Ar-42	K-42
Ca-47	Sc-47
Ti-44	Sc-44
Fe-52	Mn-52m
Fe-60	Co-60m
Zn-69m	Zn-69
Ge-68	Ga-68
Rb-83	Kr-83m
Sr-82	Rb-82
Sr-90	Y-90
Sr-91	Y-91m
Sr-92	Y-92
Y-87	Sr-87m
Zr-95	Nb-95m
Zr-97	Nb-97m, Nb-97
Mo-99	Tc-99m
Tc-95m	Tc-95
Tc-96m	Tc-96
Ru-103	Rh-103m
Ru-106	Rh-106
Pd-103	Rh-103m
Ag-108m	Ag-108
Ag-110m	Ag-110
Cd-115	In-115m
In-114m	In-114
Sn-113	In-113m
Sn-121m	Sn-121
Sn-126	Sb-126m
Te-118	Sb-118
Te-127m	Te-127
Te-129m	Te-129
Te-131m	Te-131
Te-132	I-132
I-135	Xe-135m
Xe-122	I-122
Cs-137	Ba-137m
Ba-131	Cs-131
Ba-140	La-140
Ce-144	Pr-144m, Pr-144
Pm-148m	Pm-148
Gd-146	Eu-146
Dy-166	Ho-166
Hf-172	Lu-172
W-178	Ta-178
W-188	Re-188
Re-189	Os-189m
Os-194	Ir-194
Ir-189	Os-189m
Pt-188	Ir-188
Hg-194	Au-194
Hg-195m	Hg-195
Pb-210	Bi-210
Pb-212	Bi-212, Tl-208, Po-212
Bi-210m	Tl-206
Bi-212	Tl-208, Po-212

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At-211	Po-211
Rn-222	Po-218, Pb-214, At-218, Bi-214, Po-214
Ra-223	Rn-219, Po-215, Pb-211, Bi-211, Po-211, Tl-207
Ra-224	Rn-220, Po-216, Pb-212, Bi-212, Tl-208, Po-212
Ra-225	Ac-225, Fr-221, At-217, Bi-213, Tl-209, Po-213, Pb-209
Ra-226	Rn-222, Po-218, Pb-214, At-218, Bi-214, Po-214
Ra-228	Ac-228
Ac-225	Fr-221, At-217, Bi-213, Tl-209, Po-213, Pb-209
Ac-227	Fr-223
Th-228	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208, Po-212
Th-234	Pa-234m, Pa-234
Pa-230	Ac-226, Th-226, Fr-222, Ra-222, Rn-218, Po-214
U-230	Th-226, Ra-222, Rn-218, Po-214
U-235	Th-231
Pu-241	U-237
Pu-244	U-240, Np-240m
Am-242m	Am-242, Np-238
Am-243	Np-239
Cm-247	Pu-243
Bk-249	Am-245
Cf-253	Cm-249

- (b) Parent nuclides and their progeny included in secular equilibrium are listed in the following:

Sr-90	Y-90
Zr-93	Nb-93m
Zr-97	Nb-97
Ru-106	Rh-106
Ag-108m	Ag-108
Cs-137	Ba-137m
Ce-144	Pr-144
Ba-140	La-140
Bi-212	Tl-208 (0.36), Po-212 (0.64)
Pb-210	Bi-210, Po-210
Pb-212	Bi-212, Tl-208 (0.36), Po-212 (0.64)
Rn-222	Po-218, Pb-214, Bi-214, Po-214
Ra-223	Rn-219, Po-215, Pb-211, Bi-211, Tl-207
Ra-224	Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
Ra-226	Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210
Ra-228	Ac-228
Th-228	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
Th-229	Ra-225, Ac-225, Fr-221, At-217, Bi-213, Po-213, Pb-209
Th-nat	Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
Th-234	Pa-234m
U-230	Th-226, Ra-222, Rn-218, Po-214
U-232	Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
U-235	Th-231
U-238	Th-234, Pa-234m
U-nat	Th-234, Pa-234m, U-234, Th-230, Ra-226, Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210
Np-237	Pa-233
Am-242m	Am-242
Am-243	Np-239

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- (c) The quantity may be determined from a measurement of the rate of decay or a measurement of the radiation level at a prescribed distance from the source.
- (d) These values apply only to compounds of uranium that take the chemical form of UF_6 , UO_2F_2 and $UO_2(NO_3)_2$ in both normal and accident conditions of carriage.
- (e) These values apply only to compounds of uranium that take the chemical form of UO_3 , UF_4 , UCl_4 and hexavalent compounds in both normal and accident conditions of carriage.
- (f) These values apply to all compounds of uranium other than those specified in (d) and (e) above.
- (g) These values apply to unirradiated uranium only.

2.2.7.2.2.2 For individual radionuclides which are not listed in Table 2.2.7.2.2.1 the determination of the basic radionuclide values referred to in 2.2.7.2.2.1 shall require multilateral approval. It is permissible to use an A_2 value calculated using a dose coefficient for the appropriate lung absorption type as recommended by the International Commission on Radiological Protection, if the chemical forms of each radionuclide under both normal and accident conditions of carriage are taken into consideration. Alternatively, the radionuclide values in Table 2.2.7.2.2.2 may be used without obtaining competent authority approval.

Table 2.2.7.2.2.2: Basic radionuclide values for unknown radionuclides or mixtures

Radioactive contents	A_1	A_2	Activity concentration for exempt material	Activity limit for exempt consignments
	(TBq)	(TBq)	(Bq/g)	(Bq)
Only beta or gamma emitting nuclides are known to be present	0.1	0.02	1×10^1	1×10^4
Alpha emitting nuclides but no neutron emitters are known to be present	0.2	9×10^{-5}	1×10^{-1}	1×10^3
Neutron emitting nuclides are known to be present or no relevant data are available	0.001	9×10^{-5}	1×10^{-1}	1×10^3

2.2.7.2.2.3 In the calculations of A_1 and A_2 for a radionuclide not in Table 2.2.7.2.2.1, a single radioactive decay chain in which the radionuclides are present in their naturally occurring proportions, and in which no daughter nuclide has a half-life either longer than 10 days or longer than that of the parent nuclide, shall be considered as a single radionuclide; and the activity to be taken into account and the A_1 or A_2 value to be applied shall be those corresponding to the parent nuclide of that chain. In the case of radioactive decay chains in which any daughter nuclide has a half-life either longer than 10 days or greater than that of the parent nuclide, the parent and such daughter nuclides shall be considered as mixtures of different nuclides.

2.2.7.2.2.4 For mixtures of radionuclides, the determination of the basic radionuclide values referred to in 2.2.7.2.2.1 may be determined as follows:

$$X_m = \frac{1}{\sum_i \frac{f(i)}{X(i)}}$$

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where,

f(i) is the fraction of activity or activity concentration of radionuclide i in the mixture;

X(i) is the appropriate value of A_1 or A_2 , or the activity concentration for exempt material or the activity limit for an exempt consignment as appropriate for the radionuclide i; and

X_m is the derived value of A_1 or A_2 , or the activity concentration for exempt material or the activity limit for an exempt consignment in the case of a mixture.

2.2.7.2.2.5 When the identity of each radionuclide is known but the individual activities of some of the radionuclides are not known, the radionuclides may be grouped and the lowest radionuclide value, as appropriate, for the radionuclides in each group may be used in applying the formulas in 2.2.7.2.2.4 and 2.2.7.2.4.4. Groups may be based on the total alpha activity and the total beta/gamma activity when these are known, using the lowest radionuclide values for the alpha emitters or beta/gamma emitters, respectively.

2.2.7.2.2.6 For individual radionuclides or for mixtures of radionuclides for which relevant data are not available, the values shown in Table 2.2.7.2.2.2 shall be used.

2.2.7.2.3 *Determination of other material characteristics*

2.2.7.2.3.1 Low specific activity (LSA) material

2.2.7.2.3.1.1 *(Reserved)*

2.2.7.2.3.1.2 LSA material shall be in one of three groups:

(a) LSA-I

(i) uranium and thorium ores and concentrates of such ores, and other ores containing naturally occurring radionuclides which are intended to be processed for the use of these radionuclides;

(ii) natural uranium, depleted uranium, natural thorium or their compounds or mixtures, that are unirradiated and in solid or liquid form;

(iii) radioactive material for which the A_2 value is unlimited, excluding fissile material not excepted under 2.2.7.2.3.5; or

(iv) other radioactive material in which the activity is distributed throughout and the estimated average specific activity does not exceed 30 times the values for activity concentration specified in 2.2.7.2.2.1 to 2.2.7.2.2.6, excluding fissile material not excepted under 2.2.7.2.3.5;

(b) LSA-II

(i) water with tritium concentration up to 0.8 TBq/l; or

(ii) other material in which the activity is distributed throughout and the estimated average specific activity does not exceed 10^{-4} A_2 /g for solids and gases, and 10^{-5} A_2 /g for liquids;

(c) LSA-III - Solids (e.g. consolidated wastes, activated materials), excluding powders, meeting the requirements of 2.2.7.2.3.1.3, in which:

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- (i) the radioactive material is distributed throughout a solid or a collection of solid objects, or is essentially uniformly distributed in a solid compact binding agent (such as concrete, bitumen, ceramic, etc.);
- (ii) the radioactive material is relatively insoluble, or it is intrinsically contained in a relatively insoluble matrix, so that, even under loss of packaging, the loss of radioactive material per package by leaching when placed in water for seven days would not exceed $0.1 A_2$; and
- (iii) the estimated average specific activity of the solid, excluding any shielding material, does not exceed $2 \times 10^{-3} A_2/g$.

2.2.7.2.3.1.3 LSA-III material shall be a solid of such a nature that if the entire contents of a package were subjected to the test specified in 2.2.7.2.3.1.4 the activity in the water would not exceed $0.1 A_2$.

2.2.7.2.3.1.4 LSA-III material shall be tested as follows:

A solid material sample representing the entire contents of the package shall be immersed for 7 days in water at ambient temperature. The volume of water to be used in the test shall be sufficient to ensure that at the end of the 7 day test period the free volume of the unabsorbed and unreacted water remaining shall be at least 10% of the volume of the solid test sample itself. The water shall have an initial pH of 6-8 and a maximum conductivity of 1 mS/m at 20 °C. The total activity of the free volume of water shall be measured following the 7 day immersion of the test sample.

2.2.7.2.3.1.5 Demonstration of compliance with the performance standards in 2.2.7.2.3.1.4 shall be in accordance with 6.4.12.1 and 6.4.12.2.

2.2.7.2.3.2 Surface contaminated object (SCO)

SCO is classified in one of two groups:

- (a) SCO-I: A solid object on which:
 - (i) the non-fixed contamination on the accessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 4 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters, or 0.4 Bq/cm^2 for all other alpha emitters; and
 - (ii) the fixed contamination on the accessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed $4 \times 10^4 \text{ Bq/cm}^2$ for beta and gamma emitters and low toxicity alpha emitters, or $4 \times 10^3 \text{ Bq/cm}^2$ for all other alpha emitters; and
 - (iii) the non-fixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed $4 \times 10^4 \text{ Bq/cm}^2$ for beta and gamma emitters and low toxicity alpha emitters, or $4 \times 10^3 \text{ Bq/cm}^2$ for all other alpha emitters;
- (b) SCO-II: A solid object on which either the fixed or non-fixed contamination on the surface exceeds the applicable limits specified for SCO-I in (a) above and on which:
 - (i) the non-fixed contamination on the accessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 400 Bq/cm^2 for beta and gamma emitters and low toxicity alpha emitters, or 40 Bq/cm^2 for all other alpha emitters; and

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- (ii) the fixed contamination on the accessible surface, averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 8×10^5 Bq/cm² for beta and gamma emitters and low toxicity alpha emitters, or 8×10^4 Bq/cm² for all other alpha emitters; and
- (iii) the non-fixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm² (or the area of the surface if less than 300 cm²) does not exceed 8×10^5 Bq/cm² for beta and gamma emitters and low toxicity alpha emitters, or 8×10^4 Bq/cm² for all other alpha emitters.

2.2.7.2.3.3 Special form radioactive material

2.2.7.2.3.3.1 Special form radioactive material shall have at least one dimension not less than 5 mm. When a sealed capsule constitutes part of the special form radioactive material, the capsule shall be so manufactured that it can be opened only by destroying it. The design for special form radioactive material requires unilateral approval.

2.2.7.2.3.3.2 Special form radioactive material shall be of such a nature or shall be so designed that if it is subjected to the tests specified in 2.2.7.2.3.3.4 to 2.2.7.2.3.3.8, it shall meet the following requirements:

- (a) It would not break or shatter under the impact, percussion and bending tests 2.2.7.2.3.3.5 (a), (b), (c) and 2.2.7.2.3.3.6 (a) as applicable;
- (b) It would not melt or disperse in the applicable heat test 2.2.7.2.3.3.5 (d) or 2.2.7.2.3.3.6 (b) as applicable; and
- (c) The activity in the water from the leaching tests specified in 2.2.7.2.3.3.7 and 2.2.7.2.3.3.8 would not exceed 2 kBq; or alternatively for sealed sources, the leakage rate for the volumetric leakage assessment test specified in ISO 9978:1992 "Radiation Protection - Sealed Radioactive Sources - Leakage Test Methods", would not exceed the applicable acceptance threshold acceptable to the competent authority.

2.2.7.2.3.3.3 Demonstration of compliance with the performance standards in 2.2.7.2.3.3.2 shall be in accordance with 6.4.12.1 and 6.4.12.2.

2.2.7.2.3.3.4 Specimens that comprise or simulate special form radioactive material shall be subjected to the impact test, the percussion test, the bending test, and the heat test specified in 2.2.7.2.3.3.5 or alternative tests as authorized in 2.2.7.2.3.3.6. A different specimen may be used for each of the tests. Following each test, a leaching assessment or volumetric leakage test shall be performed on the specimen by a method no less sensitive than the methods given in 2.2.7.2.3.3.7 for indispersible solid material or 2.2.7.2.3.3.8 for encapsulated material.

2.2.7.2.3.3.5 The relevant test methods are:

- (a) Impact test: The specimen shall drop onto the target from a height of 9 m. The target shall be as defined in 6.4.14;
- (b) Percussion test: The specimen shall be placed on a sheet of lead which is supported by a smooth solid surface and struck by the flat face of a mild steel bar so as to cause an impact equivalent to that resulting from a free drop of 1.4 kg through 1 m. The lower part of the bar shall be 25 mm in diameter with the edges rounded off to a radius of (3.0 ± 0.3) mm. The lead, of hardness number 3.5 to 4.5 on the Vickers scale and not more than 25 mm thick, shall cover an area greater than that covered by the specimen. A fresh surface of lead shall be used for each impact. The bar shall strike the specimen so as to cause maximum damage;

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- (c) Bending test: The test shall apply only to long, slender sources with both a minimum length of 10 cm and a length to minimum width ratio of not less than 10. The specimen shall be rigidly clamped in a horizontal position so that one half of its length protrudes from the face of the clamp. The orientation of the specimen shall be such that the specimen will suffer maximum damage when its free end is struck by the flat face of a steel bar. The bar shall strike the specimen so as to cause an impact equivalent to that resulting from a free vertical drop of 1.4 kg through 1 m. The lower part of the bar shall be 25 mm in diameter with the edges rounded off to a radius of (3.0 ± 0.3) mm;
- (d) Heat test: The specimen shall be heated in air to a temperature of 800 °C and held at that temperature for a period of 10 minutes and shall then be allowed to cool.

2.2.7.2.3.3.6 Specimens that comprise or simulate radioactive material enclosed in a sealed capsule may be excepted from:

- (a) The tests prescribed in 2.2.7.2.3.3.5 (a) and (b) provided the mass of the special form radioactive material:
 - (i) is less than 200 g and they are alternatively subjected to the Class 4 impact test prescribed in ISO 2919:1999 "Radiation protection - Sealed radioactive sources - General requirements and classification"; or
 - (ii) is less than 500 g and they are alternatively subjected to the Class 5 impact test prescribed in ISO 2919:1999 "Radiation protection - Sealed radioactive sources - General requirements and classification"; and
- (b) The test prescribed in 2.2.7.2.3.3.5 (d) provided they are alternatively subjected to the Class 6 temperature test specified in ISO 2919:1999 "Radiation protection - Sealed radioactive sources - General requirements and classification".

2.2.7.2.3.3.7 For specimens which comprise or simulate indispersible solid material, a leaching assessment shall be performed as follows:

- (a) The specimen shall be immersed for 7 days in water at ambient temperature. The volume of water to be used in the test shall be sufficient to ensure that at the end of the 7 day test period the free volume of the unabsorbed and unreacted water remaining shall be at least 10% of the volume of the solid test sample itself. The water shall have an initial pH of 6-8 and a maximum conductivity of 1 mS/m at 20 °C;
- (b) The water with specimen shall then be heated to a temperature of (50 ± 5) °C and maintained at this temperature for 4 hours;
- (c) The activity of the water shall then be determined;
- (d) The specimen shall then be kept for at least 7 days in still air at not less than 30 °C and relative humidity not less than 90%;
- (e) The specimen shall then be immersed in water of the same specification as in (a) above and the water with the specimen heated to (50 ± 5) °C and maintained at this temperature for 4 hours;
- (f) The activity of the water shall then be determined.

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2.2.7.2.3.3.8 For specimens which comprise or simulate radioactive material enclosed in a sealed capsule, either a leaching assessment or a volumetric leakage assessment shall be performed as follows:

- (a) The leaching assessment shall consist of the following steps:
 - (i) the specimen shall be immersed in water at ambient temperature. The water shall have an initial pH of 6-8 with a maximum conductivity of 1 mS/m at 20 °C;
 - (ii) the water and specimen shall be heated to a temperature of (50 ± 5) °C and maintained at this temperature for 4 hours;
 - (iii) the activity of the water shall then be determined;
 - (iv) the specimen shall then be kept for at least 7 days in still air at not less than 30 °C and relative humidity of not less than 90%;
 - (v) the process in (i), (ii) and (iii) shall be repeated;
- (b) The alternative volumetric leakage assessment shall comprise any of the tests prescribed in ISO 9978:1992 "Radiation Protection - Sealed radioactive sources - Leakage test methods", which are acceptable to the competent authority.

2.2.7.2.3.4 Low dispersible radioactive material

2.2.7.2.3.4.1 The design for low dispersible radioactive material shall require multilateral approval. Low dispersible radioactive material shall be such that the total amount of this radioactive material in a package, taking into account the provisions of 6.4.8.14, shall meet the following requirements:

- (a) The radiation level at 3 m from the unshielded radioactive material does not exceed 10 mSv/h;
- (b) If subjected to the tests specified in 6.4.20.3 and 6.4.20.4, the airborne release in gaseous and particulate forms of up to 100 µm aerodynamic equivalent diameter would not exceed 100 A₂. A separate specimen may be used for each test; and
- (c) If subjected to the test specified in 2.2.7.2.3.1.4 the activity in the water would not exceed 100 A₂. In the application of this test, the damaging effects of the tests specified in (b) above shall be taken into account.

2.2.7.2.3.4.2 Low dispersible radioactive material shall be tested as follows:

A specimen that comprises or simulates low dispersible radioactive material shall be subjected to the enhanced thermal test specified in 6.4.20.3 and the impact test specified in 6.4.20.4. A different specimen may be used for each of the tests. Following each test, the specimen shall be subjected to the leach test specified in 2.2.7.2.3.1.4. After each test it shall be determined if the applicable requirements of 2.2.7.2.3.4.1 have been met.

2.2.7.2.3.4.3 Demonstration of compliance with the performance standards in 2.2.7.2.3.4.1 and 2.2.7.2.3.4.2 shall be in accordance with 6.4.12.1 and 6.4.12.2.

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2.2.7.2.3.5 Fissile material

Packages containing fissile material shall be classified under the relevant entry of Table 2.2.7.2.1.1, the description of which includes the words "FISSILE" or "fissile-excepted". Classification as "fissile-excepted" is allowed only if one of the conditions (a) to (d) of this paragraph is met. Only one type of exception is allowed per consignment (see also 6.4.7.2).

- (a) A mass limit per consignment, provided that the smallest external dimension of each package is not less than 10 cm, such that:

$$\frac{\text{mass of uranium-235 (g)}}{X} + \frac{\text{mass of other fissile material (g)}}{Y} < 1$$

where X and Y are the mass limits defined in Table 2.2.7.2.3.5, provided that either:

- (i) each individual package contains not more than 15 g of fissile nuclides; for unpackaged material, this quantity limitation shall apply to the consignment being carried in or on the vehicle; or
- (ii) the fissile material is a homogeneous hydrogenous solution or mixture where the ratio of fissile nuclides to hydrogen is less than 5% by mass; or
- (iii) there are not more than 5 g of fissile nuclides in any 10 litre volume of material.

Beryllium shall not be present in quantities exceeding 1% of the applicable consignment mass limits provided in Table 2.2.7.2.3.5 except where the concentration of beryllium in the material does not exceed 1 gram beryllium in any 1 000 grams.

Deuterium shall also not be present in quantities exceeding 1% of the applicable consignment mass limits provided in Table 2.2.7.2.3.5 except where deuterium occurs up to natural concentration in hydrogen.

- (b) Uranium enriched in uranium-235 to a maximum of 1% by mass, and with a total plutonium and uranium-233 content not exceeding 1% of the mass of uranium-235, provided that the fissile nuclides are distributed essentially homogeneously throughout the material. In addition, if uranium-235 is present in metallic, oxide or carbide forms, it shall not form a lattice arrangement;
- (c) Liquid solutions of uranyl nitrate enriched in uranium-235 to a maximum of 2% by mass, with a total plutonium and uranium-233 content not exceeding 0.002% of the mass of uranium, and with a minimum nitrogen to uranium atomic ratio (N/U) of 2;
- (d) Plutonium containing not more than 20% of fissile nuclides by mass up to a maximum of 1 kg of plutonium per consignment. Shipments under this exception shall be under exclusive use.

Table 2.2.7.2.3.5: Consignment mass limits for exceptions from the requirements for packages containing fissile material

Fissile material	Fissile material mass (g) mixed with substances having an average hydrogen density less than or equal to water	Fissile material mass (g) mixed with substances having an average hydrogen density greater than water
Uranium-235 (X)	400	290
Other fissile material (Y)	250	180

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2.2.7.2.4 *Classification of packages or unpacked material*

The quantity of radioactive material in a package shall not exceed the relevant limits for the package type as specified below.

2.2.7.2.4.1 Classification as excepted package

2.2.7.2.4.1.1 Packages may be classified as excepted packages if:

- (a) They are empty packagings having contained radioactive material;
- (b) They contain instruments or articles in limited quantities as specified in Table 2.2.7.2.4.1.2;
- (c) They contain articles manufactured of natural uranium, depleted uranium or natural thorium; or
- (d) They contain radioactive material in limited quantities as specified in Table 2.2.7.2.4.1.2.

2.2.7.2.4.1.2 A package containing radioactive material may be classified as an excepted package provided that the radiation level at any point on its external surface does not exceed 5 $\mu\text{Sv/h}$.**Table 2.2.7.2.4.1.2: Activity limits for excepted packages**

Physical state of contents	Instruments or articles		Materials Package limits ^a
	Item limits ^a	Package limits ^a	
(1)	(2)	(3)	(4)
Solids			
special form	$10^{-2} A_1$	A_1	$10^{-3} A_1$
other form	$10^{-2} A_2$	A_2	$10^{-3} A_2$
Liquids	$10^{-3} A_2$	$10^{-1} A_2$	$10^{-4} A_2$
Gases			
tritium	$2 \times 10^{-2} A_2$	$2 \times 10^{-1} A_2$	$2 \times 10^{-2} A_2$
special form	$10^{-3} A_1$	$10^{-2} A_1$	$10^{-3} A_1$
other forms	$10^{-3} A_2$	$10^{-2} A_2$	$10^{-3} A_2$

^a For mixtures of radionuclides, see 2.2.7.2.2.4 to 2.2.7.2.2.6.

2.2.7.2.4.1.3 Radioactive material which is enclosed in or is included as a component part of an instrument or other manufactured article may be classified under UN No. 2911 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - INSTRUMENTS or ARTICLES only if:

- (a) The radiation level at 10 cm from any point on the external surface of any unpackaged instrument or article is not greater than 0.1 mSv/h; and
- (b) Each instrument or manufactured article bears the marking "RADIOACTIVE" except:
 - (i) radioluminescent time-pieces or devices;
 - (ii) consumer products that either have received regulatory approval according to 1.7.1.4 (d) or do not individually exceed the activity limit for an exempt consignment in Table 2.2.7.2.2.1 (column 5), provided such products are carried in a package that bears the marking "RADIOACTIVE" on an internal surface in such a manner that warning of the presence of radioactive material is visible on opening the package; and

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- (c) The active material is completely enclosed by non-active components (a device performing the sole function of containing radioactive material shall not be considered to be an instrument or manufactured article); and
- (d) The limits specified in columns 2 and 3 of Table 2.2.7.2.4.1.2 are met for each individual item and each package, respectively.

2.2.7.2.4.1.4 Radioactive material in forms other than as specified in 2.2.7.2.4.1.3 and with an activity not exceeding the limits specified in column 4 of Table 2.2.7.2.4.1.2, may be classified under UN No. 2910 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL provided that:

- (a) The package retains its radioactive contents under routine conditions of carriage; and
- (b) The package bears the marking "RADIOACTIVE" on an internal surface in such a manner that a warning of the presence of radioactive material is visible on opening the package.

2.2.7.2.4.1.5 An empty packaging which had previously contained radioactive material may be classified under UN No. 2908 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - EMPTY PACKAGING, only if:

- (a) It is in a well-maintained condition and securely closed;
- (b) The outer surface of any uranium or thorium in its structure is covered with an inactive sheath made of metal or some other substantial material;
- (c) The level of internal non-fixed contamination, when averaged over any 300 cm², does not exceed:
 - (i) 400 Bq/cm² for beta and gamma emitters and low toxicity alpha emitters; and
 - (ii) 40 Bq/cm² for all other alpha emitters; and
- (d) Any labels which may have been displayed on it in conformity with 5.2.2.1.11.1 are no longer visible.

2.2.7.2.4.1.6 Articles manufactured of natural uranium, depleted uranium or natural thorium and articles in which the sole radioactive material is unirradiated natural uranium, unirradiated depleted uranium or unirradiated natural thorium may be classified under UN No. 2909 RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - ARTICLES MANUFACTURED FROM NATURAL URANIUM or DEPLETED URANIUM or NATURAL THORIUM, only if the outer surface of the uranium or thorium is enclosed in an inactive sheath made of metal or some other substantial material.

2.2.7.2.4.2 Classification as Low specific activity (LSA) material

Radioactive material may only be classified as LSA material if the definition of LSA in 2.2.7.1.3 and the conditions of 2.2.7.2.3.1, 4.1.9.2 and 7.5.11 CV33 (2) are met.

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2.2.7.2.4.3 Classification as Surface contaminated object (SCO)

Radioactive material may be classified as SCO if the definition of SCO in 2.2.7.1.3 and the conditions of 2.2.7.2.3.2, 4.1.9.2 and 7.5.11 CV33 (2) are met.

2.2.7.2.4.4 Classification as Type A package

Packages containing radioactive material may be classified as Type A packages provided that the following conditions are met:

Type A packages shall not contain activities greater than the following:

- (a) For special form radioactive material - A_1 ; or
- (b) For all other radioactive material - A_2 .

For mixtures of radionuclides whose identities and respective activities are known, the following condition shall apply to the radioactive contents of a Type A package:

$$\sum_i \frac{B(i)}{A_1(i)} + \sum_j \frac{C(j)}{A_2(j)} \leq 1$$

where $B(i)$ is the activity of radionuclide i as special form radioactive material;

$A_1(i)$ is the A_1 value for radionuclide i ;

$C(j)$ is the activity of radionuclide j as other than special form radioactive material; and

$A_2(j)$ is the A_2 value for radionuclide j .

2.2.7.2.4.5 Classification of Uranium hexafluoride

Uranium hexafluoride shall only be assigned to UN Nos. 2977 RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, FISSILE, or 2978 RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, non fissile or fissile-excepted.

2.2.7.2.4.5.1 Packages containing uranium hexafluoride shall not contain:

- (a) A mass of uranium hexafluoride different from that authorized for the package design;
- (b) A mass of uranium hexafluoride greater than a value that would lead to an ullage smaller than 5% at the maximum temperature of the package as specified for the plant systems where the package shall be used; or
- (c) Uranium hexafluoride other than in solid form or at an internal pressure above atmospheric pressure when presented for carriage.

2.2.7.2.4.6 Classification as Type B(U), Type B(M) or Type C packages

2.2.7.2.4.6.1 Packages not otherwise classified in 2.2.7.2.4 (2.2.7.2.4.1 to 2.2.7.2.4.5) shall be classified in accordance with the competent authority approval certificate for the package issued by the country of origin of design.

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2.2.7.2.4.6.2 A package may only be classified as a Type B(U) if it does not contain:

- (a) Activities greater than those authorized for the package design;
- (b) Radionuclides different from those authorized for the package design; or
- (c) Contents in a form, or a physical or chemical state different from those authorized for the package design;

as specified in the certificate of approval.

2.2.7.2.4.6.3 A package may only be classified as a Type B(M) if it does not contain:

- (a) Activities greater than those authorized for the package design;
- (b) Radionuclides different from those authorized for the package design; or
- (c) Contents in a form, or a physical or chemical state different from those authorized for the package design;

as specified in the certificate of approval.

2.2.7.2.4.6.4 A package may only be classified as a Type C if it does not contain:

- (a) Activities greater than those authorized for the package design;
- (b) Radionuclides different from those authorized for the package design; or
- (c) Contents in a form, or physical or chemical state different from those authorized for the package design;

as specified in the certificate of approval.

2.2.7.2.5 *Special arrangements*

Radioactive material shall be classified as transported under special arrangement when it is intended to be carried in accordance with 1.7.4.

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2.2.8 Class 8 Corrosive substances

2.2.8.1 Criteria

2.2.8.1.1 The heading of Class 8 covers substances and articles containing substances of this class which by chemical action attack epithelial tissue - of skin or mucous membranes - with which they are in contact, or which in the event of leakage are capable of damaging or destroying other goods, or means of transport. The heading of this class also covers other substances which form a corrosive liquid only in the presence of water, or which produce corrosive vapour or mist in the presence of natural moisture of the air.

2.2.8.1.2 Substances and articles of Class 8 are subdivided as follows:

C1-C11 Corrosive substances without subsidiary risk and articles containing such substances:

C1-C4 Acid substances:

C1 Inorganic, liquid;

C2 Inorganic, solid;

C3 Organic, liquid;

C4 Organic, solid;

C5-C8 Basic substances:

C5 Inorganic, liquid;

C6 Inorganic, solid;

C7 Organic, liquid;

C8 Organic, solid;

C9-C10 Other corrosive substances:

C9 Liquid;

C10 Solid;

C11 Articles;

CF Corrosive substances, flammable:

CF1 Liquid;

CF2 Solid;

CS Corrosive substances, self-heating:

CS1 Liquid;

CS2 Solid;

CW Corrosive substances which, in contact with water, emit flammable gases:

CW1 Liquid;

CW2 Solid;

CO Corrosive substances, oxidizing:

CO1 Liquid;

CO2 Solid;

CT Corrosive substances, toxic and articles containing such substances:

CT1 Liquid;

CT2 Solid;

CT3 Articles;

CFT Corrosive substances, flammable, liquid, toxic;

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COT Corrosive substances, oxidizing, toxic.

Classification and assignment of packing groups

2.2.8.1.3 Substances of Class 8 shall be classified in three packing groups according to the degree of danger they present for carriage, as follows:

Packing group I: highly corrosive substances
Packing group II: corrosive substances
Packing group III: slightly corrosive substances.

2.2.8.1.4 Substances and articles classified in Class 8 are listed in Table A of Chapter 3.2. Allocation of substances to packing groups I, II and III has been made on the basis of experience taking into account such additional factors as inhalation risk (see 2.2.8.1.5) and reactivity with water (including the formation of dangerous decomposition products).

2.2.8.1.5 A substance or preparation meeting the criteria of Class 8 having an inhalation toxicity of dusts and mists (LC_{50}) in the range of packing group I, but toxicity through oral ingestion or dermal contact only in the range of packing group III or less, shall be allocated to Class 8.

2.2.8.1.6 Substances, including mixtures, not mentioned by name in Table A of Chapter 3.2 can be assigned to the relevant entry of sub-section 2.2.8.3, and to the relevant packing group on the basis of the length of time of contact necessary to produce full thickness destruction of human skin in accordance with the criteria of (a) to (c) below.

Liquids, and solids which may become liquid during carriage, which are judged not to cause full thickness destruction of human skin shall still be considered for their potential to cause corrosion to certain metal surfaces. In assigning the packing group, account shall be taken of human experience in instances of accidental exposure. In the absence of human experience, the grouping shall be based on data obtained from experiments in accordance with OECD Test Guideline 404⁷ or 435⁸. A substance which is determined not to be corrosive in accordance with OECD Test Guideline 430⁹ or 431¹⁰ may be considered not to be corrosive to skin for the purposes of ADR without further testing.

- (a) Packing group I is assigned to substances that cause full thickness destruction of intact skin tissue within an observation period up to 60 minutes starting after the exposure time of 3 minutes or less;
- (b) Packing group II is assigned to substances that cause full thickness destruction of intact skin tissue within an observation period up to 14 days starting after the exposure time of more than 3 minutes but not more than 60 minutes;
- (c) Packing group III is assigned to substances that:
 - cause full thickness destruction of intact skin tissue within an observation period up to 14 days starting after the exposure time of more than 60 minutes but not more than 4 hours; or
 - are judged not to cause full thickness destruction of intact skin tissue, but which exhibit a corrosion rate on either steel or aluminium surfaces exceeding 6.25 mm a year at a test temperature of 55 °C when tested on both materials.

⁷ OECD Guideline for the testing of chemicals No. 404 "Acute Dermal Irritation/Corrosion" 2002.

⁸ OECD Guideline for the testing of chemicals No. 435 "In Vitro Membrane Barrier Test Method for Skin Corrosion" 2006.

⁹ OECD Guideline for the testing of chemicals No. 430 "In Vitro Skin Corrosion: Transcutaneous Electrical Resistance Test (TER)" 2004.

¹⁰ OECD Guideline for the testing of chemicals No. 431 "In Vitro Skin Corrosion: Human Skin Model Test" 2004.

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For the purposes of testing steel, type S235JR+CR (1.0037 resp. St 37-2), S275J2G3+CR (1.0144 resp. St 44-3), ISO 3574, Unified Numbering System (UNS) G10200 or SAE 1020, and for testing aluminium, non-clad, types 7075-T6 or AZ5GU-T6 shall be used. An acceptable test is prescribed in the Manual of Tests and Criteria, Part III, Section 37.

NOTE: Where an initial test on either steel or aluminium indicates the substance being tested is corrosive the follow up test on the other metal is not required.

Table 2.2.8.1.6: Table summarizing the criteria in 2.2.8.1.6

Packing Group	Exposure Time	Observation Period	Effect
I	≤ 3 min	≤ 60 min	Full thickness destruction of intact skin
II	> 3 min ≤ 1 h	≤ 14 d	Full thickness destruction of intact skin
III	> 1 h ≤ 4 h	≤ 14 d	Full thickness destruction of intact skin
III	-	-	Corrosion rate on either steel or aluminium surfaces exceeding 6.25 mm a year at a test temperature of 55 °C when tested on both materials

2.2.8.1.7 If substances of Class 8, as a result of admixtures, come into categories of risk different from those to which the substances mentioned by name in Table A of Chapter 3.2 belong, these mixtures or solutions shall be assigned to the entries to which they belong, on the basis of their actual degree of danger.

NOTE: For the classification of solutions and mixtures (such as preparations and wastes), see also 2.1.3.

2.2.8.1.8 On the basis of the criteria set out in paragraph 2.2.8.1.6, it may also be determined whether the nature of a solution or mixture mentioned by name or containing a substance mentioned by name is such that the solution or mixture is not subject to the provisions for this class.

2.2.8.1.9 Substances, solutions and mixtures, which

- do not meet the criteria of Directives 67/548/EEC³ or 1999/45/EC⁴ as amended and therefore are not classified as corrosive according to these directives, as amended; and
- do not exhibit a corrosive effect on steel or aluminium;

may be considered as substances not belonging to Class 8.

NOTE: UN No. 1910 calcium oxide and UN No. 2812 sodium aluminate, listed in the UN Model Regulations, are not subject to the provisions of ADR.

2.2.8.2 Substances not accepted for carriage

2.2.8.2.1 The chemically unstable substances of Class 8 shall not be accepted for carriage unless the necessary steps have been taken to prevent their dangerous decomposition or polymerization

³ Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances (Official Journal of the European Communities No. L 196 of 16.08.1967).

⁴ Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 on the approximation of laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations (Official Journal of the European Communities No. L 200 of 30 July 1999).

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during carriage. To this end it shall in particular be ensured that receptacles and tanks do not contain any substance liable to promote these reactions.

2.2.8.2.2

The following substances shall not be accepted for carriage:

- UN No. 1798 NITROHYDROCHLORIC ACID;
- chemically unstable mixtures of spent sulphuric acid;
- chemically unstable mixtures of nitrating acid or mixtures of residual sulphuric and nitric acids, not denitrated;
- perchloric acid aqueous solution with more than 72% pure acid, by mass, or mixtures of perchloric acid with any liquid other than water.

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2.2.8.3 *List of collective entries***Corrosive substances without subsidiary risk and articles containing such substances**

Acid	inorganic	liquid C1	2584 ALKYL SULPHONIC ACIDS, LIQUID with more than 5% free sulphuric acid or 2584 ARYL SULPHONIC ACIDS, LIQUID with more than 5% free sulphuric acid 2693 BISULPHITES, AQUEOUS SOLUTION, N.O.S. 2837 BISULPHATES, AQUEOUS SOLUTION 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
		solid C2	1740 HYDROGEN DIFLUORIDES, SOLID, N.O.S. 2583 ALKYL SULPHONIC ACIDS, SOLID with more than 5% free sulphuric acid or 2583 ARYL SULPHONIC ACIDS, SOLID with more than 5% free sulphuric acid 3260 CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
C1-C4	organic	liquid C3	2586 ALKYL SULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid or 2586 ARYL SULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid 2987 CHLOROSILANES, CORROSIVE, N.O.S. 3145 ALKYL PHENOLS, LIQUID, N.O.S. (including C ₂ -C ₁₂ homologues) 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
		solid C4	2430 ALKYL PHENOLS, SOLID, N.O.S. (including C ₂ -C ₁₂ homologues) 2585 ALKYL SULPHONIC ACIDS, SOLID with not more than 5% free sulphuric acid or 2585 ARYL SULPHONIC ACIDS, SOLID with not more than 5% free sulphuric acid 3261 CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
Basic	inorganic	liquid C5	1719 CAUSTIC ALKALI LIQUID, N.O.S. 2797 BATTERY FLUID, ALKALI 3266 CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
		solid C6	3262 CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
C5-C8	organic	liquid C7	2735 AMINES, LIQUID, CORROSIVE, N.O.S. or 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. 3267 CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
		solid C8	3259 AMINES, SOLID, CORROSIVE, N.O.S. or 3259 POLYAMINES, SOLID, CORROSIVE, N.O.S. 3263 CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.
Other corrosive substances C9-C10		liquid C9	1903 DISINFECTANT, LIQUID, CORROSIVE, N.O.S. 2801 DYE, LIQUID, CORROSIVE, N.O.S. or 2801 DYE INTERMEDIATE, LIQUID, CORROSIVE, N.O.S. 3066 PAINT (including paint, enamel, stain, shellac, varnish, polish, liquid filler and lacquer base) or 3066 PAINT RELATED MATERIAL (including paint thinning or reducing compound) 1760 CORROSIVE LIQUID, N.O.S.
		solid ^a C10	3147 DYE, SOLID, CORROSIVE, N.O.S. or 3147 DYE INTERMEDIATE, SOLID, CORROSIVE, N.O.S. 3244 SOLIDS CONTAINING CORROSIVE LIQUID, N.O.S. 1759 CORROSIVE SOLID, N.O.S.
Articles		C11	2794 BATTERIES, WET, FILLED WITH ACID, electric storage 2795 BATTERIES, WET, FILLED WITH ALKALI, electric storage 2800 BATTERIES, WET, NON-SPILLABLE, electric storage 3028 BATTERIES, DRY, CONTAINING POTASSIUM HYDROXIDE SOLID, electric storage 1774 FIRE EXTINGUISHER CHARGES, corrosive liquid 2028 BOMBS, SMOKE, NON-EXPLOSIVE with corrosive liquid, without initiating device 3477 FUEL CELL CARTRIDGES containing corrosive substances, or 3477 FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT, containing corrosive substances, or 3477 FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing corrosive substances

(cont'd on next page)

^a *Mixtures of solids which are not subject to the provisions of ADR and of corrosive liquids may be carried under UN No. 3244 without being subject to the classification criteria of Class 8, provided there is no free liquid visible at the time the substance is loaded or at the time the packaging, container or transport unit is closed. Each packaging shall correspond to a design type which has passed the leakproofness test for Packing group II level.*

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Corrosive substances with subsidiary risk(s) and articles containing such substances

<i>(cont'd)</i>	Flammable^b	liquid	CF1	3470 PAINT, CORROSIVE, FLAMMABLE (including paint, enamel, stain, shellac, varnish, polish, liquid filler and lacquer base) or
				3470 PAINT RELATED MATERIAL, CORROSIVE, FLAMMABLE (including paint thinning or reducing compound)
				2734 AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. or
				2734 POLYAMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.
				2986 CHLOROSILANES, CORROSIVE, FLAMMABLE, N.O.S.
				2920 CORROSIVE LIQUID, FLAMMABLE, N.O.S.
	CF	solid	CF2	2921 CORROSIVE SOLID, FLAMMABLE, N.O.S.
	Self-heating	liquid	CS1	3301 CORROSIVE LIQUID, SELF-HEATING, N.O.S.
	CS	solid	CS2	3095 CORROSIVE SOLID, SELF-HEATING, N.O.S.
	Water-reactive	liquid^b	CW1	3094 CORROSIVE LIQUID, WATER-REACTIVE, N.O.S.
	CW	solid	CW2	3096 CORROSIVE SOLID, WATER-REACTIVE, N.O.S.
	Oxidizing	liquid	CO1	3093 CORROSIVE LIQUID, OXIDIZING, N.O.S.
	CO	solid	CO2	3084 CORROSIVE SOLID, OXIDIZING, N.O.S.
	Toxic^d	liquid^c	CT1	3471 HYDROGENDIFLUORIDES SOLUTION, N.O.S.
				2922 CORROSIVE LIQUID, TOXIC, N.O.S.
	CT	solid^e	CT2	2923 CORROSIVE SOLID, TOXIC, N.O.S.
		articles	CT3	3506 MERCURY CONTAINED IN MANUFACTURED ARTICLES
	Flammable, liquid, toxic^d		CFT	No collective entry with this classification code available; if need be, classification under a collective entry with a classification code to be determined according to table of precedence of hazard in 2.1.3.10.
	Oxidizing, toxic^{d,e}		COT	No collective entry with this classification code available; if need be, classification under a collective entry with a classification code to be determined according to table of precedence of hazard in 2.1.3.10.

^b Chlorosilanes which, in contact with water or moist air, emit flammable gases, are substances of Class 4.3.

^c Chloroformates having predominantly toxic properties are substances of Class 6.1.

^d Corrosive substances which are highly toxic by inhalation, as defined in 2.2.61.1.4 to 2.2.61.1.9 are substances of Class 6.1.

^e UN No. 2505 AMMONIUM FLUORIDE, UN No. 1812 POTASSIUM FLUORIDE, SOLID, UN No. 1690 SODIUM FLUORIDE, SOLID, UN No. 2674 SODIUM FLUOROSILICATE, UN No. 2856 FLUOROSILICATES, N.O.S., UN No. 3415 SODIUM FLUORIDE SOLUTION and UN No. 3422 POTASSIUM FLUORIDE SOLUTION are substances of Class 6.1.

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2.2.9 Class 9 Miscellaneous dangerous substances and articles

2.2.9.1 Criteria

2.2.9.1.1 The heading of Class 9 covers substances and articles which, during carriage, present a danger not covered by the heading of other classes.

2.2.9.1.2 The substances and articles of Class 9 are subdivided as follows:

- M1 Substances which, on inhalation as fine dust, may endanger health;
- M2 Substances and apparatus which, in the event of fire, may form dioxins;
- M3 Substances evolving flammable vapour;
- M4 Lithium batteries;
- M5 Life-saving appliances;
- M6-M8 Environmentally hazardous substances:
 - M6 Pollutant to the aquatic environment, liquid;
 - M7 Pollutant to the aquatic environment, solid;
 - M8 Genetically modified microorganisms and organisms;
- M9-M10 Elevated temperature substances:
 - M9 Liquid;
 - M10 Solid;
- M11 Other substances presenting a danger during carriage, but not meeting the definitions of another class.

Definitions and classification

2.2.9.1.3 Substances and articles classified in Class 9 are listed in Table A of Chapter 3.2. The assignment of substances and articles not mentioned by name in Table A of Chapter 3.2 to the relevant entry of that Table or of sub-section 2.2.9.3 shall be done in accordance with 2.2.9.1.4 to 2.2.9.1.14 below.

Substances which, on inhalation as fine dust, may endanger health

2.2.9.1.4 Substances which, on inhalation as fine dust, may endanger health include asbestos and mixtures containing asbestos.

Substances and apparatus which, in the event of fire, may form dioxins

2.2.9.1.5 Substances and apparatus which, in the event of fire, may form dioxins include polychlorinated biphenyls (PCBs) and terphenyls (PCTs) and polyhalogenated biphenyls and terphenyls and mixtures containing these substances, as well as apparatus such as transformers, condensers and apparatus containing those substances or mixtures.

NOTE: *Mixtures with a PCB or PCT content of not more than 50 mg/kg are not subject to the provisions of ADR.*

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Substances evolving flammable vapour

- 2.2.9.1.6 Substances evolving flammable vapour include polymers containing flammable liquids with a flash-point not exceeding 55 °C.

Lithium batteries

- 2.2.9.1.7 Cells and batteries, cells and batteries contained in equipment, or cells and batteries packed with equipment, containing lithium in any form shall be assigned to UN Nos. 3090, 3091, 3480 or 3481 as appropriate. They may be carried under these entries if they meet the following provisions:

- (a) Each cell or battery is of the type proved to meet the requirements of each test of the Manual of Tests and Criteria, Part III, sub-section 38.3;

NOTE: *Batteries shall be of a type proved to meet the testing requirements of the Manual of Tests and Criteria, part III, sub-section 38.3, irrespective of whether the cells of which they are composed are of a tested type.*

- (b) Each cell and battery incorporates a safety venting device or is designed to preclude a violent rupture under normal conditions of carriage;
- (c) Each cell and battery is equipped with an effective means of preventing external short circuits;
- (d) Each battery containing cells or series of cells connected in parallel is equipped with effective means as necessary to prevent dangerous reverse current flow (e.g., diodes, fuses, etc.);
- (e) Cells and batteries shall be manufactured under a quality management programme that includes:
- (i) A description of the organizational structure and responsibilities of personnel with regard to design and product quality;
 - (ii) The relevant inspection and test, quality control, quality assurance, and process operation instructions that will be used;
 - (iii) Process controls that should include relevant activities to prevent and detect internal short circuit failure during manufacture of cells;
 - (iv) Quality records, such as inspection reports, test data, calibration data and certificates. Test data shall be kept and made available to the competent authority upon request;
 - (v) Management reviews to ensure the effective operation of the quality management programme;
 - (vi) A process for control of documents and their revision;
 - (vii) A means for control of cells or batteries that are not conforming to the type tested as mentioned in (a) above;
 - (viii) Training programmes and qualification procedures for relevant personnel; and
 - (ix) Procedures to ensure that there is no damage to the final product.

NOTE: *In house quality management programmes may be accepted. Third party certification is not required, but the procedures listed in (i) to (ix) above shall be properly recorded and traceable. A copy of the quality management programme shall be made available to the competent authority upon request.*

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Lithium batteries are not subject to the provisions of ADR if they meet the requirements of special provision 188 of Chapter 3.3.

NOTE: *The entry UN 3171 Battery-powered vehicle or UN 3171 Battery-powered equipment only applies to vehicles powered by wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries and equipment powered by wet batteries or sodium batteries transported with these batteries installed.*

For the purpose of this UN number, vehicles are self-propelled apparatus designed to carry one or more persons or goods. Examples of such vehicles are electrically-powered cars, motorcycles, scooters, three- and four-wheeled vehicles or motorcycles, e-bikes, wheelchairs, lawn tractors, boats and aircraft.

Examples of equipment are lawnmowers, cleaning machines or model boats and model aircraft. Equipment powered by lithium metal batteries or lithium ion batteries shall be consigned under the entries UN 3091 LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or UN 3091 LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT or UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or UN 3481 LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, as appropriate.

Hybrid electric vehicles powered by both an internal combustion engine and wet batteries, sodium batteries, lithium metal batteries or lithium ion batteries, transported with the battery(ies) installed shall be classified under the entries UN 3166 vehicle, flammable gas powered or UN 3166 vehicle, flammable liquid powered, as appropriate. Vehicles which contain a fuel cell shall be classified under the entries UN 3166 vehicle, fuel cell, flammable gas powered or UN 3166 vehicle, fuel cell, flammable liquid powered, as appropriate.

Life-saving appliances

- 2.2.9.1.8 Life-saving appliances include life-saving appliances and motor vehicle components which meet the descriptions of special provisions 235 or 296 of Chapter 3.3.

Environmentally hazardous substances

- 2.2.9.1.9 *(Deleted)*

Pollutants to the aquatic environment

- 2.2.9.1.10 *Environmentally hazardous substances (aquatic environment)*

- 2.2.9.1.10.1 General definitions

- 2.2.9.1.10.1.1 Environmentally hazardous substances include, inter alia, liquid or solid substances pollutant to the aquatic environment and solutions and mixtures of such substances (such as preparations and wastes).

For the purposes of 2.2.9.1.10, "substance" means chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

- 2.2.9.1.10.1.2 The aquatic environment may be considered in terms of the aquatic organisms that live in the water, and the aquatic ecosystem of which they are part¹¹. The basis, therefore, of the identification of hazard is the aquatic toxicity of the substance or mixture, although this may be modified by further information on the degradation and bioaccumulation behaviour.

¹¹ *This does not address aquatic pollutants for which there may be a need to consider effects beyond the aquatic environment such as the impacts on human health etc.*

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2.2.9.1.10.1.3 While the following classification procedure is intended to apply to all substances and mixtures, it is recognised that in some cases, e.g. metals or poorly soluble inorganic compounds, special guidance will be necessary¹².

2.2.9.1.10.1.4 The following definitions apply for acronyms or terms used in this section:

- BCF: Bioconcentration Factor;
- BOD: Biochemical Oxygen Demand;
- COD: Chemical Oxygen Demand;
- GLP: Good Laboratory Practices;
- EC_x: the concentration associated with x% response;
- EC₅₀: the effective concentration of substance that causes 50% of the maximum response;
- ErC₅₀: EC₅₀ in terms of reduction of growth;
- Kow: octanol/water partition coefficient;
- LC₅₀ (50% lethal concentration): the concentration of a substance in water which causes the death of 50% (one half) in a group of test animals;
- L(E)C₅₀: LC₅₀ or EC₅₀;
- NOEC (No Observed Effect Concentration): the test concentration immediately below the lowest tested concentration with statistically significant adverse effect. The NOEC has no statistically significant adverse effect compared to the control;
- OECD Test Guidelines: Test guidelines published by the Organization for Economic Cooperation and Development (OECD).

2.2.9.1.10.2 Definitions and data requirements

2.2.9.1.10.2.1 The basic elements for classification of environmentally hazardous substances (aquatic environment) are:

- (a) Acute aquatic toxicity;
- (b) Chronic aquatic toxicity;
- (c) Potential for or actual bioaccumulation; and
- (d) Degradation (biotic or abiotic) for organic chemicals.

2.2.9.1.10.2.2 While data from internationally harmonised test methods are preferred, in practice, data from national methods may also be used where they are considered as equivalent. In general, it has been agreed that freshwater and marine species toxicity data can be considered as equivalent data and are preferably to be derived using OECD Test Guidelines or equivalent according to the principles of Good Laboratory Practices (GLP). Where such data are not available, classification shall be based on the best available data.

2.2.9.1.10.2.3 *Acute aquatic toxicity* means the intrinsic property of a substance to be injurious to an organism in a short-term aquatic exposure to that substance.

Acute (short-term) hazard, for classification purposes, means the hazard of a chemical caused by its acute toxicity to an organism during short-term aquatic exposure to that chemical.

Acute aquatic toxicity shall normally be determined using a fish 96 hour LC₅₀ (OECD Test Guideline 203 or equivalent), a crustacea species 48 hour EC₅₀ (OECD Test Guideline 202 or equivalent) and/or an algal species 72 or 96 hour EC₅₀ (OECD Test Guideline 201 or equivalent). These species are considered as surrogate for all aquatic organisms and data on other species such as Lemna may also be considered if the test methodology is suitable.

¹² This can be found in Annex 10 of the GHS.

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- 2.2.9.1.10.2.4 *Chronic aquatic toxicity* means the intrinsic property of a substance to cause adverse effects to aquatic organisms during aquatic exposures which are determined in relation to the life-cycle of the organism.

Long-term hazard, for classification purposes, means the hazard of a chemical caused by its chronic toxicity following long-term exposure in the aquatic environment.

Chronic toxicity data are less available than acute data and the range of testing procedures less standardised. Data generated according to the OECD Test Guidelines 210 (Fish Early Life Stage) or 211 (Daphnia Reproduction) and 201 (Algal Growth Inhibition) may be accepted. Other validated and internationally accepted tests may also be used. The NOECs or other equivalent EC_x shall be used.

- 2.2.9.1.10.2.5 *Bioaccumulation* means net result of uptake, transformation and elimination of a substance in an organism due to all routes of exposure (i.e. air, water, sediment/soil and food).

The potential for bioaccumulation shall normally be determined by using the octanol/water partition coefficient, usually reported as a log K_{ow} determined according to OECD Test Guideline 107 or 117. While this represents a potential to bioaccumulate, an experimentally determined Bioconcentration Factor (BCF) provides a better measure and shall be used in preference when available. A BCF shall be determined according to OECD Test Guideline 305.

- 2.2.9.1.10.2.6 *Degradation* means the decomposition of organic molecules to smaller molecules and eventually to carbon dioxide, water and salts.

Environmental degradation may be biotic or abiotic (e.g. hydrolysis) and the criteria used reflect this fact. Ready biodegradation is most easily defined using the biodegradability tests (A-F) of OECD Test Guideline 301. A pass level in these tests may be considered as indicative of rapid degradation in most environments. These are freshwater tests and thus the use of the results from OECD Test Guideline 306, which is more suitable for marine environments, has also been included. Where such data are not available, a BOD(5 days)/COD ratio ≥ 0.5 is considered as indicative of rapid degradation.

Abiotic degradation such as hydrolysis, primary degradation, both abiotic and biotic, degradation in non-aquatic media and proven rapid degradation in the environment may all be considered in defining rapid degradability¹³.

Substances are considered rapidly degradable in the environment if the following criteria are met:

- (a) In 28-day ready biodegradation studies, the following levels of degradation are achieved:
- (i) Tests based on dissolved organic carbon: 70%;
 - (ii) Tests based on oxygen depletion or carbon dioxide generation: 60% of theoretical maxima;

These levels of biodegradation shall be achieved within 10 days of the start of degradation which point is taken as the time when 10% of the substance has been degraded", unless the substance is identified as a complex, multi-component substance with structurally similar constituents. In this case, and where there is

¹³ Special guidance on data interpretation is provided in Chapter 4.1 and Annex 9 of the GHS.

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sufficient justification, the 10-day window condition may be waived and the pass level applied at 28 days¹⁴; or

- (b) In those cases where only BOD and COD data are available, when the ratio of BOD5/COD is ≥ 0.5 ; or
- (c) If other convincing scientific evidence is available to demonstrate that the substance or mixture can be degraded (biotically and/or abiotically) in the aquatic environment to a level above 70% within a 28 day period.

2.2.9.1.10.3 Substance classification categories and criteria

- 2.2.9.1.10.3.1 Substances shall be classified as "environmentally hazardous substances (aquatic environment)", if they satisfy the criteria for Acute 1, Chronic 1 or Chronic 2, according to Table 2.2.9.1.10.3.1. These criteria describe in detail the classification categories. They are diagrammatically summarized in Table 2.2.9.1.10.3.2.

¹⁴ See Chapter 4.1 and Annex 9, paragraph A9.4.2.2.3 of the GHS.

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Table 2.2.9.1.10.3.1: Categories for substances hazardous to the aquatic environment (see Note 1)

(a) Acute (short-term) aquatic hazard	
Category Acute 1: (see Note 2)	
96 hr LC ₅₀ (for fish)	≤ 1 mg/l and/or
48 hr EC ₅₀ (for crustacea)	≤ 1 mg/l and/or
72 or 96hr ErC ₅₀ (for algae or other aquatic plants)	≤ 1 mg/l (see Note 3)
(b) Long-term aquatic hazard (see also Figure 2.2.9.1.10.3.1)	
(i) Non-rapidly degradable substances (see Note 4) for which there are adequate chronic toxicity data available	
Category Chronic 1: (see Note 2)	
Chronic NOEC or EC _x (for fish)	≤ 0.1 mg/l and/or
Chronic NOEC or EC _x (for crustacea)	≤ 0.1 mg/l and/or
Chronic NOEC or EC _x (for algae or other aquatic plants)	≤ 0.1 mg/l
Category Chronic 2:	
Chronic NOEC or EC _x (for fish)	≤ 1 mg/l and/or
Chronic NOEC or EC _x (for crustacea)	≤ 1 mg/l and/or
Chronic NOEC or EC _x (for algae or other aquatic plants)	≤ 1 mg/l
(ii) Rapidly degradable substances for which there are adequate chronic toxicity data available	
Category Chronic 1: (see Note 2)	
Chronic NOEC or EC _x (for fish)	≤ 0.01 mg/l and/or
Chronic NOEC or EC _x (for crustacea)	≤ 0.01 mg/l and/or
Chronic NOEC or EC _x (for algae or other aquatic plants)	≤ 0.01 mg/l
Category Chronic 2:	
Chronic NOEC or EC _x (for fish)	≤ 0.1 mg/l and/or
Chronic NOEC or EC _x (for crustacea)	≤ 0.1 mg/l and/or
Chronic NOEC or EC _x (for algae or other aquatic plants)	≤ 0.1 mg/l
(iii) Substances for which adequate chronic toxicity data are not available	
Category Chronic 1: (see Note 2)	
96 hr LC ₅₀ (for fish)	≤ 1 mg/l and/or
48 hr EC ₅₀ (for crustacea)	≤ 1 mg/l and/or
72 or 96hr ErC ₅₀ (for algae or other aquatic plants)	≤ 1 mg/l (see Note 3)
and the substance is not rapidly degradable and/or the experimentally determined BCF is ≥ 500 (or, if absent the log K _{ow} ≥ 4) (see Notes 4 and 5).	
Category Chronic 2:	
96 hr LC ₅₀ (for fish)	>1 but ≤ 10 mg/l and/or
48 hr EC ₅₀ (for crustacea)	>1 but ≤ 10 mg/l and/or
72 or 96hr ErC ₅₀ (for algae or other aquatic plants)	>1 but ≤ 10 mg/l (see Note 3)
and the substance is not rapidly degradable and/or the experimentally determined BCF is ≥ 500 (or, if absent the log K _{ow} ≥ 4) (see Notes 4 and 5).	

NOTE 1: The organisms fish, crustacea and algae are tested as surrogate species covering a range of trophic levels and taxa, and the test methods are highly standardized. Data on other organisms may also be considered, however, provided they represent equivalent species and test endpoints.

NOTE 2: When classifying substances as Acute 1 and/or Chronic 1 it is necessary at the same time to indicate an appropriate M factor (see 2.2.9.1.10.4.6.4) to apply the summation method.

NOTE 3: Where the algal toxicity ErC₅₀ (= EC₅₀ (growth rate)) falls more than 100 times below the next most sensitive species and results in a classification based solely on this effect, consideration shall be given to whether this toxicity is representative of the toxicity to

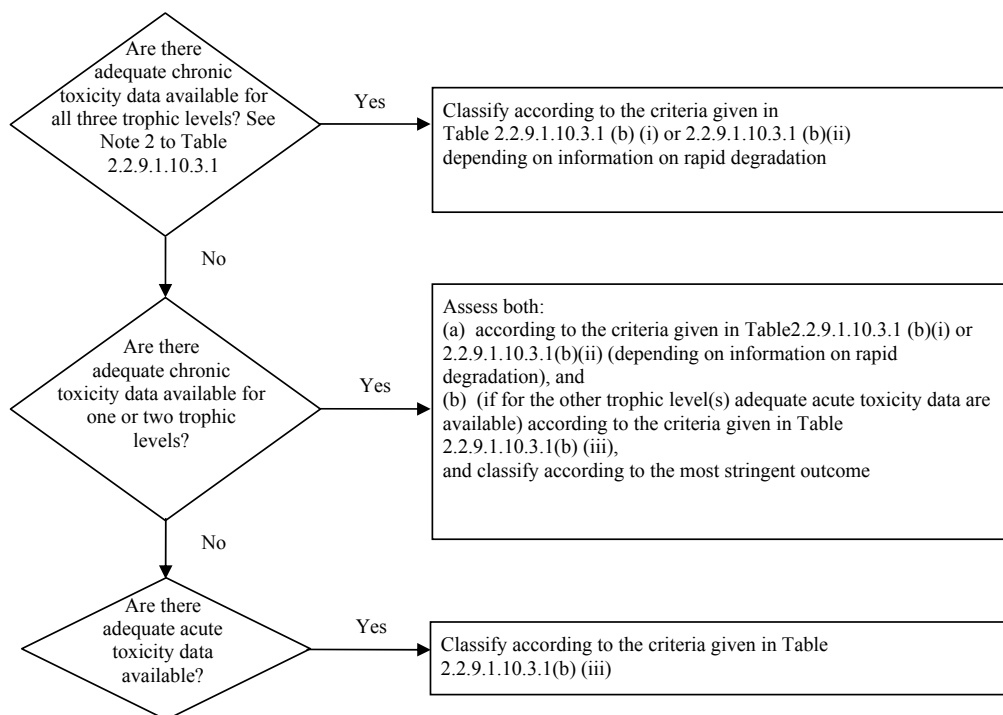
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aquatic plants. Where it can be shown that this is not the case, professional judgment shall be used in deciding if classification shall be applied. Classification shall be based on the ErC_{50} . In circumstances where the basis of the EC_{50} is not specified and no ErC_{50} is recorded, classification shall be based on the lowest EC_{50} available.

NOTE 4: *Lack of rapid degradability is based on either a lack of ready biodegradability or other evidence of lack of rapid degradation. When no useful data on degradability are available, either experimentally determined or estimated data, the substance shall be regarded as not rapidly degradable.*

NOTE 5: *Potential to bioaccumulate, based on an experimentally derived $BCF \geq 500$ or, if absent, a $\log K_{ow} \geq 4$ provided $\log K_{ow}$ is an appropriate descriptor for the bioaccumulation potential of the substance. Measured $\log K_{ow}$ values take precedence over estimated values and measured BCF values take precedence over $\log K_{ow}$ values.*

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Figure 2.2.9.1.10.3.1: Categories for substances long-term hazardous to the aquatic environment

2.2.9.1.10.3.2 The classification scheme in Table 2.2.9.1.10.3.2 below summarizes the classification criteria for substances.

Table 2.2.9.1.10.3.2: Classification scheme for substances hazardous to the aquatic environment

Classification categories			
Acute hazard (see Note 1)	Long-term hazard (see Note 2)		
	Adequate chronic toxicity data available		Adequate chronic toxicity data not available (see Note 1)
	Non-rapidly degradable substances (see Note 3)	Rapidly degradable substances (see Note 3)	
Category: Acute 1	Category: Chronic 1	Category: Chronic 1	Category: Chronic 1
$L(E)C_{50} \leq 1.00$	$NOEC \text{ or } EC_x \leq 0.1$	$NOEC \text{ or } EC_x \leq 0.01$	$L(E)C_{50} \leq 1.00$ and lack of rapid degradability and/or $BCF \geq 500$ or, if absent $\log K_{ow} \geq 4$
	Category: Chronic 2	Category: Chronic 2	Category: Chronic 2
	$0.1 < NOEC \text{ or } EC_x \leq 1$	$0.01 < NOEC \text{ or } EC_x \leq 0.1$	$1.00 < L(E)C_{50} \leq 10.0$ and lack of rapid degradability and/or $BCF \geq 500$ or, if absent $\log K_{ow} \geq 4$

NOTE 1: Acute toxicity band based on $L(E)C_{50}$ values in mg/l for fish, crustacea and/or algae or other aquatic plants (or Quantitative Structure Activity Relationships (QSAR) estimation if no experimental data¹⁵).

¹⁵ Special guidance is provided in Chapter 4.1, paragraph 4.1.2.13 and Annex 9, Section A9.6 of the GHS.

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NOTE 2: *Substances are classified in the various chronic categories unless there are adequate chronic toxicity data available for all three trophic levels above the water solubility or above 1 mg/l. ("Adequate" means that the data sufficiently cover the endpoint of concern. Generally this would mean measured test data, but in order to avoid unnecessary testing it can on a case by case basis also be estimated data, e.g. (Q)SAR, or for obvious cases expert judgment).*

NOTE 3: *Chronic toxicity band based on NOEC or equivalent EC_x values in mg/l for fish or crustacea or other recognized measures for chronic toxicity.*

2.2.9.1.10.4 Mixtures classification categories and criteria

2.2.9.1.10.4.1 The classification system for mixtures covers the classification categories which are used for substances, meaning categories Acute 1 and Chronic 1 and 2. In order to make use of all available data for purposes of classifying the aquatic environmental hazards of the mixture, the following assumption is made and is applied where appropriate:

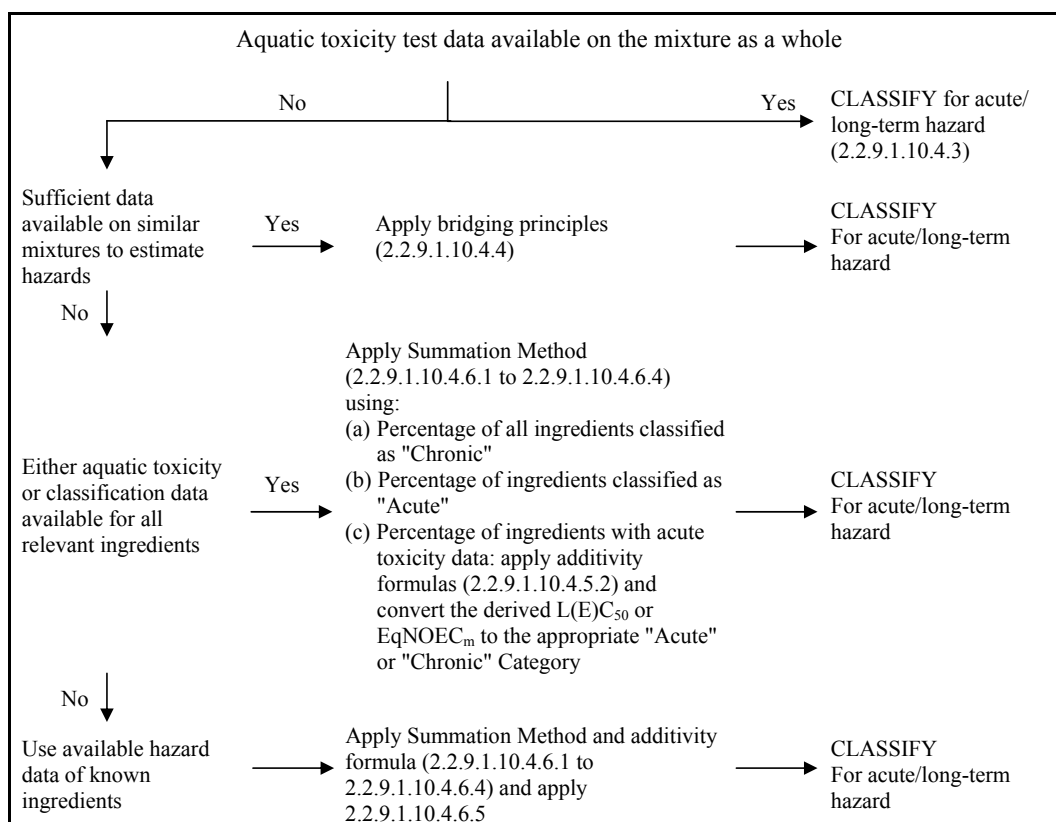
The "relevant ingredients" of a mixture are those which are present in a concentration equal to or greater than 0.1% (by mass) for ingredients classified as Acute and/or Chronic 1 and equal to or greater than 1% for other ingredients, unless there is a presumption (e.g. in the case of highly toxic ingredients) that an ingredient present at less than 0.1% can still be relevant for classifying the mixture for aquatic environmental hazards.

2.2.9.1.10.4.2 The approach for classification of aquatic environmental hazards is tiered, and is dependent upon the type of information available for the mixture itself and for its ingredients. Elements of the tiered approach include:

- (a) Classification based on tested mixtures;
- (b) Classification based on bridging principles;
- (c) The use of "summation of classified ingredients" and/or an "additivity formula".

Figure 2.2.9.1.10.4.2 below outlines the process to be followed.

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Figure 2.2.9.1.10.4.2: Tiered approach to classification of mixtures for acute and long-term aquatic environmental hazards

2.2.9.1.10.4.3 Classification of mixtures when toxicity data are available for the complete mixture

2.2.9.1.10.4.3.1 When the mixture as a whole has been tested to determine its aquatic toxicity, this information shall be used for classifying the mixture according to the criteria that have been agreed for substances. The classification is normally based on the data for fish, crustacea and algae/plants (see 2.2.9.1.10.2.3 and 2.2.9.1.10.2.4). When adequate acute or chronic data for the mixture as a whole are lacking, "bridging principles" or "summation method" shall be applied (see 2.2.9.1.10.4.4 to 2.2.9.1.10.4.6).

2.2.9.1.10.4.3.2 The long-term hazard classification of mixtures requires additional information on degradability and in certain cases bioaccumulation. There are no degradability and bioaccumulation data for mixtures as a whole. Degradability and bioaccumulation tests for mixtures are not used as they are usually difficult to interpret, and such tests may be meaningful only for single substances.

2.2.9.1.10.4.3.3 Classification for category Acute 1

- (a) When there are adequate acute toxicity test data (LC_{50} or EC_{50}) available for the mixture as a whole showing $L(E)C_{50} \leq 1$ mg/l:

Classify the mixture as Acute 1 in accordance with Table 2.2.9.1.10.3.1 (a);

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- (b) When there are acute toxicity test data ($LC_{50}(s)$ or $EC_{50}(s)$) available for the mixture as a whole showing $L(E)C_{50}(s) > 1$ mg/l, or above the water solubility:

No need to classify for acute hazard under ADR.

2.2.9.1.10.4.3.4 Classification for categories Chronic 1 and 2

- (a) When there are adequate chronic toxicity data (EC_x or NOEC) available for the mixture as a whole showing EC_x or NOEC of the tested mixture ≤ 1 mg/l:
- (i) classify the mixture as Chronic 1 or 2 in accordance with Table 2.2.9.1.10.3.1 (b) (ii) (rapidly degradable) if the available information allows the conclusion that all relevant ingredients of the mixture are rapidly degradable;
- (ii) classify the mixture as Chronic 1 or 2 in all other cases in accordance with Table 2.2.9.1.10.3.1 (b) (i) (non-rapidly degradable);
- (b) When there are adequate chronic toxicity data (EC_x or NOEC) available for the mixture as a whole showing $EC_x(s)$ or NOEC(s) of the tested mixture > 1 mg/l or above the water solubility:

No need to classify for long-term hazard under ADR.

2.2.9.1.10.4.4 Classification of mixtures when toxicity data are not available for the complete mixture: bridging principles

2.2.9.1.10.4.4.1 Where the mixture itself has not been tested to determine its aquatic environmental hazard, but there are sufficient data on the individual ingredients and similar tested mixtures to adequately characterise the hazards of the mixture, these data shall be used in accordance with the following agreed bridging rules. This ensures that the classification process uses the available data to the greatest extent possible in characterising the hazards of the mixture without the necessity for additional testing in animals.

2.2.9.1.10.4.4.2 Dilution

Where a new mixture is formed by diluting a tested mixture or a substance with a diluent which has an equivalent or lower aquatic hazard classification than the least toxic original ingredient and which is not expected to affect the aquatic hazards of other ingredients, then the resulting mixture shall be classified as equivalent to the original tested mixture or substance. Alternatively, the method explained in 2.2.9.1.10.4.5 may be applied.

2.2.9.1.10.4.4.3 Batching

The aquatic hazard classification of a tested production batch of a mixture shall be assumed to be substantially equivalent to that of another untested production batch of the same commercial product when produced by or under the control of the same manufacturer, unless there is reason to believe there is significant variation such that the aquatic hazard classification of the untested batch has changed. If the latter occurs, new classification is necessary.

2.2.9.1.10.4.4.4 Concentration of mixtures which are classified with the most severe classification categories (Chronic 1 and Acute 1)

If a tested mixture is classified as Chronic 1 and/or Acute 1, and the ingredients of the mixture which are classified as Chronic 1 and/or Acute 1 are further concentrated, the more concentrated untested mixture shall be classified with the same classification category as the original tested mixture without additional testing.

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2.2.9.1.10.4.4.5 Interpolation within one toxicity category

For three mixtures (A, B and C) with identical ingredients, where mixtures A and B have been tested and are in the same toxicity category, and where untested mixture C has the same toxicologically active ingredients as mixtures A and B but has concentrations of toxicologically active ingredients intermediate to the concentrations in mixtures A and B, then mixture C is assumed to be in the same category as A and B.

2.2.9.1.10.4.4.6 Substantially similar mixtures

Given the following:

- (a) Two mixtures:
 - (i) A + B;
 - (ii) C + B;
- (b) The concentration of ingredient B is essentially the same in both mixtures;
- (c) The concentration of ingredient A in mixture (i) equals that of ingredient C in mixture (ii);
- (d) Data on aquatic hazards for A and C are available and are substantially equivalent, i.e. they are in the same hazard category and are not expected to affect the aquatic toxicity of B.

If mixture (i) or (ii) is already classified based on test data, then the other mixture can be assigned the same hazard category.

2.2.9.1.10.4.5 Classification of mixtures when toxicity data are available for all ingredients or only for some ingredients of the mixture

2.2.9.1.10.4.5.1 The classification of a mixture shall be based on summation of the concentrations of its classified ingredients. The percentage of ingredients classified as "Acute" or "Chronic" will feed straight into the summation method. Details of the summation method are described in 2.2.9.1.10.4.6.1 to 2.2.9.1.10.4.6.4.

2.2.9.1.10.4.5.2 Mixtures may be made of a combination of both ingredients that are classified (as Acute 1 and/or Chronic 1, 2) and those for which adequate toxicity test data are available. When adequate toxicity data are available for more than one ingredient in the mixture, the combined toxicity of those ingredients shall be calculated using the following additivity formulas (a) or (b), depending on the nature of the toxicity data:

- (a) Based on acute aquatic toxicity:

$$\frac{\sum C_i}{L(E)C_{50m}} = \sum_n \frac{C_i}{L(E)C_{50i}}$$

where:

- C_i = concentration of ingredient i (mass percentage);
 $L(E)C_{50i}$ = LC_{50} or EC_{50} for ingredient i (mg/l);
 n = number of ingredients, and i is running from 1 to n;
 $L(E)C_{50m}$ = $L(E)C_{50}$ of the part of the mixture with test data;

The calculated toxicity shall be used to assign that portion of the mixture an acute hazard category which is then subsequently used in applying the summation method;

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(b) Based on chronic aquatic toxicity:

$$\frac{\sum C_i + \sum C_j}{EqNOEC_m} = \sum_n \frac{C_i}{NOEC_i} + \sum_n \frac{C_j}{0.1 \cdot NOEC_j}$$

where:

- C_i = concentration of ingredient i (mass percentage) covering the rapidly degradable ingredients;
- C_j = concentration of ingredient j (mass percentage) covering the non rapidly degradable ingredients;
- $NOEC_i$ = NOEC (or other recognized measures for chronic toxicity) for ingredient i covering the rapidly degradable ingredients, in mg/l;
- $NOEC_j$ = NOEC (or other recognized measures for chronic toxicity) for ingredient j covering the non-rapidly degradable ingredients, in mg/l;
- n = number of ingredients, and i and j are running from 1 to n;
- $EqNOEC_m$ = equivalent NOEC of the part of the mixture with test data;

The equivalent toxicity thus reflects the fact that non-rapidly degrading substances are classified one hazard category level more "severe" than rapidly degrading substances.

The calculated equivalent toxicity shall be used to assign that portion of the mixture a long-term hazard category, in accordance with the criteria for rapidly degradable substances (Table 2.2.9.1.10.3.1 (b) (ii)), which is then subsequently used in applying the summation method.

2.2.9.1.10.4.5.3 When applying the additivity formula for part of the mixture, it is preferable to calculate the toxicity of this part of the mixture using for each ingredient toxicity values that relate to the same taxonomic group (i.e. fish, crustacea or algae) and then to use the highest toxicity (lowest value) obtained (i.e. use the most sensitive of the three groups). However, when toxicity data for each ingredient are not available in the same taxonomic group, the toxicity value of each ingredient shall be selected in the same manner that toxicity values are selected for the classification of substances, i.e. the higher toxicity (from the most sensitive test organism) is used. The calculated acute and chronic toxicity shall then be used to classify this part of the mixture as Acute 1 and/or Chronic 1 or 2 using the same criteria described for substances.

2.2.9.1.10.4.5.4 If a mixture is classified in more than one way, the method yielding the more conservative result shall be used.

2.2.9.1.10.4.6 Summation method

2.2.9.1.10.4.6.1 Classification procedure

In general a more severe classification for mixtures overrides a less severe classification, e.g. a classification with Chronic 1 overrides a classification with Chronic 2. As a consequence the classification procedure is already completed if the results of the classification is Chronic 1. A more severe classification than Chronic 1 is not possible; therefore, it is not necessary to pursue the classification procedure further.

2.2.9.1.10.4.6.2 Classification for category Acute 1

2.2.9.1.10.4.6.2.1 First, all ingredients classified as Acute 1 are considered. If the sum of the concentrations (in %) of these ingredients is greater than or equal to 25% the whole mixture shall be classified as Acute 1. If the result of the calculation is a classification of the mixture as Acute 1, the classification process is completed.

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2.2.9.1.10.4.6.2.2 The classification of mixtures for acute hazards based on this summation of the concentrations of classified ingredients is summarized in Table 2.2.9.1.10.4.6.2.2 below.

Table 2.2.9.1.10.4.6.2.2: Classification of a mixture for acute hazards based on summation of the concentrations of classified ingredients

Sum of the concentrations (in %) of ingredients classified as:	Mixture classified as:
Acute 1 \times M ^a \geq 25%	Acute 1

^a For explanation of the M factor, see 2.2.9.1.10.4.6.4.

2.2.9.1.10.4.6.3 Classification for categories Chronic 1 and 2

2.2.9.1.10.4.6.3.1 First, all ingredients classified as Chronic 1 are considered. If the sum of the concentrations (in %) of these ingredients is greater than or equal to 25% the mixture shall be classified as Chronic 1. If the result of the calculation is a classification of the mixture as Chronic 1 the classification procedure is completed.

2.2.9.1.10.4.6.3.2 In cases where the mixture is not classified as Chronic 1, classification of the mixture as Chronic 2 is considered. A mixture shall be classified as Chronic 2 if 10 times the sum of the concentrations (in %) of all ingredients classified as Chronic 1 plus the sum of the concentrations (in %) of all ingredients classified as Chronic 2 is greater than or equal to 25%. If the result of the calculation is classification of the mixture as Chronic 2, the classification process is completed.

2.2.9.1.10.4.6.3.3 The classification of mixtures for long-term hazards based on this summation of the concentrations of classified ingredients is summarized in Table 2.2.9.1.10.4.6.3.3 below.

Table 2.2.9.1.10.4.6.3.3: Classification of a mixture for long-term hazards based on summation of the concentrations of classified ingredients

Sum of the concentrations (in %) of ingredients classified as:	Mixture classified as:
Chronic 1 \times M ^a \geq 25%	Chronic 1
(M \times 10 \times Chronic 1) + Chronic 2 \geq 25%	Chronic 2

^a For explanation of the M factor, see 2.2.9.1.10.4.6.4.

2.2.9.1.10.4.6.4 Mixtures with highly toxic ingredients

Acute 1 or Chronic 1 ingredients with acute toxicities well below 1 mg/l and/or chronic toxicities well below 0.1 mg/l (if non-rapidly degradable) and 0.01 mg/l (if rapidly degradable) may influence the toxicity of the mixture and are given increased weight in applying the summation method. When a mixture contains ingredients classified as acute or Chronic 1, the tiered approach described in 2.2.9.1.10.4.6.2 and 2.2.9.1.10.4.6.3 shall be applied using a weighted sum by multiplying the concentrations of Acute 1 and Chronic 1 ingredients by a factor, instead of merely adding up the percentages. This means that the concentration of "Acute 1" in the left column of Table 2.2.9.1.10.4.6.2.2 and the concentration of "Chronic 1" in the left column of Table 2.2.9.1.10.4.6.3.3 are multiplied by the appropriate multiplying factor. The multiplying factors to be applied to these ingredients are defined using the toxicity value, as summarised in Table 2.2.9.1.10.4.6.4 below. Therefore, in order to classify a mixture containing Acute 1 and/or Chronic 1 ingredients, the classifier needs to be informed of the value of the M factor in order to apply the summation method. Alternatively, the additivity formula (see 2.2.9.1.10.4.5.2) may be used when toxicity data are available for all highly toxic ingredients in the mixture and there is convincing evidence that all other ingredients,

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including those for which specific acute and/or chronic toxicity data are not available, are of low or no toxicity and do not significantly contribute to the environmental hazard of the mixture.

Table 2.2.9.1.10.4.6.4: Multiplying factors for highly toxic ingredients of mixtures

Acute toxicity	M factor	Chronic toxicity	M factor	
L(E)C ₅₀ value		NOEC value	NRD ^a ingredients	RD ^b ingredients
0.1 < L(E)C ₅₀ ≤ 1	1	0.01 < NOEC ≤ 0.1	1	–
0.01 < L(E)C ₅₀ ≤ 0.1	10	0.001 < NOEC ≤ 0.01	10	1
0.001 < L(E)C ₅₀ ≤ 0.01	100	0.0001 < NOEC ≤ 0.001	100	10
0.0001 < L(E)C ₅₀ ≤ 0.001	1 000	0.00001 < NOEC ≤ 0.0001	1 000	100
0.00001 < L(E)C ₅₀ ≤ 0.0001	10 000	0.000001 < NOEC ≤ 0.00001	10 000	1 000
(continue in factor 10 intervals)		(continue in factor 10 intervals)		

^a Non-rapidly degradable.^b Rapidly degradable.

2.2.9.1.10.4.6.5 Classification of mixtures with ingredients without any useable information

In the event that no useable information on acute and/or chronic aquatic toxicity is available for one or more relevant ingredients, it is concluded that the mixture cannot be attributed (a) definitive hazard category(ies). In this situation the mixture shall be classified based on the known ingredients only with the additional statement that: "x percent of the mixture consists of ingredient(s) of unknown hazard to the aquatic environment.

2.2.9.1.10.5 Substances or mixtures classified as environmentally hazardous substances (aquatic environment) on the basis of Regulation 1272/2008/EC¹⁶

If data for classification according to the criteria of 2.2.9.1.10.3 and 2.2.9.1.10.4 are not available, a substance or mixture:

- (a) Shall be classified as an environmentally hazardous substance (aquatic environment) if it has to be assigned category(ies) Aquatic Acute 1, Aquatic Chronic 1 or Aquatic Chronic 2 according to Regulation 1272/2008/EC¹⁶ or, if still relevant according to the said Regulation, risk phrase(s) R50, R50/53 or R51/53 according to the Directives 67/548/EEC³ or 1999/45/EC⁴;
- (b) May be regarded as not being an environmentally hazardous substance (aquatic environment) if it does not have to be assigned such a risk phrase or category according to the said Directives or Regulation.

³ Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances (Official Journal of the European Communities No. L 196 of 16 August 1967).

⁴ Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations (Official Journal of the European Communities No. L 200 of 30 July 1999).

¹⁶ Regulation 1272/2008/EC of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (Official Journal of the European Union No. L 353 of 30 December 2008).

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- 2.2.9.1.10.6 Assignment of substances or mixtures classified as environmentally hazardous substances (aquatic environment) according to the provisions in 2.2.9.1.10.3, 2.2.9.1.10.4 or 2.2.9.1.10.5

Substances or mixtures classified as environmentally hazardous substances (aquatic environment), not otherwise classified under ADR shall be designated:

UN No. 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.; or

UN No. 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

They shall be assigned to packing group III.

Genetically modified microorganisms or organisms

- 2.2.9.1.11 Genetically modified microorganisms (GMMOs) and genetically modified organisms (GMOs) are microorganisms and organisms in which genetic material has been purposely altered through genetic engineering in a way that does not occur naturally. They are assigned to Class 9 (UN No. 3245) if they do not meet the definition of toxic substances or of infectious substances, but are capable of altering animals, plants or microbiological substances in a way not normally the result of natural reproduction.

NOTE 1: *GMMOs and GMOs which are infectious are substances of Class 6.2, UN Nos. 2814, 2900 or 3373.*

NOTE 2: *GMMOs or GMOs are not subject to the provisions of ADR when authorized for use by the competent authorities of the countries of origin, transit and destination¹⁷.*

NOTE 3: *Live animals shall not be used to carry genetically modified microorganisms classified in Class 9 unless the substance can be carried no other way. Genetically modified live animals shall be carried under terms and conditions of the competent authorities of the countries of origin and destination.*

- 2.2.9.1.12 (Deleted)

Elevated temperature substances

- 2.2.9.1.13 Elevated temperature substances include substances which are carried or handed over for carriage in the liquid state at or above 100 °C and, in the case of those with a flash-point, below their flash-point. They also include solids which are carried or handed over for carriage at or above 240 °C.

NOTE: *Elevated temperature substances may be assigned to Class 9 only if they do not meet the criteria of any other class.*

Other substances presenting a danger during carriage but not meeting the definitions of another class.

- 2.2.9.1.14 The following other miscellaneous substances not meeting the definitions of another class are assigned to Class 9:

Solid ammonia compounds having a flash-point below 60 °C;
Low hazard dithionites;
Highly volatile liquids;
Substances emitting noxious fumes;

¹⁷ See in particular Part C of Directive 2001/18/EC of the European Parliament and of the Council on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC (Official Journal of the European Communities, No. L 106, of 17 April 2001, pp. 8-14), which sets out the authorization procedures for the European Community.

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Substances containing allergens;
Chemical kits and first aid kits;
Electric double layer capacitors (with an energy storage capacity greater than 0.3 Wh)

NOTE: UN No. 1845 carbon dioxide, solid (dry ice)¹⁸, UN No. 2071 ammonium nitrate fertilizers, UN No. 2216 fish meal (fish scrap), stabilized, UN No. 2807 magnetized material, UN No. 3166 engine, internal combustion or 3166 vehicle, flammable gas powered or 3166 vehicle, flammable liquid powered or 3166 engine, fuel cell, flammable gas powered or 3166 engine, fuel cell, flammable liquid powered or 3166 vehicle, fuel cell, flammable gas powered or 3166 vehicle, fuel cell, flammable liquid powered, UN No. 3171 battery-powered vehicle or 3171 battery-powered equipment (wet battery) (see also the NOTE at the end of 2.2.9.1.7), UN No. 3334 aviation regulated liquid, n.o.s., UN No. 3335 aviation regulated solid, n.o.s. and UN No. 3363 dangerous goods in machinery or dangerous goods in apparatus listed in the UN Model Regulations, are not subject to the provisions of ADR.

Assignment of the packing groups

2.2.9.1.15 When indicated in column (4) of Table A of Chapter 3.2, substances and articles of Class 9 are assigned to one of the following packing groups according to their degree of danger:

Packing group II: substances presenting medium danger;
Packing group III: substances presenting low danger.

2.2.9.2 Substances and articles not accepted for carriage

The following substances and articles shall not be accepted for carriage:

- Lithium batteries which do not meet the relevant conditions of special provisions 188, 230 or 636 of Chapter 3.3;
- Uncleaned empty containment vessels for apparatus such as transformers, condensers and hydraulic apparatus containing substances assigned to UN Nos. 2315, 3151, 3152 or 3432.

¹⁸ For UN No. 1845 carbon dioxide, solid (dry ice) used as a coolant, see 5.5.3.

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2.2.9.3 *List of entries*

Substances which, on inhalation as fine dust, may endanger health	M1	2212 BLUE ASBESTOS (crocidolite) or 2212 BROWN ASBESTOS (amosite, mysorite) 2590 WHITE ASBESTOS (chrysotile, actinolite, anthophyllite, tremolite)
Substances and apparatus which, in the event of fire, may form dioxins	M2	2315 POLYCHLORINATED BIPHENYLS, LIQUID 3432 POLYCHLORINATED BIPHENYLS, SOLID 3151 POLYHALOGENATED BIPHENYLS, LIQUID or 3151 POLYHALOGENATED TERPHENYLS, LIQUID 3152 POLYHALOGENATED BIPHENYLS, SOLID or 3152 POLYHALOGENATED TERPHENYLS, SOLID
Substances evolving flammable vapour	M3	2211 POLYMERIC BEADS, EXPANDABLE, evolving flammable vapour 3314 PLASTICS MOULDING COMPOUND in dough, sheet or extruded rope form evolving flammable vapour
Lithium batteries	M4	3090 LITHIUM METAL BATTERIES (including lithium alloy batteries) 3091 LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT (including lithium alloy batteries) or 3091 LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT (including lithium alloy batteries) 3480 LITHIUM ION BATTERIES (including lithium ion polymer batteries) 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT (including lithium ion polymer batteries) or 3481 LITHIUM ION BATTERIES PACKED WITH EQUIPMENT (including lithium ion polymer batteries)
Life-saving appliances	M5	2990 LIFE-SAVING APPLIANCES, SELF-INFLATING 3072 LIFE-SAVING APPLIANCES NOT SELF-INFLATING containing dangerous goods as equipment 3268 AIR BAG INFLATORS or 3268 AIR BAG MODULES or 3268 SEAT-BELT PRETENSIONERS
Environmentally hazardous substances	M6	pollutant to the aquatic environment, liquid 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
	M7	pollutant to the aquatic environment, solid 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Elevated temperature substances	M8	genetically modified micro-organisms and organisms 3245 GENETICALLY MODIFIED MICROORGANISMS or 3245 GENETICALLY MODIFIED ORGANISMS
	M9	liquid 3257 ELEVATED TEMPERATURE LIQUID, N.O.S., at or above 100 °C and below its flash-point (including molten metal, molten salts, etc.)
	M10	solid 3258 ELEVATED TEMPERATURE SOLID, N.O.S., at or above 240 °C
Other substances or articles presenting a danger during carriage, but not meeting the definitions of another class	M11	No collective entry available. Only substances listed in Table A of Chapter 3.2 are subject to the provisions for Class 9 under this classification code, as follows: 1841 ACETALDEHYDE AMMONIA 1931 ZINC DITHIONITE (ZINC HYDROSULPHITE) 1941 DIBROMODIFLUOROMETHANE 1990 BENZALDEHYDE 2969 CASTOR BEANS, or 2969 CASTOR MEAL, or 2969 CASTOR POMACE, or 2969 CASTOR FLAKE 3316 CHEMICAL KIT, or 3316 FIRST AID KIT 3359 FUMIGATED UNIT 3499 CAPACITOR, electric double layer (with an energy storage capacity greater than 0.3 Wh)

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CHAPTER 2.3

TEST METHODS

2.3.0 General

Unless otherwise provided for in Chapter 2.2 or in this Chapter, the test methods to be used for the classification of dangerous goods are those described in the Manual of Tests and Criteria.

2.3.1 Exudation test for blasting explosives of Type A

2.3.1.1 Blasting explosives of type A (UN No. 0081) shall, if they contain more than 40% liquid nitric ester, in addition to the testing specified in the Manual of Tests and Criteria, satisfy the following exudation test.

2.3.1.2 The apparatus for testing blasting explosive for exudation (figs. 1 to 3) consists of a hollow bronze cylinder. This cylinder, which is closed at one end by a plate of the same metal, has an internal diameter of 15.7 mm and a depth of 40 mm. It is pierced by 20 holes 0.5 mm in diameter (four sets of five holes) on the circumference. A bronze piston, cylindrically fashioned over a length of 48 mm and having a total length of 52 mm, slides into the vertically placed cylinder. The piston, whose diameter is 15.6 mm, is loaded with a mass of 2 220 g so that a pressure of 120 kPa (1.20 bar) is exerted on the base of the cylinder.

2.3.1.3 A small plug of blasting explosive weighing 5 to 8 g, 30 mm long and 15 mm in diameter, is wrapped in very fine gauze and placed in the cylinder; the piston and its loading mass are then placed on it so that the blasting explosive is subjected to a pressure of 120 kPa (1.20 bar). The time taken for the appearance of the first signs of oily droplets (nitroglycerine) at the outer orifices of the cylinder holes is noted.

2.3.1.4 The blasting explosive is considered satisfactory if the time elapsing before the appearance of the liquid exudations is more than five minutes, the test having been carried out at a temperature of 15 °C to 25 °C.

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Test of blasting explosive for exudation

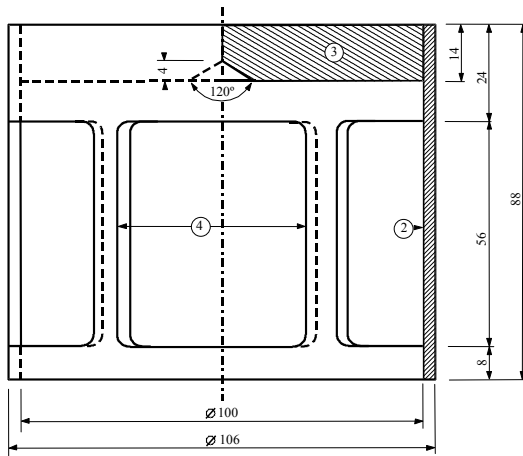


Fig.1: Bell-form charge, mass 2220 g, capable of being suspended from a bronze piston

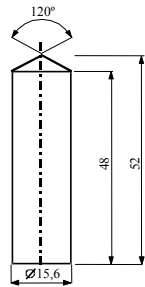


Fig.2: Cylindrical bronze piston, dimensions in mm

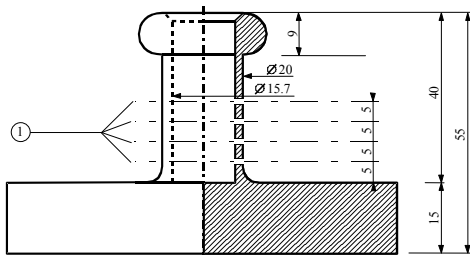


Fig.3: Hollow bronze cylinder, closed at one end; Plan and cut dimensions in mm

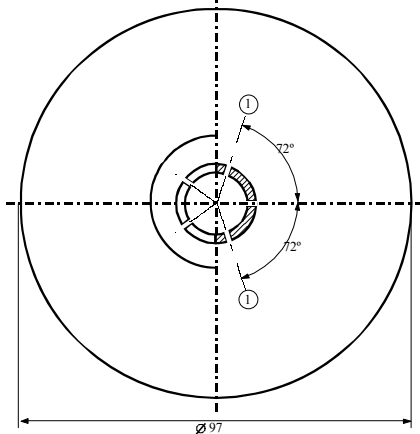


Fig. 1 to 3

- (1) 4 series of 5 holes at 0.5 N
- (2) copper
- (3) iron plate with centre cone at the inferior face
- (4) 4 openings, approximately 46x56, set at even intervals on the periphery

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2.3.2 Tests relating to nitrated cellulose mixtures of Class 4.1

- 2.3.2.1 Nitrocellulose heated for half an hour at 132 °C shall not give off visible yellowish-brown nitrous fumes (nitrous gases). The ignition temperature shall be above 180 °C. See 2.3.2.3 to 2.3.2.8, 2.3.2.9 (a) and 2.3.2.10 below.
- 2.3.2.2 3 g of plasticized nitrocellulose, heated for one hour at 132 °C, shall not give off visible yellowish-brown nitrous fumes (nitrous gases). The ignition temperature shall be above 170 °C. See 2.3.2.3 to 2.3.2.8, 2.3.2.9 (b) and 2.3.2.10 below.
- 2.3.2.3 The test procedures set out below are to be applied when differences of opinion arise as to the acceptability of substances for carriage by road.
- 2.3.2.4 If other methods or test procedures are used to verify the conditions of stability prescribed above in this section, those methods shall lead to the same findings as could be reached by the methods specified below.
- 2.3.2.5 In carrying out the stability tests by heating described below, the temperature of the oven containing the sample under test shall not deviate by more than 2 °C from the prescribed temperature; the prescribed duration of a 30-minute or 60-minute test shall be observed to within two minutes. The oven shall be such that the required temperature is restored not more than five minutes after insertion of the sample.
- 2.3.2.6 Before undergoing the tests in 2.3.2.9 and 2.3.2.10, the samples shall be dried for not less than 15 hours at the ambient temperature in a vacuum desiccator containing fused and granulated calcium chloride, the sample substance being spread in a thin layer; for this purpose, substances which are neither in powder form nor fibrous shall be ground, or grated, or cut into small pieces. The pressure in the desiccator shall be brought below 6.5 kPa (0.065 bar).
- 2.3.2.7 Before being dried as prescribed in 2.3.2.6 above, substances conforming to 2.3.2.2 shall undergo preliminary drying in a well-ventilated oven, with its temperature set at 70 °C, until the loss of mass per quarter-hour is less than 0.3% of the original mass.
- 2.3.2.8 Weakly nitrated nitrocellulose conforming to 2.3.2.1 shall first undergo preliminary drying as prescribed in 2.3.2.7 above; drying shall then be completed by keeping the nitrocellulose for at least 15 hours over concentrated sulphuric acid in a desiccator.

2.3.2.9 Test of chemical stability under heat

(a) *Test of the substance listed in paragraph 2.3.2.1 above.*

(i) In each of two glass test tubes having the following dimensions:

length	350 mm
internal diameter	16 mm
thickness of wall	1.5 mm

is placed 1 g of substance dried over calcium chloride (if necessary the drying shall be carried out after reducing the substance to pieces weighing not more than 0.05 g each).

Both test tubes, completely covered with loose-fitting closures, are then so placed in an oven that at least four-fifths of their length is visible, and are kept at a constant temperature of 132 °C for 30 minutes. It is observed whether nitrous gases in the form of yellowish-brown fumes clearly visible against a white background are given off during this time;

(ii) In the absence of such fumes the substance is deemed to be stable;

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- (b) *Test of plasticized nitrocellulose (see 2.3.2.2)*
- (i) 3 g of plasticized nitrocellulose are placed in glass test tubes, similar to those referred to in (a), which are then placed in an oven kept at a constant temperature of 132 °C;
- (ii) The test tubes containing the plasticized nitrocellulose are kept in the oven for one hour. During this time no yellowish-brown nitrous fumes (nitrous gases) shall be visible. Observation and appraisal as in (a).

2.3.2.10 Ignition temperature (see 2.3.2.1 and 2.3.2.2)

- (a) The ignition temperature is determined by heating 0.2 g of substance enclosed in a glass test tube immersed in a Wood's alloy bath. The test tube is placed in the bath when the latter has reached 100 °C. The temperature of the bath is then progressively increased by 5 °C per minute;
- (b) The test tubes must have the following dimensions:
- | | |
|-------------------|--------|
| length | 125 mm |
| internal diameter | 15 mm |
| thickness of wall | 0.5 mm |
- and shall be immersed to a depth of 20 mm;
- (c) The test shall be repeated three times, the temperature at which ignition of the substance occurs, i.e., slow or rapid combustion, deflagration or detonation, being noted each time;
- (d) The lowest temperature recorded in the three tests is the ignition temperature.

2.3.3 Tests relating to flammable liquids of Classes 3, 6.1 and 8

2.3.3.1 Determination of flash-point

2.3.3.1.1 The following methods for determining the flash-point of flammable liquids may be used:

International standards:

ISO 1516 (Determination of flash/no flash – Closed cup equilibrium method)
ISO 1523 (Determination of flash point – Closed cup equilibrium method)
ISO 2719 (Determination of flash point – Pensky-Martens closed cup method)
ISO 13736 (Determination of flash point – Abel closed-cup method)
ISO 3679 (Determination of flash point – Rapid equilibrium closed cup method)
ISO 3680 (Determination of flash/no flash – Rapid equilibrium closed cup method)

National standards:

American Society for Testing Materials International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, Pennsylvania, USA 19428-2959:

ASTM D3828-07a, Standard Test Methods for Flash Point by Small Scale Closed-Cup Tester
ASTM D56-05, Standard Test Method for Flash Point by Tag Closed-Cup Tester
ASTM D3278-96(2004)e1, Standard Test Methods for Flash Point of Liquids by Small Scale Closed-Cup Apparatus
ASTM D93-08, Standard Test Methods for Flash Point by Pensky-Martens Closed-Cup Tester

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Association française de normalisation, AFNOR, 11, rue de Pressensé, F-93571 La Plaine Saint-Denis Cedex:

French standard NF M 07 - 019
French standards NF M 07 - 011 / NF T 30 - 050 / NF T 66 - 009
French standard NF M 07 - 036

Deutsches Institut für Normung, Burggrafenstr. 6, D-10787 Berlin:

Standard DIN 51755 (flash-points below 65 °C)

State Committee of the Council of Ministers for Standardization, RUS-113813, GSP, Moscow, M-49 Leninsky Prospect, 9:

GOST 12.1.044-84

2.3.3.1.2 To determine the flash-point of paints, gums and similar viscous products containing solvents, only apparatus and test methods suitable for determining the flash-point for viscous liquids shall be used, in accordance with the following standards:

- (a) International Standard ISO 3679: 1983;
- (b) International Standard ISO 3680: 1983;
- (c) International Standard ISO 1523: 1983;
- (d) International standards EN ISO 13736 and EN ISO 2719, Method B.

2.3.3.1.3 The standards listed in 2.3.3.1.1 shall only be used for flash-point ranges which are specified therein. The possibility of chemical reactions between the substance and the sample holder shall be considered when selecting the standard to be used. The apparatus shall, as far as is consistent with safety, be placed in a draught-free position. For safety, a method utilizing a small sample size, around 2 ml, shall be used for organic peroxides and self-reactive substances (also known as "energetic" substances), or for toxic substances.

2.3.3.1.4 When the flash-point, determined by a non-equilibrium method is found to be 23 ± 2 °C or 60 ± 2 °C, it shall be confirmed for each temperature range by an equilibrium method.

2.3.3.1.5 In the event of a dispute as to the classification of a flammable liquid, the classification proposed by the consignor shall be accepted if a check-test of the flash-point, yields a result not differing by more than 2 °C from the limits (23 °C and 60 °C respectively) stated in 2.2.3.1. If the difference is more than 2 °C, a second check-test shall be carried out, and the lowest figure of the flash-points obtained in either check-test shall be adopted.

2.3.3.2 *Determination of initial boiling point*

The following methods for determining the initial boiling point of flammable liquids may be used:

International standards:

ISO 3924 (Petroleum products – Determination of boiling range distribution – Gas chromatography method)

ISO 4626 (Volatile organic liquids – Determination of boiling range of organic solvents used as raw materials)

ISO 3405 (Petroleum products – Determination of distillation characteristics at atmospheric pressure)

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National standards:

American Society for Testing Materials International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, Pennsylvania, USA 19428-2959:

ASTM D86-07a, Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure

ASTM D1078-05, Standard Test Method for Distillation Range of Volatile Organic Liquids

Further acceptable methods:

Method A.2 as described in Part A of the Annex to Commission Regulation (EC) No 440/2008¹.

2.3.3.3 *Test for determining peroxide content*

To determine the peroxide content of a liquid, the procedure is as follows:

A quantity p (about 5 g, weighed to the nearest 0.01 g) of the liquid to be titrated is placed in an Erlenmeyer flask; 20 cm³ of acetic anhydride and about 1 g of powdered solid potassium iodide are added; the flask is shaken and, after 10 minutes, heated for 3 minutes to about 60 °C. When it has been left to cool for 5 minutes, 25 cm³ of water are added. After this, it is left standing for half an hour, then the liberated iodine is titrated with a decinormal solution of sodium thiosulphate, no indicator being added; complete discoloration indicates the end of the reaction. If n is the number of cm³ of thiosulphate solution required, the percentage of peroxide (calculated as H₂O₂) present in the sample is obtained by the formula:

$$\frac{17n}{100p}$$

2.3.4 *Test for determining fluidity*

To determine the fluidity of liquid, viscous or pasty substances and mixtures, the following test method shall be used.

2.3.4.1 *Test apparatus*

Commercial penetrometer conforming to ISO 2137:1985, with a guide rod of 47.5 g ± 0.05 g; sieve disc of duralumin with conical bores and a mass of 102.5 g ± 0.05 g (see Figure 1); penetration vessel with an inside diameter of 72 mm to 80 mm for reception of the sample.

2.3.4.2 *Test procedure*

The sample is poured into the penetration vessel not less than half an hour before the measurement. The vessel is then hermetically closed and left standing until the measurement. The sample in the hermetically closed penetration vessel is heated to 35 °C ± 0.5 °C and is placed on the penetrometer table immediately prior to measurement (not more than two minutes). The point S of the sieve disc is then brought into contact with the surface of the liquid and the rate of penetration is measured.

¹ Commission Regulation (EC) No 440/2008 of 30 May 2008 laying down test methods pursuant to Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Official Journal of the European Union, No. L 142 of 31.05.2008, p.1-739 and No. L 143 of 03.06.2008, p.55).

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2.3.4.3 *Evaluation of test results*

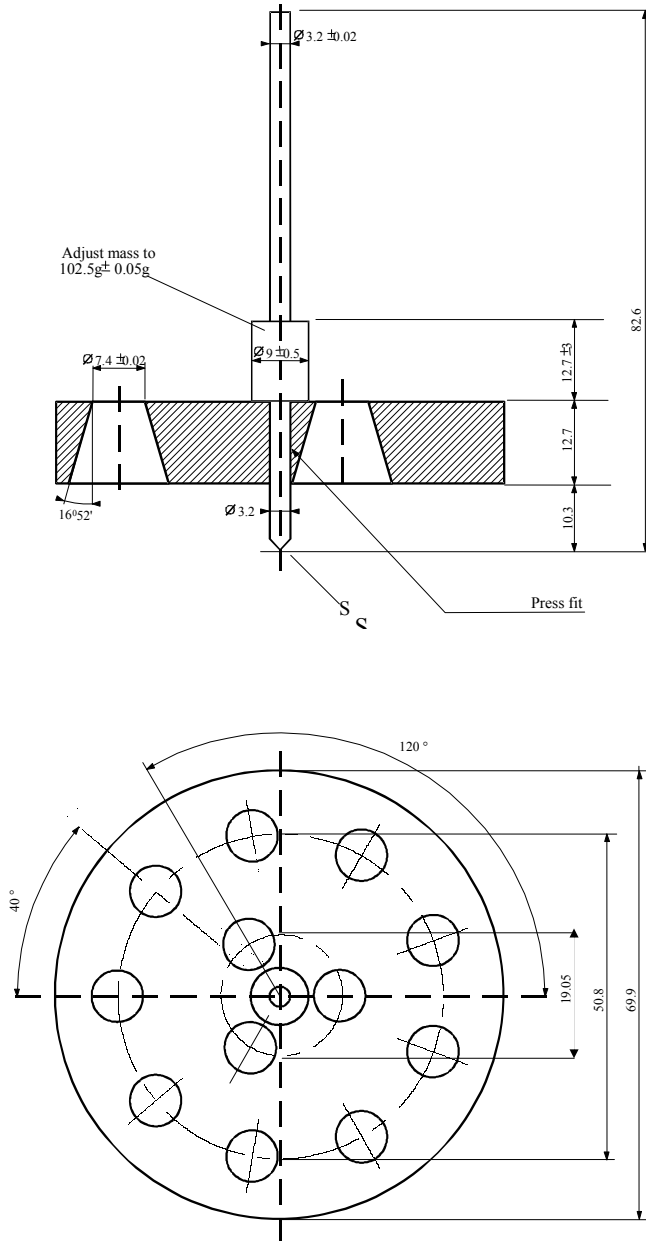
A substance is pasty if, after the centre S has been brought into contact with the surface of the sample, the penetration indicated by the dial gauge:

- (a) after a loading time of $5\text{ s} \pm 0.1\text{ s}$, is less than $15.0\text{ mm} \pm 0.3\text{ mm}$; or
- (b) after a loading time of $5\text{ s} \pm 0.1\text{ s}$, is greater than $15.0\text{ mm} \pm 0.3\text{ mm}$, but the additional penetration after another $55\text{ s} \pm 0.5\text{ s}$ is less than $5.0\text{ mm} \pm 0.5\text{ mm}$.

NOTE: In the case of samples having a flow point, it is often impossible to produce a steady level surface in the penetration vessel and, hence, to establish satisfactory initial measuring conditions for the contact of the point S. Furthermore, with some samples, the impact of the sieve disc can cause an elastic deformation of the surface and, in the first few seconds, simulate a deeper penetration. In all these cases, it may be appropriate to make the evaluation in paragraph (b) above.

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Figure 1 – Penetrometer



Tolerances not specified are ± 0.1 mm.

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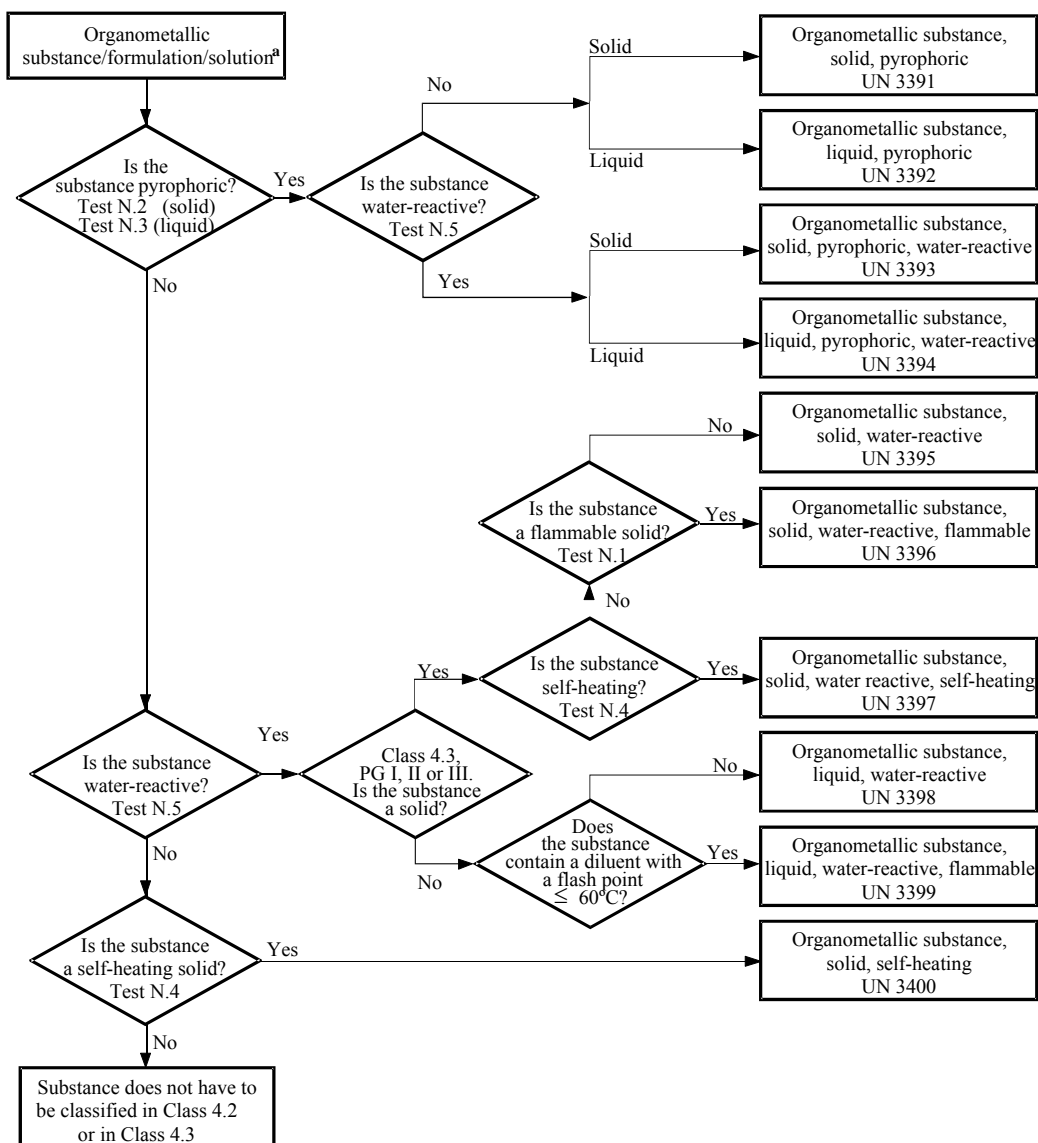
2.3.5 Classification of organometallic substances in Classes 4.2 and 4.3

Depending on their properties as determined in accordance with tests N.1 to N.5 of the Manual of Tests and Criteria, Part III, section 33, organometallic substances may be classified in Class 4.2 or 4.3, as appropriate, in accordance with the flowchart scheme given in Figure 2.3.5.

NOTE 1: *Depending on their other properties and on the precedence of hazard table (see 2.1.3.10), organometallic substances may have to be classified in other classes as appropriate.*

NOTE 2: *Flammable solutions with organometallic compounds in concentrations which are not liable to spontaneous combustion or, in contact with water, do not emit flammable gases in dangerous quantities, are substances of Class 3.*

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Figure 2.3.5: Flowchart scheme for the classification of organometallic substances in Classes 4.2 and 4.3^b

^a If applicable and testing is relevant, taking into account reactivity properties, class 6.1 and 8 properties should be considered according to the precedence of hazard table of 2.1.3.10.

^b Test methods N.1 to N.5 can be found in the Manual of Tests and Criteria, Part III, Section 33.

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PART 3

Dangerous goods list, special provisions and exemptions related to limited and excepted quantities

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CHAPTER 3.1

GENERAL

3.1.1 Introduction

In addition to the provisions referred to or given in the tables of this Part, the general requirements of each Part, Chapter and/or Section are to be observed. These general requirements are not given in the tables. When a general requirement is contradictory to a special provision, the special provision prevails.

3.1.2 Proper shipping name

NOTE: For proper shipping names used for the carriage of samples, see 2.1.4.1.

3.1.2.1 The proper shipping name is that portion of the entry most accurately describing the goods in Table A in Chapter 3.2, which is shown in upper case characters (plus any numbers, Greek letters, "sec", "tert", and the letters "m", "n", "o", "p", which form an integral part of the name). An alternative proper shipping name may be shown in brackets following the main proper shipping name [e.g., ETHANOL (ETHYL ALCOHOL)]. Portions of an entry appearing in lower case need not be considered as part of the proper shipping name.

3.1.2.2 When conjunctions such as "and" or "or" are in lower case or when segments of the name are punctuated by commas, the entire name of the entry need not necessarily be shown in the transport document or package markings. This is the case particularly when a combination of several distinct entries are listed under a single UN Number. Examples illustrating the selection of the proper shipping name for such entries are:

- (a) UN 1057 LIGHTERS or LIGHTER REFILLS - The proper shipping name is the most appropriate of the following possible combinations:

LIGHTERS
LIGHTER REFILLS;

- (b) UN 2793 FERROUS METAL BORINGS, SHAVINGS, TURNINGS or CUTTINGS in a form liable to self-heating. The proper shipping name is the most appropriate of the following combinations:

FERROUS METAL BORINGS
FERROUS METAL SHAVINGS
FERROUS METAL TURNINGS
FERROUS METAL CUTTINGS.

3.1.2.3 Proper shipping names may be used in the singular or plural as appropriate. In addition, when qualifying words are used as part of the proper shipping name, their sequence on documentation or package markings is optional. For instance, "DIMETHYLAMINE AQUEOUS SOLUTION" may alternatively be shown "AQUEOUS SOLUTION OF DIMETHYLAMINE". Commercial or military names for goods of Class 1 which contain the proper shipping name supplemented by additional descriptive text may be used.

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3.1.2.4 Many substances have an entry for both the liquid and solid state (see definitions for liquid and solid in 1.2.1), or for the solid and solution. These are allocated separate UN numbers which are not necessarily adjacent to each other¹.

3.1.2.5 Unless it is already included in capital letters in the name indicated in Table A in Chapter 3.2, the qualifying word "MOLTEN" shall be added as part of the proper shipping name when a substance, which is a solid in accordance with the definition in 1.2.1, is offered for carriage in the molten state (e.g. ALKYLPHENOL, SOLID, N.O.S., MOLTEN).

3.1.2.6 Except for self-reactive substances and organic peroxides and unless it is already included in capital letters in the name indicated in Column (2) of Table A of Chapter 3.2, the word "STABILIZED" shall be added as part of the proper shipping name of a substance which without stabilization would be forbidden from carriage in accordance with paragraphs 2.2.X.2 due to it being liable to dangerously react under conditions normally encountered in carriage (e.g.: "TOXIC LIQUID, ORGANIC, N.O.S., STABILIZED").

When temperature control is used to stabilize such substances to prevent the development of any dangerous excess pressure, then:

(a) For liquids: where the SADT is less than or equal to 50 °C, the provisions of 2.2.41.1.17, the special provision V8 of Chapter 7.2, the special provision S4 of Chapter 8.5 and the requirements of Chapter 9.6 shall apply; for carriage in IBCs and tanks, all the provisions applicable to UN No. 3239 apply (see in particular 4.1.7.2, packing instruction IBC520 et 4.2.1.13);

(b) For gases: the conditions of carriage shall be approved by the competent authority.

3.1.2.7 Hydrates may be carried under the proper shipping name for the anhydrous substance.

3.1.2.8 *Generic or "not otherwise specified" (N.O.S.) names*

3.1.2.8.1 Generic and "not otherwise specified" proper shipping names that are assigned to special provision 274 or 318 in Column (6) of Table A in Chapter 3.2 shall be supplemented with the technical name of the goods unless a national law or international convention prohibits its disclosure if it is a controlled substance. For explosives of Class 1, the dangerous goods description may be supplemented by additional descriptive text to indicate commercial or military names. Technical names shall be entered in brackets immediately following the proper shipping name. An appropriate modifier, such as "contains" or "containing" or other qualifying words such as "mixture", "solution", etc. and the percentage of the technical constituent may also be used. For example: "UN 1993 FLAMMABLE LIQUID, N.O.S. (CONTAINS XYLENE AND BENZENE), 3, II".

3.1.2.8.1.1 The technical name shall be a recognized chemical name or biological name, or other name currently used in scientific and technical handbooks, journals and texts. Trade names shall not be used for this purpose. In the case of pesticides, only ISO common name(s), other name(s) in the World Health Organization (WHO) Recommended Classification of Pesticides by Hazard and Guidelines to Classification, or the name(s) of the active substance(s) may be used.

3.1.2.8.1.2 When a mixture of dangerous goods is described by one of the "N.O.S." or "generic" entries to which special provision 274 has been allocated in Column (6) of Table A in Chapter 3.2, not more than the two constituents which most predominantly contribute to the hazard or hazards of a mixture need to be shown, excluding controlled substances when their disclosure is prohibited by national law or international convention. If a package containing

¹ Details are provided in the alphabetical index (Table B of Chapter 3.2), e.g.:

NITROXYLENES, LIQUID	6.1	1665;
NITROXYLENES, SOLID	6.1	3447.

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a mixture is labelled with any subsidiary risk label, one of the two technical names shown in parentheses shall be the name of the constituent which compels the use of the subsidiary risk label.

NOTE: See 5.4.1.2.2.

- 3.1.2.8.1.3 Examples illustrating the selection of the proper shipping name supplemented with the technical name of goods for such N.O.S. entries are:

UN 2902 PESTICIDE, LIQUID, TOXIC, N.O.S. (drazoxolon);
UN 3394 ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE (trimethylgallium).

3.1.3 Solutions or mixtures

NOTE: Where a substance is specifically mentioned by name in Table A of Chapter 3.2, it shall be identified in carriage by the proper shipping name in Column (2) of Table A of Chapter 3.2. Such substances may contain technical impurities (for example those deriving from the production process) or additives for stability or other purposes that do not affect its classification. However, a substance mentioned by name containing technical impurities or additives for stability or other purposes affecting its classification shall be considered a solution or mixture (see 2.1.3.3).

- 3.1.3.1 A solution or mixture is not subject to ADR if the characteristics, properties, form or physical state of the solution or mixture are such that it does not meet the criteria, including human experience criteria, for inclusion in any class.

- 3.1.3.2 A solution or mixture meeting the classification criteria of ADR composed of a single predominant substance mentioned by name in Table A of Chapter 3.2 and one or more substances not subject to ADR or traces of one or more substances mentioned by name in Table A of Chapter 3.2, shall be assigned the UN number and proper shipping name of the predominant substance mentioned by name in Table A of Chapter 3.2 unless:

- (a) The solution or mixture is mentioned by name in Table A of Chapter 3.2;
- (b) The name and description of the substance mentioned by name in Table A of Chapter 3.2 specifically indicate that they apply only to the pure substance;
- (c) The class, classification code, packing group, or physical state of the solution or mixture is different from that of the substance mentioned by name in Table A of Chapter 3.2; or
- (d) The hazard characteristics and properties of the solution or mixture necessitate emergency response measures that are different from those required for the substance mentioned by name in Table A of Chapter 3.2.

Qualifying words such as "SOLUTION" or "MIXTURE", as appropriate, shall be added as part of the proper shipping name, for example, "ACETONE SOLUTION". In addition, the concentration of the mixture or solution may also be indicated after the basic description of the mixture or solution, for example, "ACETONE 75% SOLUTION".

- 3.1.3.3 A solution or mixture meeting the classification criteria of ADR that is not mentioned by name in Table A of Chapter 3.2 and that is composed of two or more dangerous goods shall be assigned to an entry that has the proper shipping name, description, class, classification code and packing group that most precisely describe the solution or mixture.

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CHAPTER 3.2**DANGEROUS GOODS LIST****3.2.1 Table A: Dangerous Goods List***Explanations*

As a rule, each row of Table A of this Chapter deals with the substance(s) or article(s) covered by a specific UN number. However, when substances or articles belonging to the same UN number have different chemical properties, physical properties and/or carriage conditions, several consecutive rows may be used for that UN number.

Each column of Table A is dedicated to a specific subject as indicated in the explanatory notes below. The intersection of columns and rows (cell) contains information concerning the subject treated in that column, for the substance(s) or article(s) of that row:

- The first four cells identify the substance(s) or article(s) belonging to that row (additional information in that respect may be given by the special provisions referred to in Column (6));
- The following cells give the applicable special provisions, either in the form of complete information or in coded form. The codes cross-refer to detailed information that is to be found in the Part, Chapter, Section and/or Sub-section indicated in the explanatory notes below. An empty cell means either that there is no special provision and that only the general requirements apply, or that the carriage restriction indicated in the explanatory notes is in force.

The applicable general requirements are not referred to in the corresponding cells. The explanatory notes below indicate for every column the Part(s), Chapter(s), Section(s) and/or Sub-section(s) where these are to be found.

Explanatory notes for each column:

Column (1) "UN No."

Contains the UN number:

- of the dangerous substance or article if the substance or article has been assigned its own specific UN number; or
- of the generic or n.o.s. entry to which the dangerous substances or articles not mentioned by name shall be assigned in accordance with the criteria ("decision trees") of Part 2.

Column (2) "Name and description"

Contains, in upper case characters, the name of the substance or article, if the substance or article has been assigned its own specific UN number, or of the generic or n.o.s. entry to which it has been assigned in accordance with the criteria ("decision trees") of Part 2. This name shall be used as the proper shipping name or, when applicable, as part of the proper shipping name (see 3.1.2 for further details on the proper shipping name).

A descriptive text in lower case characters is added after the proper shipping name to clarify the scope of the entry if the classification and/or

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carriage conditions of the substance or article may be different under certain conditions.

Column (3a)	<p>"Class"</p> <p>Contains the number of the class, whose heading covers the dangerous substance or article. This class number is assigned in accordance with the procedures and criteria of Part 2.</p>
Column (3b)	<p>"Classification code"</p> <p>Contains the classification code of the dangerous substance or article.</p> <ul style="list-style-type: none"> - For dangerous substances or articles of Class 1, the code consists of a division number and compatibility group letter, which are assigned in accordance with the procedures and criteria of 2.2.1.1.4; - For dangerous substances or articles of Class 2, the code consists of a number and hazardous property group, which are explained in 2.2.2.1.2 and 2.2.2.1.3; - For dangerous substances or articles of Classes 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 6.2, 8 and 9, the codes are explained in 2.2.x.1.2¹; - Dangerous substances or articles of Class 7 do not have a classification code.
Column (4)	<p>"Packing group"</p> <p>Contains the packing group number(s) (I, II or III) assigned to the dangerous substance. These packing group numbers are assigned on the basis of the procedures and criteria of Part 2. Certain articles and substances are not assigned to packing groups.</p>
Column (5)	<p>"Labels"</p> <p>Contains the model number of the labels/placards (see 5.2.2.2 and 5.3.1.7) that have to be affixed to packages, containers, tank-containers, portable tanks, MEGCs and vehicles. However, for substances or articles of Class 7, 7X means label model No.7A, 7B or 7C as appropriate according to the category (see 5.1.5.3.4 and 5.2.2.1.11.1) or placard No. 7D (see 5.3.1.1.3 and 5.3.1.7.2).</p> <p>The general provisions on labelling/placarding (e.g. number of labels, their location) are to be found in 5.2.2.1 for packages, and in 5.3.1, for containers, tank-containers, MEGCs, portable tanks and vehicles.</p> <p><i>NOTE: Special provisions, indicated in Column (6), may change the above labelling provisions.</i></p>

¹ *x = the class number of the dangerous substance or article, without dividing point if applicable.*

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Column (6)	"Special provisions"
	Contains the numeric codes of special provisions that have to be met. These provisions concern a wide array of subjects, mainly connected with the contents of Columns (1) to (5) (e.g. carriage prohibitions, exemptions from requirements, explanations concerning the classification of certain forms of the dangerous goods concerned and additional labelling or marking provisions), and are listed in Chapter 3.3 in numerical order. If Column (6) is empty, no special provisions apply to the contents of Columns (1) to (5) for the dangerous goods concerned.
Column (7a)	"Limited Quantities"
	Provides the maximum quantity per inner packaging or article for carrying dangerous goods as limited quantities in accordance with Chapter 3.4.
Column (7b)	"Excepted Quantities"
	Contains an alphanumeric code with the following meaning: <ul style="list-style-type: none">- "E0" signifies that no exemption from the provisions of ADR exists for the dangerous goods packed in excepted quantities;- All the other alphanumerical codes starting with the letter "E" signify that the provisions of ADR are not applicable if the conditions indicated in Chapter 3.5 are fulfilled.
Column (8)	"Packing instructions"
	Contains the alphanumeric codes of the applicable packing instructions: <ul style="list-style-type: none">- Alphanumeric codes starting with the letter "P", which refers to packing instructions for packagings and receptacles (except IBCs and large packagings), or "R", which refers to packing instructions for light gauge metal packagings. These are listed in 4.1.4.1 in numerical order, and specify the packagings and receptacles that are authorized. They also indicate which of the general packing provisions of 4.1.1, 4.1.2 and 4.1.3, and which of the special packing provisions of 4.1.5, 4.1.6, 4.1.7, 4.1.8 and 4.1.9 have to be met. If Column (8) does not contain a code starting with the letters "P" or "R", the dangerous goods concerned may not be carried in packagings;- Alphanumeric codes starting with the letters "IBC" refer to packing instructions for IBCs. These are listed in 4.1.4.2 in numerical order, and specify the IBCs that are authorized. They also indicate which of the general packing provisions of 4.1.1, 4.1.2 and 4.1.3, and which of the special packing provisions of 4.1.5, 4.1.6, 4.1.7, 4.1.8 and 4.1.9 have to be met. If Column (8) does not contain a code starting with the letters "IBC", the dangerous goods concerned may not be carried in IBCs;

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- Alphanumeric codes starting with the letters "LP" refer to packing instructions for large packagings. These are listed in 4.1.4.3 in numerical order, and specify the large packagings that are authorized. They also indicate which of the general packing provisions of 4.1.1, 4.1.2 and 4.1.3, and which of the special packing provisions of 4.1.5, 4.1.6, 4.1.7, 4.1.8 and 4.1.9 have to be met. If Column (8) does not contain a code starting with the letters "LP", the dangerous goods concerned cannot be carried in large packagings;

NOTE: Special packing provisions, indicated in Column (9a), may change the above packing instructions.

Column (9a) "Special packing provisions"

Contains the alphanumeric codes of the applicable special packing provisions:

- Alphanumeric codes starting with the letters "PP" or "RR" refer to special packing provisions for packagings and receptacles (except IBCs and large packagings) that have additionally to be met. These are to be found in 4.1.4.1, at the end of the relevant packing instruction (with the letter "P" or "R") referred to in Column (8). If Column (9a) does not contain a code starting with the letters "PP" or "RR", none of the special packing provisions listed at the end of the relevant packing instruction apply;
- Alphanumeric codes starting with the letter "B" or the letters "BB" refer to special packing provisions for IBCs that have additionally to be met. These are to be found in 4.1.4.2, at the end of the relevant packing instruction (with the letters "IBC") referred to in Column (8). If Column (9a) does not contain a code starting with the letter "B" or the letters "BB", none of the special packing provisions listed at the end of the relevant packing instruction apply;
- Alphanumeric codes starting with the letter "L" refer to special packing provisions for large packagings that have additionally to be met. These are to be found in 4.1.4.3, at the end of the relevant packing instruction (with the letters "LP") referred to in Column (8). If Column (9a) does not contain a code starting with the letter "L", none of the special packing provisions listed at the end of the relevant packing instruction apply.

Column (9b) "Mixed packing provisions"

Contains the alphanumeric codes starting with the letters "MP" of the applicable mixed packing provisions. These are listed in 4.1.10 in numerical order. If Column (9b) does not contain a code starting with the letters "MP", only the general requirements apply (see 4.1.1.5 and 4.1.1.6).

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Column (10)	"Portable tank and bulk container instructions"
	<p>Contains an alphanumeric code assigned to a portable tank instruction, in accordance with 4.2.5.2.1 to 4.2.5.2.4 and 4.2.5.2.6. This portable tank instruction corresponds to the least stringent provisions that are acceptable for the carriage of the substance in portable tanks. The codes identifying the other portable tank instructions that are also permitted for the carriage of the substance are to be found in 4.2.5.2.5. If no code is given, carriage in portable tanks is not permitted unless a competent authority approval is granted as detailed in 6.7.1.3.</p> <p>The general requirements for the design, construction, equipment, type approval, testing and marking of portable tanks are to be found in Chapter 6.7. The general requirements for the use (e.g. filling) are to be found in 4.2.1 to 4.2.4.</p> <p>The indication of a "(M)" means that the substance may be carried in UN MEGCs.</p> <p><i>NOTE: Special provisions, indicated in Column (11), may change the above requirements.</i></p> <p>May also contain alphanumeric codes starting with the letters "BK" referring to types of bulk containers described in Chapter 6.11 which may be used for the carriage of bulk goods in accordance with 7.3.1.1 (a) and 7.3.2.</p>
Column (11)	"Portable tank and bulk container special provisions"
	<p>Contains the alphanumeric codes of the portable tank special provisions that have additionally to be met. These codes, starting with the letters "TP" refer to special provisions for the construction or use of these portable tanks. They are to be found in 4.2.5.3.</p> <p><i>NOTE: If technically relevant, these special provisions are not only applicable to the portable tanks specified in column (10), but also to the portable tanks that may be used according to the table in 4.2.5.2.5.</i></p>
Column (12)	"Tank codes for ADR tanks"
	<p>Contains an alphanumeric code describing a tank type, in accordance with 4.3.3.1.1 (for gases of Class 2) or 4.3.4.1.1 (for substances of Classes 3 to 9). This tank type corresponds to the least stringent tank provisions that are acceptable for the carriage of the relevant substance in ADR tanks. The codes describing the other permitted tank types are to be found in 4.3.3.1.2 (for gases of Class 2) or 4.3.4.1.2 (for substances of Classes 3 to 9). If no code is given, carriage in ADR tanks is not permitted.</p> <p>If in this column a tank code for solids (S) and for liquids (L) is indicated, this means that this substance may be offered for carriage in tanks in the solid or the liquid (molten) state. In general this provision is applicable to substances having melting points from 20 °C to 180 °C.</p> <p>If for a solid, only a tank code for liquids (L) is indicated in this column, this means that this substance is only offered for carriage in tanks in the liquid (molten) state.</p>

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The general requirements for the construction, equipment, type approval, testing and marking that are not indicated in the tank code are to be found in 6.8.1, 6.8.2, 6.8.3 and 6.8.5. The general requirements for the use (e.g. maximum degree of filling, minimum test pressure) are to be found in 4.3.1 to 4.3.4.

The indication of a "(M)" after the tank code means that the substance can also be carried in battery-vehicles or MEGCs.

The indication of a (+) after the tank code means that the alternative use of the tanks is permitted only where this is specified in the certificate of type approval.

For fibre-reinforced plastic tanks, see 4.4.1 and Chapter 6.9; for vacuum operated waste tanks, see 4.5.1 and Chapter 6.10.

NOTE: *Special provisions, indicated in Column (13), may change the above requirements.*

Column (13)

"Special provisions for ADR tanks"

Contains the alphanumeric codes of the special provisions for ADR tanks that have additionally to be met:

- Alphanumeric codes starting with the letters "TU" refer to special provisions for the use of these tanks. These are to be found in 4.3.5;
- Alphanumeric codes starting with the letters "TC" refer to special provisions for the construction of these tanks. These are to be found in 6.8.4 (a);
- Alphanumeric codes starting with the letters "TE" refer to special provisions concerning the items of equipment of these tanks. These are to be found in 6.8.4 (b);
- Alphanumeric codes starting with the letters "TA" refer to special provisions for the type approval of these tanks. These are to be found in 6.8.4 (c);
- Alphanumeric codes starting with the letters "TT" refer to special provisions for the testing of these tanks. These are to be found in 6.8.4 (d);
- Alphanumeric codes starting with the letters "TM" refer to special provisions for the marking of these tanks. These are to be found in 6.8.4 (e).

NOTE: *If technically relevant, these special provisions are not only applicable to the tanks specified in column (12), but also to the tanks that may be used according to the hierarchies in 4.3.3.1.2 and 4.3.4.1.2.*

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- Column (14) "Vehicle for tank carriage"
- Contains a code designating the vehicle (including the drawing vehicle of trailers or semi-trailers) (see 9.1.1) to be used for the carriage of the substance in tank in accordance with 7.4.2. The requirements concerning the construction and approval of vehicles are to be found in Chapters 9.1, 9.2 and 9.7.
- Column (15) "Transport category / (Tunnel restriction code)"
- Contains at the top of the cell a figure indicating the transport category to which the substance or article is assigned for the purposes of exemption related to quantities carried per transport unit (see 1.1.3.6).
- Contains at the bottom of the cell, between brackets, the tunnel restriction code that refers to the applicable restriction for the passage of vehicles carrying the substance or article through road tunnels. These are to be found in Chapter 8.6. When no tunnel restriction code has been assigned, this is indicated by the mention '(—)'.
- Column (16) "Special provisions for carriage - Packages"
- Contains the alphanumeric code(s), starting with letter "V", of the applicable special provisions (if any) for carriage in packages. These are listed in 7.2.4. General provisions concerning the carriage in packages are to be found in Chapters 7.1 and 7.2.
- NOTE: In addition, special provisions indicated in Column (18), concerning loading, unloading and handling, shall be observed.*
- Column (17) "Special provisions for carriage - Bulk"
- Contains the alphanumeric code(s), starting with letters "VV", of the applicable special provisions for carriage in bulk. These are listed in 7.3.3. If no code is given, carriage in bulk is not permitted. General Provisions concerning the carriage in bulk are to be found in Chapters 7.1 and 7.3.
- NOTE: In addition, special provisions indicated in Column (18), concerning loading, unloading and handling, shall be observed.*
- Column (18) "Special provisions for carriage - Loading and unloading"
- Contains the alphanumeric code(s), starting with letters "CV", of the applicable special provisions for loading, unloading and handling. These are listed in 7.5.11. If no code is given, only the general provisions apply (see 7.5.1 to 7.5.10).
- Column (19) "Special provisions for carriage - Operation"
- Contains the alphanumeric code(s), starting with letter "S", of the applicable special provisions for operation which are listed in Chapter 8.5. These provisions shall be applied in addition to the requirements of Chapters 8.1 to 8.4 but in the event of conflict with the requirements of Chapters 8.1 to 8.4, the special provisions shall take precedence.

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Column (20) "Hazard identification number"

Contains a two or three figure number (preceded in certain cases by the letter "X") for substances and articles of classes 2 to 9, and for substances and articles of Class 1, the classification code (see column (3b)). In the cases described in 5.3.2.1, this number shall appear in the upper half of the orange-coloured marking. The meaning of the hazard identification numbers is explained in 5.3.2.3.

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TABLE A
DANGEROUS GOODS LIST

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
0004	AMMONIUM PICRATE dry or wetted with less than 10% water, by mass	1	1.1D		1		0	E0	P112(a) P112(b) P112(c)	PP26	MP20		
0005	CARTRIDGES FOR WEAPONS with bursting charge	1	1.1F		1		0	E0	P130		MP23		
0006	CARTRIDGES FOR WEAPONS with bursting charge	1	1.1E		1		0	E0	P130 LP101	PP67 L1	MP21		
0007	CARTRIDGES FOR WEAPONS with bursting charge	1	1.2F		1		0	E0	P130		MP23		
0009	AMMUNITION, INCENDIARY with or without burster, expelling charge or propelling charge	1	1.2G		1		0	E0	P130 LP101	PP67 L1	MP23		
0010	AMMUNITION, INCENDIARY with or without burster, expelling charge or propelling charge	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23		
0012	CARTRIDGES FOR WEAPONS, INERT PROJECTILE or CARTRIDGES, SMALL ARMS	1	1.4S		1.4	364	5 kg	E0	P130		MP23 MP24		
0014	CARTRIDGES FOR WEAPONS, BLANK or CARTRIDGES, SMALL ARMS, BLANK or CARTRIDGE FOR TOOLS, BLANK	1	1.4S		1.4	364	5 kg	E0	P130		MP23 MP24		
0015	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge	1	1.2G		1		0	E0	P130 LP101	PP67 L1	MP23		
0015	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing corrosive substances	1	1.2G		1 +8		0	E0	P130 LP101	PP67 L1	MP23		
0016	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23		
0016	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing corrosive substances	1	1.3G		1 +8		0	E0	P130 LP101	PP67 L1	MP23		
0018	AMMUNITION, TEAR-PRODUCING with burster, expelling charge or propelling charge	1	1.2G		1 +6.1 +8		0	E0	P130 LP101	PP67 L1	MP23		
0019	AMMUNITION, TEAR-PRODUCING with burster, expelling charge or propelling charge	1	1.3G		1 +6.1 +8		0	E0	P130 LP101	PP67 L1	MP23		
0020	AMMUNITION, TOXIC with burster, expelling charge or propelling charge	1	1.2K	CARRIAGE PROHIBITED									
0021	AMMUNITION, TOXIC with burster, expelling charge or propelling charge	1	1.3K	CARRIAGE PROHIBITED									
0027	BLACK POWDER (GUNPOWDER), granular or as a meal	1	1.1D		1		0	E0	P113	PP50	MP20 MP24		
0028	BLACK POWDER (GUNPOWDER), COMPRESSED or BLACK POWDER (GUNPOWDER), IN PELLETS	1	1.1D		1		0	E0	P113	PP51	MP20 MP24		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0004	AMMONIUM PICRATE dry or wetted with less than 10% water, by mass
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0005	CARTRIDGES FOR WEAPONS with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0006	CARTRIDGES FOR WEAPONS with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0007	CARTRIDGES FOR WEAPONS with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0009	AMMUNITION, INCENDIARY with or without burster, expelling charge or propelling charge
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0010	AMMUNITION, INCENDIARY with or without burster, expelling charge or propelling charge
			4 (E)			CV1 CV2 CV3	S1		0012	CARTRIDGES FOR WEAPONS, INERT PROJECTILE or CARTRIDGES, SMALL ARMS
			4 (E)			CV1 CV2 CV3	S1		0014	CARTRIDGES FOR WEAPONS, BLANK or CARTRIDGES, SMALL ARMS, BLANK
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0015	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0015	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing corrosive substances
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0016	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0016	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing corrosive substances
			1 (B1000C)	V2		CV1 CV2 CV3 CV28	S1		0018	AMMUNITION, TEAR-PRODUCING with burster, expelling charge or propelling charge
			1 (C5000D)	V2		CV1 CV2 CV3 CV28	S1		0019	AMMUNITION, TEAR-PRODUCING with burster, expelling charge or propelling charge
CARRIAGE PROHIBITED									0020	AMMUNITION, TOXIC with burster, expelling charge or propelling charge
CARRIAGE PROHIBITED									0021	AMMUNITION, TOXIC with burster, expelling charge or propelling charge
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0027	BLACK POWDER (GUNPOWDER), granular or as a meal
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0028	BLACK POWDER (GUNPOWDER), COMPRESSED or BLACK POWDER (GUNPOWDER), IN PELLETS

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
0029	DETONATORS, NON-ELECTRIC for blasting	1	1.1B		1		0	E0	P131	PP68	MP23		
0030	DETONATORS, ELECTRIC for blasting	1	1.1B		1		0	E0	P131		MP23		
0033	BOMBS with bursting charge	1	1.1F		1		0	E0	P130		MP23		
0034	BOMBS with bursting charge	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0035	BOMBS with bursting charge	1	1.2D		1		0	E0	P130 LP101	PP67 L1	MP21		
0037	BOMBS, PHOTO-FLASH	1	1.1F		1		0	E0	P130		MP23		
0038	BOMBS, PHOTO-FLASH	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0039	BOMBS, PHOTO-FLASH	1	1.2G		1		0	E0	P130 LP101	PP67 L1	MP23		
0042	BOOSTERS without detonator	1	1.1D		1		0	E0	P132(a) P132(b)		MP21		
0043	BURSTERS, explosive	1	1.1D		1		0	E0	P133	PP69	MP21		
0044	PRIMERS, CAP TYPE	1	1.4S		1.4		0	E0	P133		MP23 MP24		
0048	CHARGES, DEMOLITION	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0049	CARTRIDGES, FLASH	1	1.1G		1		0	E0	P135		MP23		
0050	CARTRIDGES, FLASH	1	1.3G		1		0	E0	P135		MP23		
0054	CARTRIDGES, SIGNAL	1	1.3G		1		0	E0	P135		MP23 MP24		
0055	CASES, CARTRIDGE, EMPTY, WITH PRIMER	1	1.4S		1.4	364	5 kg	E0	P136		MP23		
0056	CHARGES, DEPTH	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0059	CHARGES, SHAPED without detonator	1	1.1D		1		0	E0	P137	PP70	MP21		
0060	CHARGES, SUPPLEMENTARY, EXPLOSIVE	1	1.1D		1		0	E0	P132(a) P132(b)		MP21		
0065	CORD, DETONATING, flexible	1	1.1D		1		0	E0	P139	PP71 PP72	MP21		
0066	CORD, IGNITER	1	1.4G		1.4		0	E0	P140		MP23		
0070	CUTTERS, CABLE, EXPLOSIVE	1	1.4S		1.4		0	E0	P134 LP102		MP23		
0072	CYCLOTTRIMETHYLENE-TRINITRAMINE (CYCLONITE; HEXOGEN; RDX), WETTED with not less than 15% water, by mass	1	1.1D		1	266	0	E0	P112(a)	PP45	MP20		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0029	DETONATORS, NON-ELECTRIC for blasting
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0030	DETONATORS, ELECTRIC for blasting
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0033	BOMBS with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0034	BOMBS with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0035	BOMBS with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0037	BOMBS, PHOTO-FLASH
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0038	BOMBS, PHOTO-FLASH
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0039	BOMBS, PHOTO-FLASH
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0042	BOOSTERS without detonator
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0043	BURSTERS, explosive
			4 (E)			CV1 CV2 CV3	S1		0044	PRIMERS, CAP TYPE
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0048	CHARGES, DEMOLITION
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0049	CARTRIDGES, FLASH
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0050	CARTRIDGES, FLASH
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0054	CARTRIDGES, SIGNAL
			4 (E)			CV1 CV2 CV3	S1		0055	CASES, CARTRIDGE, EMPTY, WITH PRIMER
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0056	CHARGES, DEPTH
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0059	CHARGES, SHAPED without detonator
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0060	CHARGES, SUPPLEMENTARY, EXPLOSIVE
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0065	CORD, DETONATING, flexible
			2 (E)	V2		CV1 CV2 CV3	S1		0066	CORD, IGNITER
			4 (E)			CV1 CV2 CV3	S1		0070	CUTTERS, CABLE, EXPLOSIVE
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0072	CYCLOTRIMETHYLENE-TRINITRAMINE (CYCLONITE; HEXOGEN; RDX), WETTED with not less than 15% water, by mass

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
0073	DETONATORS FOR AMMUNITION	1	1.1B		1		0	E0	P133		MP23			
0074	DIAZODINITROPHENOL, WETTED with not less than 40% water, or mixture of alcohol and water, by mass	1	1.1A		1	266	0	E0	P110(b)	PP42	MP20			
0075	DIETHYLENEGLYCOL DINITRATE, DESENSITIZED with not less than 25% non-volatile, water-insoluble phlegmatizer, by mass	1	1.1D		1	266	0	E0	P115	PP53 PP54 PP57 PP58	MP20			
0076	DINITROPHENOL, dry or wetted with less than 15% water, by mass	1	1.1D		1 +6.1		0	E0	P112(a) P112(b) P112(c)	PP26	MP20			
0077	DINITROPHENOLATES, alkali metals, dry or wetted with less than 15% water, by mass	1	1.3C		1 +6.1		0	E0	P114(a) P114(b)	PP26	MP20			
0078	DINITRORESORCINOL, dry or wetted with less than 15% water, by mass	1	1.1D		1		0	E0	P112(a) P112(b) P112(c)	PP26	MP20			
0079	HEXANITRODIPHENYLAMINE (DIPICRYLAMINE; HEXYL)	1	1.1D		1		0	E0	P112(b) P112(c)		MP20			
0081	EXPLOSIVE, BLASTING, TYPE A	1	1.1D		1	616 617	0	E0	P116	PP63 PP66	MP20			
0082	EXPLOSIVE, BLASTING, TYPE B	1	1.1D		1	617	0	E0	P116	PP61 PP62 PP65 B9	MP20			
0083	EXPLOSIVE, BLASTING, TYPE C	1	1.1D		1	267 617	0	E0	P116		MP20			
0084	EXPLOSIVE, BLASTING, TYPE D	1	1.1D		1	617	0	E0	P116		MP20			
0092	FLARES, SURFACE	1	1.3G		1		0	E0	P135		MP23			
0093	FLARES, AERIAL	1	1.3G		1		0	E0	P135		MP23			
0094	FLASH POWDER	1	1.1G		1		0	E0	P113	PP49	MP20			
0099	FRACTURING DEVICES, EXPLOSIVE without detonator, for oil wells	1	1.1D		1		0	E0	P134 LP102		MP21			
0101	FUSE, NON-DETONATING	1	1.3G		1		0	E0	P140	PP74 PP75	MP23			
0102	CORD (FUSE), DETONATING, metal clad	1	1.2D		1		0	E0	P139	PP71	MP21			
0103	FUSE, IGNITER, tubular, metal clad	1	1.4G		1.4		0	E0	P140		MP23			
0104	CORD (FUSE), DETONATING, MILD EFFECT, metal clad	1	1.4D		1.4		0	E0	P139	PP71	MP21			
0105	FUSE, SAFETY	1	1.4S		1.4		0	E0	P140	PP73	MP23			
0106	FUZES, DETONATING	1	1.1B		1		0	E0	P141		MP23			

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0073	DETONATORS FOR AMMUNITION
			0 (B)	V2		CV1 CV2 CV3	S1		0074	DIAZODINITROPHENOL, WETTED with not less than 40% water, or mixture of alcohol and water, by mass
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0075	DIETHYLENEGLYCOL DINITRATE, DESENSITIZED with not less than 25% non-volatile, water-insoluble phlegmatizer, by mass
			1 (B1000C)	V2 V3		CV1 CV2 CV3 CV28	S1		0076	DINITROPHENOL, dry or wetted with less than 15% water, by mass
			1 (C5000D)	V2 V3		CV1 CV2 CV3 CV28	S1		0077	DINITROPHENOLATES, alkali metals, dry or wetted with less than 15% water, by mass
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0078	DINITRORESORCINOL, dry or wetted with less than 15% water, by mass
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0079	HEXANITRODIPHENYL-AMINE (DIPICRYLAMINE; HEXYL)
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0081	EXPLOSIVE, BLASTING, TYPE A
			1 (B1000C)	V2 V3 V12		CV1 CV2 CV3	S1		0082	EXPLOSIVE, BLASTING, TYPE B
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0083	EXPLOSIVE, BLASTING, TYPE C
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0084	EXPLOSIVE, BLASTING, TYPE D
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0092	FLARES, SURFACE
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0093	FLARES, AERIAL
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0094	FLASH POWDER
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0099	FRACTURING DEVICES, EXPLOSIVE without detonator, for oil wells
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0101	FUSE, NON-DETONATING
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0102	CORD (FUSE), DETONATING, metal clad
			2 (E)	V2		CV1 CV2 CV3	S1		0103	FUSE, IGNITER, tubular, metal clad
			2 (E)	V2		CV1 CV2 CV3	S1		0104	CORD (FUSE), DETONATING, MILD EFFECT, metal clad
			4 (E)			CV1 CV2 CV3	S1		0105	FUSE, SAFETY
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0106	FUZES, DETONATING

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
0107	FUZES, DETONATING	1	1.2B		1		0	E0	P141		MP23			
0110	GRENADES, PRACTICE, hand or rifle	1	1.4S		1.4		0	E0	P141		MP23			
0113	GUANYLNITROSAMINO-GUANYLIDENE HYDRAZINE, WETTED with not less than 30% water, by mass	1	1.1A		1	266	0	E0	P110(b)	PP42	MP20			
0114	GUANYLNITROSAMINO-GUANYLTETRAZENE (TETRAZENE), WETTED with not less than 30% water, or mixture of alcohol and water, by mass	1	1.1A		1	266	0	E0	P110(b)	PP42	MP20			
0118	HEXOLITE (HEXOTOL), dry or wetted with less than 15% water, by mass	1	1.1D		1		0	E0	P112(a) P112(b) P112(c)		MP20			
0121	IGNITERS	1	1.1G		1		0	E0	P142		MP23			
0124	JET PERFORATING GUNS, CHARGED, oil well, without detonator	1	1.1D		1		0	E0	P101		MP21			
0129	LEAD AZIDE, WETTED with not less than 20% water, or mixture of alcohol and water, by mass	1	1.1A		1	266	0	E0	P110(b)	PP42	MP20			
0130	LEAD STYPHNATE (LEAD TRINITRORESORCINATE), WETTED with not less than 20% water, or mixture of alcohol and water, by mass	1	1.1A		1	266	0	E0	P110(b)	PP42	MP20			
0131	LIGHTERS, FUSE	1	1.4S		1.4		0	E0	P142		MP23			
0132	DEFLAGRATING METAL SALTS OF AROMATIC NITRODERIVATIVES, N.O.S.	1	1.3C		1	274	0	E0	P114(a) P114(b)	PP26	MP2			
0133	MANNITOL HEXANITRATE (NITROMANNITE), WETTED with not less than 40% water, or mixture of alcohol and water, by mass	1	1.1D		1	266	0	E0	P112(a)		MP20			
0135	MERCURY FULMINATE, WETTED with not less than 20% water, or mixture of alcohol and water, by mass	1	1.1A		1	266	0	E0	P110(b)	PP42	MP20			
0136	MINES with bursting charge	1	1.1F		1		0	E0	P130		MP23			
0137	MINES with bursting charge	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21			
0138	MINES with bursting charge	1	1.2D		1		0	E0	P130 LP101	PP67 L1	MP21			
0143	NITROGLYCERIN, DESENSITIZED with not less than 40% non-volatile water-insoluble phlegmatizer, by mass	1	1.1D		1 +6.1	266 271	0	E0	P115	PP53 PP54 PP57 PP58	MP20			

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0107	FUZES, DETONATING
			4 (E)			CV1 CV2 CV3	S1		0110	GRENADES, PRACTICE, hand or rifle
			0 (B)	V2		CV1 CV2 CV3	S1		0113	GUANYLNITROSAMINO-GUANYLIDENE HYDRAZINE, WETTED with not less than 30% water, by mass
			0 (B)	V2		CV1 CV2 CV3	S1		0114	GUANYLNITROSAMINO-GUANYLTETRAZENE (TETRAZENE), WETTED with not less than 30% water, or mixture of alcohol and water, by mass
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0118	HEXOLITE (HEXOTOL), dry or wetted with less than 15% water, by mass
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0121	IGNITERS
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0124	JET PERFORATING GUNS, CHARGED, oil well, without detonator
			0 (B)	V2		CV1 CV2 CV3	S1		0129	LEAD AZIDE, WETTED with not less than 20% water, or mixture of alcohol and water, by mass
			0 (B)	V2		CV1 CV2 CV3	S1		0130	LEAD STYPHNATE (LEAD TRINITRORESORCINATE), WETTED with not less than 20% water, or mixture of alcohol and water, by mass
			4 (E)			CV1 CV2 CV3	S1		0131	LIGHTERS, FUSE
			1 (C5000D)	V2 V3		CV1 CV2 CV3	S1		0132	DEFLAGRATING METAL SALTS OF AROMATIC NITRODERIVATIVES, N.O.S.
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0133	MANNITOL HEXANITRATE (NITROMANNITE), WETTED with not less than 40% water, or mixture of alcohol and water, by mass
			0 (B)	V2		CV1 CV2 CV3	S1		0135	MERCURY FULMINATE, WETTED with not less than 20% water, or mixture of alcohol and water, by mass
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0136	MINES with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0137	MINES with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0138	MINES with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3 CV28	S1		0143	NITROGLYCERIN, DESENSITIZED with not less than 40% non-volatile water-insoluble phlegmatizer, by mass

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
0144	NITROGLYCERIN SOLUTION IN ALCOHOL with more than 1% but not more than 10% nitroglycerin	1	1.1D		1	358	0	E0	P115	PP45 PP55 PP56 PP59 PP60	MP20		
0146	NITROSTARCH, dry or wetted with less than 20% water, by mass	1	1.1D		1		0	E0	P112(a) P112(b) P112(c)		MP20		
0147	NITRO UREA	1	1.1D		1		0	E0	P112(b)		MP20		
0150	PENTAERYTHRITATE TETRANITRATE (PENTAERYTHRITOL TETRANITRATE; PETN), WETTED with not less than 25% water, by mass, or DESENSITIZED with not less than 15% phlegmatizer, by mass	1	1.1D		1	266	0	E0	P112(a) P112(b)		MP20		
0151	PENTOLITE, dry or wetted with less than 15% water, by mass	1	1.1D		1		0	E0	P112(a) P112(b) P112(c)		MP20		
0153	TRINITROANILINE (PICRAMIDE)	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0154	TRINITROPHENOL (PICRIC ACID), dry or wetted with less than 30% water, by mass	1	1.1D		1		0	E0	P112(a) P112(b) P112(c)	PP26	MP20		
0155	TRINITROCHLORO-BENZENE (PICRYL CHLORIDE)	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0159	POWDER CAKE (POWDER PASTE), WETTED with not less than 25% water, by mass	1	1.3C		1	266	0	E0	P111	PP43	MP20		
0160	POWDER, SMOKELESS	1	1.1C		1		0	E0	P114(b)	PP50 PP52	MP20 MP24		
0161	POWDER, SMOKELESS	1	1.3C		1		0	E0	P114(b)	PP50 PP52	MP20 MP24		
0167	PROJECTILES with bursting charge	1	1.1F		1		0	E0	P130		MP23		
0168	PROJECTILES with bursting charge	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0169	PROJECTILES with bursting charge	1	1.2D		1		0	E0	P130 LP101	PP67 L1	MP21		
0171	AMMUNITION, ILLUMINATING with or without burster, expelling charge or propelling charge	1	1.2G		1		0	E0	P130 LP101	PP67 L1	MP23		
0173	RELEASE DEVICES, EXPLOSIVE	1	1.4S		1.4		0	E0	P134 LP102		MP23		
0174	RIVETS, EXPLOSIVE	1	1.4S		1.4		0	E0	P134 LP102		MP23		
0180	ROCKETS with bursting charge	1	1.1F		1		0	E0	P130		MP23		
0181	ROCKETS with bursting charge	1	1.1E		1		0	E0	P130 LP101	PP67 L1	MP21		
0182	ROCKETS with bursting charge	1	1.2E		1		0	E0	P130 LP101	PP67 L1	MP21		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0144	NITROGLYCERIN SOLUTION IN ALCOHOL with more than 1% but not more than 10% nitroglycerin
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0146	NITROSTARCH, dry or wetted with less than 20% water, by mass
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0147	NITRO UREA
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0150	PENTAERYTHRITETETRANITRATE (PENTAERYTHRITOL TETRANITRATE; PETN), WETTED with not less than 25% water, by mass, or DESENSITIZED with not less than 15% phlegmatizer, by mass
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0151	PENTOLITE, dry or wetted with less than 15% water, by mass
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0153	TRINITROANILINE (PICRAMIDE)
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0154	TRINITROPHENOL (PICRIC ACID), dry or wetted with less than 30% water, by mass
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0155	TRINITROCHLORO-BENZENE (PICRYL CHLORIDE)
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0159	POWDER CAKE (POWDER PASTE), WETTED with not less than 25% water, by mass
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0160	POWDER, SMOKELESS
			1 (C5000D)	V2 V3		CV1 CV2 CV3	S1		0161	POWDER, SMOKELESS
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0167	PROJECTILES with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0168	PROJECTILES with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0169	PROJECTILES with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0171	AMMUNITION, ILLUMINATING with or without burster, expelling charge or propelling charge
			4 (E)			CV1 CV2 CV3	S1		0173	RELEASE DEVICES, EXPLOSIVE
			4 (E)			CV1 CV2 CV3	S1		0174	RIVETS, EXPLOSIVE
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0180	ROCKETS with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0181	ROCKETS with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0182	ROCKETS with bursting charge

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
0183	ROCKETS with inert head	1	1.3C		1		0	E0	P130 LP101	PP67 L1	MP22		
0186	ROCKET MOTORS	1	1.3C		1		0	E0	P130 LP101	PP67 L1	MP22 MP24		
0190	SAMPLES, EXPLOSIVE, other than initiating explosive	1				16 274	0	E0	P101		MP2		
0191	SIGNAL DEVICES, HAND	1	1.4G		1.4		0	E0	P135		MP23 MP24		
0192	SIGNALS, RAILWAY TRACK, EXPLOSIVE	1	1.1G		1		0	E0	P135		MP23		
0193	SIGNALS, RAILWAY TRACK, EXPLOSIVE	1	1.4S		1.4		0	E0	P135		MP23		
0194	SIGNALS, DISTRESS, ship	1	1.1G		1		0	E0	P135		MP23 MP24		
0195	SIGNALS, DISTRESS, ship	1	1.3G		1		0	E0	P135		MP23 MP24		
0196	SIGNALS, SMOKE	1	1.1G		1		0	E0	P135		MP23		
0197	SIGNALS, SMOKE	1	1.4G		1.4		0	E0	P135		MP23 MP24		
0204	SOUNDING DEVICES, EXPLOSIVE	1	1.2F		1		0	E0	P134 LP102		MP23		
0207	TETRANITROANILINE	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0208	TRINITROPHENYLMETHYL NITRAMINE (TETRYL)	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0209	TRINITROTOLUENE (TNT), dry or wetted with less than 30% water, by mass	1	1.1D		1		0	E0	P112(b) P112(c)	PP46	MP20		
0212	TRACERS FOR AMMUNITION	1	1.3G		1		0	E0	P133	PP69	MP23		
0213	TRINITROANISOLE	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0214	TRINITROBENZENE, dry or wetted with less than 30% water, by mass	1	1.1D		1		0	E0	P112(a) P112(b) P112(c)		MP20		
0215	TRINITROBENZOIC ACID, dry or wetted with less than 30% water, by mass	1	1.1D		1		0	E0	P112(a) P112(b) P112(c)		MP20		
0216	TRINITRO-m-CRESOL	1	1.1D		1		0	E0	P112(b) P112(c)	PP26	MP20		
0217	TRINITRONAPHTHALENE	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0218	TRINITROPHENETOLE	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0219	TRINITRORESORCINOL (STYPHNIC ACID), dry or wetted with less than 20% water, or mixture of alcohol and water, by mass	1	1.1D		1		0	E0	P112(a) P112(b) P112(c)	PP26	MP20		
0220	UREA NITRATE, dry or wetted with less than 20% water, by mass	1	1.1D		1		0	E0	P112(a) P112(b) P112(c)		MP20		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0183	ROCKETS with inert head
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0186	ROCKET MOTORS
			0 (E)	V2		CV1 CV2 CV3	S1		0190	SAMPLES, EXPLOSIVE, other than initiating explosive
			2 (E)	V2		CV1 CV2 CV3	S1		0191	SIGNAL DEVICES, HAND
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0192	SIGNALS, RAILWAY TRACK, EXPLOSIVE
			4 (E)			CV1 CV2 CV3	S1		0193	SIGNALS, RAILWAY TRACK, EXPLOSIVE
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0194	SIGNALS, DISTRESS, ship
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0195	SIGNALS, DISTRESS, ship
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0196	SIGNALS, SMOKE
			2 (E)	V2		CV1 CV2 CV3	S1		0197	SIGNALS, SMOKE
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0204	SOUNDING DEVICES, EXPLOSIVE
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0207	TETRANITROANILINE
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0208	TRINITROPHENYLMETHYL NITRAMINE (TETRYL)
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0209	TRINITROTOLUENE (TNT), dry or wetted with less than 30% water, by mass
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0212	TRACERS FOR AMMUNITION
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0213	TRINITROANISOLE
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0214	TRINITROBENZENE, dry or wetted with less than 30% water, by mass
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0215	TRINITROBENZOIC ACID, dry or wetted with less than 30% water, by mass
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0216	TRINITRO-m-CRESOL
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0217	TRINITRONAPHTHALENE
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0218	TRINITROPHENETOLE
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0219	TRINITRORESORCINOL (STYPHNIC ACID), dry or wetted with less than 20% water, or mixture of alcohol and water, by mass
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0220	UREA NITRATE, dry or wetted with less than 20% water, by mass

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	4.2.5.3
												(10)	(11)
0221	WARHEADS, TORPEDO with bursting charge	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0222	AMMONIUM NITRATE with more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance	1	1.1D		1		0	E0	P112(b) P112(c)	PP47	MP20		
0224	BARIUM AZIDE, dry or wetted with less than 50% water, by mass	1	1.1A		1 +6.1		0	E0	P110(b)	PP42	MP20		
0225	BOOSTERS WITH DETONATOR	1	1.1B		1		0	E0	P133	PP69	MP23		
0226	CYCLOTETRAMETHYLENE TETRANITRAMINE (HMX; OCTOGEN), WETTED with not less than 15% water, by mass	1	1.1D		1	266	0	E0	P112(a)	PP45	MP20		
0234	SODIUM DINITRO-o-CRESOLATE, dry or wetted with less than 15% water, by mass	1	1.3C		1		0	E0	P114(a) P114(b)	PP26	MP20		
0235	SODIUM PICRAMATE, dry or wetted with less than 20% water, by mass	1	1.3C		1		0	E0	P114(a) P114(b)	PP26	MP20		
0236	ZIRCONIUM PICRAMATE, dry or wetted with less than 20% water, by mass	1	1.3C		1		0	E0	P114(a) P114(b)	PP26	MP20		
0237	CHARGES, SHAPED, FLEXIBLE, LINEAR	1	1.4D		1.4		0	E0	P138		MP21		
0238	ROCKETS, LINE-THROWING	1	1.2G		1		0	E0	P130		MP23 MP24		
0240	ROCKETS, LINE-THROWING	1	1.3G		1		0	E0	P130		MP23 MP24		
0241	EXPLOSIVE, BLASTING, TYPE E	1	1.1D		1	617	0	E0	P116 IBC100	PP61 PP62 PP65 B10	MP20		
0242	CHARGES, PROPELLING, FOR CANNON	1	1.3C		1		0	E0	P130		MP22		
0243	AMMUNITION, INCENDIARY, WHITE PHOSPHORUS with burster, expelling charge or propelling charge	1	1.2H		1		0	E0	P130 LP101	PP67 L1	MP23		
0244	AMMUNITION, INCENDIARY, WHITE PHOSPHORUS with burster, expelling charge or propelling charge	1	1.3H		1		0	E0	P130 LP101	PP67 L1	MP23		
0245	AMMUNITION, SMOKE, WHITE PHOSPHORUS with burster, expelling charge or propelling charge	1	1.2H		1		0	E0	P130 LP101	PP67 L1	MP23		
0246	AMMUNITION, SMOKE, WHITE PHOSPHORUS with burster, expelling charge or propelling charge	1	1.3H		1		0	E0	P130 LP101	PP67 L1	MP23		
0247	AMMUNITION, INCENDIARY, liquid or gel, with burster, expelling charge or propelling charge	1	1.3J		1		0	E0	P101		MP23		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0221	WARHEADS, TORPEDO with bursting charge
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0222	AMMONIUM NITRATE with more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance
			0 (B)	V2 V3		CV1 CV2 CV3 CV28	S1		0224	BARIUM AZIDE, dry or wetted with less than 50% water, by mass
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0225	BOOSTERS WITH DETONATOR
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0226	CYCLOTETRAMETHYLENE TETRANITRAMINE (HMX; OCTOGEN), WETTED with not less than 15% water, by mass
			1 (C5000D)	V2 V3		CV1 CV2 CV3	S1		0234	SODIUM DINITRO-o-CRESOLATE, dry or wetted with less than 15% water, by mass
			1 (C5000D)	V2 V3		CV1 CV2 CV3	S1		0235	SODIUM PICRAMATE, dry or wetted with less than 20% water, by mass
			1 (C5000D)	V2 V3		CV1 CV2 CV3	S1		0236	ZIRCONIUM PICRAMATE, dry or wetted with less than 20% water, by mass
			2 (E)	V2		CV1 CV2 CV3	S1		0237	CHARGES, SHAPED, FLEXIBLE, LINEAR
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0238	ROCKETS, LINE-THROWING
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0240	ROCKETS, LINE-THROWING
			1 (B1000C)	V2 V12		CV1 CV2 CV3	S1		0241	EXPLOSIVE, BLASTING, TYPE E
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0242	CHARGES, PROPELLING, FOR CANNON
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0243	AMMUNITION, INCENDIARY, WHITE PHOSPHORUS with burster, expelling charge or propelling charge
			1 (C)	V2		CV1 CV2 CV3	S1		0244	AMMUNITION, INCENDIARY, WHITE PHOSPHORUS with burster, expelling charge or propelling charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0245	AMMUNITION, SMOKE, WHITE PHOSPHORUS with burster, expelling charge or propelling charge
			1 (C)	V2		CV1 CV2 CV3	S1		0246	AMMUNITION, SMOKE, WHITE PHOSPHORUS with burster, expelling charge or propelling charge
			1 (C)	V2		CV1 CV2 CV3	S1		0247	AMMUNITION, INCENDIARY, liquid or gel, with burster, expelling charge or propelling charge

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
0248	CONTRIVANCES, WATER-ACTIVATED with burster, expelling charge or propelling charge	1	1.2L		1	274	0	E0	P144	PP77	MP1		
0249	CONTRIVANCES, WATER-ACTIVATED with burster, expelling charge or propelling charge	1	1.3L		1	274	0	E0	P144	PP77	MP1		
0250	ROCKET MOTORS WITH HYPERGOLIC LIQUIDS with or without expelling charge	1	1.3L		1		0	E0	P101		MP1		
0254	AMMUNITION, ILLUMINATING with or without burster, expelling charge or propelling charge	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23		
0255	DETONATORS, ELECTRIC for blasting	1	1.4B		1.4		0	E0	P131		MP23		
0257	FUZES, DETONATING	1	1.4B		1.4		0	E0	P141		MP23		
0266	OCTOLITE (OCTOL), dry or wetted with less than 15% water, by mass	1	1.1D		1		0	E0	P112(a) P112(b) P112(c)		MP20		
0267	DETONATORS, NON-ELECTRIC for blasting	1	1.4B		1.4		0	E0	P131	PP68	MP23		
0268	BOOSTERS WITH DETONATOR	1	1.2B		1		0	E0	P133	PP69	MP23		
0271	CHARGES, PROPELLING	1	1.1C		1		0	E0	P143	PP76	MP22		
0272	CHARGES, PROPELLING	1	1.3C		1		0	E0	P143	PP76	MP22		
0275	CARTRIDGES, POWER DEVICE	1	1.3C		1		0	E0	P134 LP102		MP22		
0276	CARTRIDGES, POWER DEVICE	1	1.4C		1.4		0	E0	P134 LP102		MP22		
0277	CARTRIDGES, OIL WELL	1	1.3C		1		0	E0	P134 LP102		MP22		
0278	CARTRIDGES, OIL WELL	1	1.4C		1.4		0	E0	P134 LP102		MP22		
0279	CHARGES, PROPELLING, FOR CANNON	1	1.1C		1		0	E0	P130		MP22		
0280	ROCKET MOTORS	1	1.1C		1		0	E0	P130 LP101	PP67 L1	MP22		
0281	ROCKET MOTORS	1	1.2C		1		0	E0	P130 LP101	PP67 L1	MP22		
0282	NITROGUANIDINE (PICRITE), dry or wetted with less than 20% water, by mass	1	1.1D		1		0	E0	P112(a) P112(b) P112(c)		MP20		
0283	BOOSTERS without detonator	1	1.2D		1		0	E0	P132(a) P132(b)		MP21		
0284	GRENADES, hand or rifle, with bursting charge	1	1.1D		1		0	E0	P141		MP21		
0285	GRENADES, hand or rifle, with bursting charge	1	1.2D		1		0	E0	P141		MP21		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			0 (B)	V2		CV1 CV2 CV3 CV4	S1		0248	CONTRIVANCES, WATER-ACTIVATED with burster, expelling charge or propelling charge
			0 (B)	V2		CV1 CV2 CV3 CV4	S1		0249	CONTRIVANCES, WATER-ACTIVATED with burster, expelling charge or propelling charge
			0 (B)	V2		CV1 CV2 CV3 CV4	S1		0250	ROCKET MOTORS WITH HYPERGOLIC LIQUIDS with or without expelling charge
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0254	AMMUNITION, ILLUMINATING with or without burster, expelling charge or propelling charge
			2 (E)	V2		CV1 CV2 CV3	S1		0255	DETONATORS, ELECTRIC for blasting
			2 (E)	V2		CV1 CV2 CV3	S1		0257	FUZES, DETONATING
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0266	OCTOLITE (OCTOL), dry or wetted with less than 15% water, by mass
			2 (E)	V2		CV1 CV2 CV3	S1		0267	DETONATORS, NON-ELECTRIC for blasting
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0268	BOOSTERS WITH DETONATOR
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0271	CHARGES, PROPELLING
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0272	CHARGES, PROPELLING
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0275	CARTRIDGES, POWER DEVICE
			2 (E)	V2		CV1 CV2 CV3	S1		0276	CARTRIDGES, POWER DEVICE
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0277	CARTRIDGES, OIL WELL
			2 (E)	V2		CV1 CV2 CV3	S1		0278	CARTRIDGES, OIL WELL
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0279	CHARGES, PROPELLING, FOR CANNON
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0280	ROCKET MOTORS
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0281	ROCKET MOTORS
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0282	NITROGUANIDINE (PICRITE), dry or wetted with less than 20% water, by mass
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0283	BOOSTERS without detonator
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0284	GRENADES, hand or rifle, with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0285	GRENADES, hand or rifle, with bursting charge

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
							(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
0286	WARHEADS, ROCKET with bursting charge	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0287	WARHEADS, ROCKET with bursting charge	1	1.2D		1		0	E0	P130 LP101	PP67 L1	MP21		
0288	CHARGES, SHAPED, FLEXIBLE, LINEAR	1	1.1D		1		0	E0	P138		MP21		
0289	CORD, DETONATING, flexible	1	1.4D		1.4		0	E0	P139	PP71 PP72	MP21		
0290	CORD (FUSE), DETONATING, metal clad	1	1.1D		1		0	E0	P139	PP71	MP21		
0291	BOMBS with bursting charge	1	1.2F		1		0	E0	P130		MP23		
0292	GRENADES, hand or rifle, with bursting charge	1	1.1F		1		0	E0	P141		MP23		
0293	GRENADES, hand or rifle, with bursting charge	1	1.2F		1		0	E0	P141		MP23		
0294	MINES with bursting charge	1	1.2F		1		0	E0	P130		MP23		
0295	ROCKETS with bursting charge	1	1.2F		1		0	E0	P130		MP23		
0296	SOUNDING DEVICES, EXPLOSIVE	1	1.1F		1		0	E0	P134 LP102		MP23		
0297	AMMUNITION, ILLUMINATING with or without burster, expelling charge or propelling charge	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0299	BOMBS, PHOTO-FLASH	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23		
0300	AMMUNITION, INCENDIARY with or without burster, expelling charge or propelling charge	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0301	AMMUNITION, TEAR-PRODUCING with burster, expelling charge or propelling charge	1	1.4G		1.4 +6.1 +8		0	E0	P130 LP101	PP67 L1	MP23		
0303	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0303	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing corrosive substances	1	1.4G		1.4 +8		0	E0	P130 LP101	PP67 L1	MP23		
0305	FLASH POWDER	1	1.3G		1		0	E0	P113	PP49	MP20		
0306	TRACERS FOR AMMUNITION	1	1.4G		1.4		0	E0	P133	PP69	MP23		
0312	CARTRIDGES, SIGNAL	1	1.4G		1.4		0	E0	P135		MP23 MP24		
0313	SIGNALS, SMOKE	1	1.2G		1		0	E0	P135		MP23		
0314	IGNITERS	1	1.2G		1		0	E0	P142		MP23		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0286	WARHEADS, ROCKET with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0287	WARHEADS, ROCKET with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0288	CHARGES, SHAPED, FLEXIBLE, LINEAR
			2 (E)	V2		CV1 CV2 CV3	S1		0289	CORD, DETONATING, flexible
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0290	CORD (FUSE), DETONATING, metal clad
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0291	BOMBS with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0292	GRENADES, hand or rifle, with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0293	GRENADES, hand or rifle, with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0294	MINES with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0295	ROCKETS with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0296	SOUNDING DEVICES, EXPLOSIVE
			2 (E)	V2		CV1 CV2 CV3	S1		0297	AMMUNITION, ILLUMINATING with or without burster, expelling charge or propelling charge
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0299	BOMBS, PHOTO-FLASH
			2 (E)	V2		CV1 CV2 CV3	S1		0300	AMMUNITION, INCENDIARY with or without burster, expelling charge or propelling charge
			2 (E)	V2		CV1 CV2 CV3 CV28	S1		0301	AMMUNITION, TEAR-PRODUCING with burster, expelling charge or propelling charge
			2 (E)	V2		CV1 CV2 CV3	S1		0303	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge
			2 (E)	V2		CV1 CV2 CV3	S1		0303	AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge, containing corrosive substances
			1 (C5000D)	V2 V3		CV1 CV2 CV3	S1		0305	FLASH POWDER
			2 (E)	V2		CV1 CV2 CV3	S1		0306	TRACERS FOR AMMUNITION
			2 (E)	V2		CV1 CV2 CV3	S1		0312	CARTRIDGES, SIGNAL
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0313	SIGNALS, SMOKE
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0314	IGNITERS

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
0315	IGNITERS	1	1.3G		1		0	E0	P142		MP23			
0316	FUZES, IGNITING	1	1.3G		1		0	E0	P141		MP23			
0317	FUZES, IGNITING	1	1.4G		1.4		0	E0	P141		MP23			
0318	GRENADES, PRACTICE, hand or rifle	1	1.3G		1		0	E0	P141		MP23			
0319	PRIMERS, TUBULAR	1	1.3G		1		0	E0	P133		MP23			
0320	PRIMERS, TUBULAR	1	1.4G		1.4		0	E0	P133		MP23			
0321	CARTRIDGES FOR WEAPONS with bursting charge	1	1.2E		1		0	E0	P130 LP101	PP67 L1	MP21			
0322	ROCKET MOTORS WITH HYPERGOLIC LIQUIDS with or without expelling charge	1	1.2L		1		0	E0	P101		MP1			
0323	CARTRIDGES, POWER DEVICE	1	1.4S		1.4	347	0	E0	P134 LP102		MP23			
0324	PROJECTILES with bursting charge	1	1.2F		1		0	E0	P130		MP23			
0325	IGNITERS	1	1.4G		1.4		0	E0	P142		MP23			
0326	CARTRIDGES FOR WEAPONS, BLANK	1	1.1C		1		0	E0	P130		MP22			
0327	CARTRIDGES FOR WEAPONS, BLANK or CARTRIDGES, SMALL ARMS, BLANK	1	1.3C		1		0	E0	P130		MP22			
0328	CARTRIDGES FOR WEAPONS, INERT PROJECTILE	1	1.2C		1		0	E0	P130 LP101	PP67 L1	MP22			
0329	TORPEDOES with bursting charge	1	1.1E		1		0	E0	P130 LP101	PP67 L1	MP21			
0330	TORPEDOES with bursting charge	1	1.1F		1		0	E0	P130		MP23			
0331	EXPLOSIVE, BLASTING, TYPE B (AGENT, BLASTING, TYPE B)	1	1.5D		1.5	617	0	E0	P116 IBC100	PP61 PP62 PP64 PP65	MP20	T1	TP1 TP17 TP32	
0332	EXPLOSIVE, BLASTING, TYPE E (AGENT, BLASTING, TYPE E)	1	1.5D		1.5	617	0	E0	P116 IBC100	PP61 PP62 PP65	MP20	T1	TP1 TP17 TP32	
0333	FIREWORKS	1	1.1G		1	645	0	E0	P135		MP23 MP24			
0334	FIREWORKS	1	1.2G		1	645	0	E0	P135		MP23 MP24			
0335	FIREWORKS	1	1.3G		1	645	0	E0	P135		MP23 MP24			
0336	FIREWORKS	1	1.4G		1.4	645 651	0	E0	P135		MP23 MP24			

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0315	IGNITERS
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0316	FUZES, IGNITING
			2 (E)	V2		CV1 CV2 CV3	S1		0317	FUZES, IGNITING
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0318	GRENADES, PRACTICE, hand or rifle
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0319	PRIMERS, TUBULAR
			2 (E)	V2		CV1 CV2 CV3	S1		0320	PRIMERS, TUBULAR
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0321	CARTRIDGES FOR WEAPONS with bursting charge
			0 (B)	V2		CV1 CV2 CV3 CV4	S1		0322	ROCKET MOTORS WITH HYPERGOLIC LIQUIDS with or without expelling charge
			4 (E)			CV1 CV2 CV3	S1		0323	CARTRIDGES, POWER DEVICE
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0324	PROJECTILES with bursting charge
			2 (E)	V2		CV1 CV2 CV3	S1		0325	IGNITERS
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0326	CARTRIDGES FOR WEAPONS, BLANK
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0327	CARTRIDGES FOR WEAPONS, BLANK or CARTRIDGES, SMALL ARMS, BLANK
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0328	CARTRIDGES FOR WEAPONS, INERT PROJECTILE
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0329	TORPEDOES with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0330	TORPEDOES with bursting charge
S2.65AN(+)	TU3 TU12 TU41 TC8 TA1 TA5	EX/III	1 (B1000C)	V2 V12		CV1 CV2 CV3	S1	1.5D	0331	EXPLOSIVE, BLASTING, TYPE B (AGENT, BLASTING, TYPE B)
		EX/III	1 (B1000C)	V2 V12		CV1 CV2 CV3	S1	1.5D	0332	EXPLOSIVE, BLASTING, TYPE E (AGENT, BLASTING, TYPE E)
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0333	FIREWORKS
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0334	FIREWORKS
			1 (C5000D)	V2 V3		CV1 CV2 CV3	S1		0335	FIREWORKS
			2 (E)	V2		CV1 CV2 CV3	S1		0336	FIREWORKS

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
0337	FIREWORKS	1	1.4S		1.4	645	0	E0	P135		MP23 MP24		
0338	CARTRIDGES FOR WEAPONS, BLANK or CARTRIDGES, SMALL ARMS, BLANK	1	1.4C		1.4		0	E0	P130		MP22		
0339	CARTRIDGES FOR WEAPONS, INERT PROJECTILE or CARTRIDGES, SMALL ARMS	1	1.4C		1.4		0	E0	P130		MP22		
0340	NITROCELLULOSE, dry or wetted with less than 25% water (or alcohol), by mass	1	1.1D		1		0	E0	P112(a) P112(b)		MP20		
0341	NITROCELLULOSE, unmodified or plasticized with less than 18% plasticizing substance, by mass	1	1.1D		1		0	E0	P112(b)		MP20		
0342	NITROCELLULOSE, WETTED with not less than 25% alcohol, by mass	1	1.3C		1	105	0	E0	P114(a)	PP43	MP20		
0343	NITROCELLULOSE, PLASTICIZED with not less than 18% plasticizing substance, by mass	1	1.3C		1	105	0	E0	P111		MP20		
0344	PROJECTILES with bursting charge	1	1.4D		1.4		0	E0	P130 LP101	PP67 L1	MP21		
0345	PROJECTILES, inert with tracer	1	1.4S		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0346	PROJECTILES with burster or expelling charge	1	1.2D		1		0	E0	P130 LP101	PP67 L1	MP21		
0347	PROJECTILES with burster or expelling charge	1	1.4D		1.4		0	E0	P130 LP101	PP67 L1	MP21		
0348	CARTRIDGES FOR WEAPONS with bursting charge	1	1.4F		1.4		0	E0	P130		MP23		
0349	ARTICLES, EXPLOSIVE, N.O.S.	1	1.4S		1.4	178 274	0	E0	P101		MP2		
0350	ARTICLES, EXPLOSIVE, N.O.S.	1	1.4B		1.4	178 274	0	E0	P101		MP2		
0351	ARTICLES, EXPLOSIVE, N.O.S.	1	1.4C		1.4	178 274	0	E0	P101		MP2		
0352	ARTICLES, EXPLOSIVE, N.O.S.	1	1.4D		1.4	178 274	0	E0	P101		MP2		
0353	ARTICLES, EXPLOSIVE, N.O.S.	1	1.4G		1.4	178 274	0	E0	P101		MP2		
0354	ARTICLES, EXPLOSIVE, N.O.S.	1	1.1L		1	178 274	0	E0	P101		MP1		
0355	ARTICLES, EXPLOSIVE, N.O.S.	1	1.2L		1	178 274	0	E0	P101		MP1		
0356	ARTICLES, EXPLOSIVE, N.O.S.	1	1.3L		1	178 274	0	E0	P101		MP1		
0357	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.1L		1	178 274	0	E0	P101		MP1		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			4 (E)			CV1 CV2 CV3	S1		0337	FIREWORKS
			2 (E)	V2		CV1 CV2 CV3	S1		0338	CARTRIDGES FOR WEAPONS, BLANK or CARTRIDGES, SMALL ARMS, BLANK
			2 (E)	V2		CV1 CV2 CV3	S1		0339	CARTRIDGES FOR WEAPONS, INERT PROJECTILE or CARTRIDGES, SMALL ARMS
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0340	NITROCELLULOSE, dry or wetted with less than 25% water (or alcohol), by mass
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0341	NITROCELLULOSE, unmodified or plasticized with less than 18% plasticizing substance, by mass
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0342	NITROCELLULOSE, WETTED with not less than 25% alcohol, by mass
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0343	NITROCELLULOSE, PLASTICIZED with not less than 18% plasticizing substance, by mass
			2 (E)	V2		CV1 CV2 CV3	S1		0344	PROJECTILES with bursting charge
			4 (E)			CV1 CV2 CV3	S1		0345	PROJECTILES, inert with tracer
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0346	PROJECTILES with burster or expelling charge
			2 (E)	V2		CV1 CV2 CV3	S1		0347	PROJECTILES with burster or expelling charge
			2 (E)	V2		CV1 CV2 CV3	S1		0348	CARTRIDGES FOR WEAPONS with bursting charge
			4 (E)			CV1 CV2 CV3	S1		0349	ARTICLES, EXPLOSIVE, N.O.S.
			2 (E)	V2		CV1 CV2 CV3	S1		0350	ARTICLES, EXPLOSIVE, N.O.S.
			2 (E)	V2		CV1 CV2 CV3	S1		0351	ARTICLES, EXPLOSIVE, N.O.S.
			2 (E)	V2		CV1 CV2 CV3	S1		0352	ARTICLES, EXPLOSIVE, N.O.S.
			2 (E)	V2		CV1 CV2 CV3	S1		0353	ARTICLES, EXPLOSIVE, N.O.S.
			0 (B)	V2		CV1 CV2 CV3 CV4	S1		0354	ARTICLES, EXPLOSIVE, N.O.S.
			0 (B)	V2		CV1 CV2 CV3 CV4	S1		0355	ARTICLES, EXPLOSIVE, N.O.S.
			0 (B)	V2		CV1 CV2 CV3 CV4	S1		0356	ARTICLES, EXPLOSIVE, N.O.S.
			0 (B)	V2		CV1 CV2 CV3 CV4	S1		0357	SUBSTANCES, EXPLOSIVE, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
0358	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.2L		1	178 274	0	E0	P101		MP1		
0359	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.3L		1	178 274	0	E0	P101		MP1		
0360	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting	1	1.1B		1		0	E0	P131		MP23		
0361	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting	1	1.4B		1.4		0	E0	P131		MP23		
0362	AMMUNITION, PRACTICE	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0363	AMMUNITION, PROOF	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0364	DETONATORS FOR AMMUNITION	1	1.2B		1		0	E0	P133		MP23		
0365	DETONATORS FOR AMMUNITION	1	1.4B		1.4		0	E0	P133		MP23		
0366	DETONATORS FOR AMMUNITION	1	1.4S		1.4	347	0	E0	P133		MP23		
0367	FUZES, DETONATING	1	1.4S		1.4		0	E0	P141		MP23		
0368	FUZES, IGNITING	1	1.4S		1.4		0	E0	P141		MP23		
0369	WARHEADS, ROCKET with bursting charge	1	1.1F		1		0	E0	P130		MP23		
0370	WARHEADS, ROCKET with burster or expelling charge	1	1.4D		1.4		0	E0	P130 LP101	PP67 L1	MP21		
0371	WARHEADS, ROCKET with burster or expelling charge	1	1.4F		1.4		0	E0	P130		MP23		
0372	GRENADES, PRACTICE, hand or rifle	1	1.2G		1		0	E0	P141		MP23		
0373	SIGNAL DEVICES, HAND	1	1.4S		1.4		0	E0	P135		MP23 MP24		
0374	SOUNDING DEVICES, EXPLOSIVE	1	1.1D		1		0	E0	P134 LP102		MP21		
0375	SOUNDING DEVICES, EXPLOSIVE	1	1.2D		1		0	E0	P134 LP102		MP21		
0376	PRIMERS, TUBULAR	1	1.4S		1.4		0	E0	P133		MP23		
0377	PRIMERS, CAP TYPE	1	1.1B		1		0	E0	P133		MP23		
0378	PRIMERS, CAP TYPE	1	1.4B		1.4		0	E0	P133		MP23		
0379	CASES, CARTRIDGE, EMPTY, WITH PRIMER	1	1.4C		1.4		0	E0	P136		MP22		
0380	ARTICLES, PYROPHORIC	1	1.2L		1		0	E0	P101		MP1		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			0 (B)	V2		CV1 CV2 CV3 CV4	S1		0358	SUBSTANCES, EXPLOSIVE, N.O.S.
			0 (B)	V2		CV1 CV2 CV3 CV4	S1		0359	SUBSTANCES, EXPLOSIVE, N.O.S.
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0360	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting
			2 (E)	V2		CV1 CV2 CV3	S1		0361	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting
			2 (E)	V2		CV1 CV2 CV3	S1		0362	AMMUNITION, PRACTICE
			2 (E)	V2		CV1 CV2 CV3	S1		0363	AMMUNITION, PROOF
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0364	DETONATORS FOR AMMUNITION
			2 (E)	V2		CV1 CV2 CV3	S1		0365	DETONATORS FOR AMMUNITION
			4 (E)			CV1 CV2 CV3	S1		0366	DETONATORS FOR AMMUNITION
			4 (E)			CV1 CV2 CV3	S1		0367	FUZES, DETONATING
			4 (E)			CV1 CV2 CV3	S1		0368	FUZES, IGNITING
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0369	WARHEADS, ROCKET with bursting charge
			2 (E)	V2		CV1 CV2 CV3	S1		0370	WARHEADS, ROCKET with burster or expelling charge
			2 (E)	V2		CV1 CV2 CV3	S1		0371	WARHEADS, ROCKET with burster or expelling charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0372	GRENADES, PRACTICE, hand or rifle
			4 (E)			CV1 CV2 CV3	S1		0373	SIGNAL DEVICES, HAND
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0374	SOUNDING DEVICES, EXPLOSIVE
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0375	SOUNDING DEVICES, EXPLOSIVE
			4 (E)			CV1 CV2 CV3	S1		0376	PRIMERS, TUBULAR
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0377	PRIMERS, CAP TYPE
			2 (E)	V2		CV1 CV2 CV3	S1		0378	PRIMERS, CAP TYPE
			2 (E)	V2		CV1 CV2 CV3	S1		0379	CASES, CARTRIDGE, EMPTY, WITH PRIMER
			0 (B)	V2		CV1 CV2 CV3 CV4	S1		0380	ARTICLES, PYROPHORIC

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	4.2.5.3
												(10)	(11)
0381	CARTRIDGES, POWER DEVICE	1	1.2C		1		0	E0	P134 LP102		MP22		
0382	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.	1	1.2B		1	178 274	0	E0	P101		MP2		
0383	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.	1	1.4B		1.4	178 274	0	E0	P101		MP2		
0384	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.	1	1.4S		1.4	178 274	0	E0	P101		MP2		
0385	5-NITROBENZOTRIAZOL	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0386	TRINITROBENZENE-SULPHONIC ACID	1	1.1D		1		0	E0	P112(b) P112(c)	PP26	MP20		
0387	TRINITROFLUORENONE	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0388	TRINITROTOLUENE (TNT) AND TRINITROBENZENE MIXTURE or TRINITROTOLUENE (TNT) AND HEXANITROSTILBENE MIXTURE	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0389	TRINITROTOLUENE (TNT) MIXTURE CONTAINING TRINITROBENZENE AND HEXANITROSTILBENE	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0390	TRITONAL	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0391	CYCLOTRIMETHYLENE-TRINITRAMINE (CYCLONITE; HEXOGEN; RDX) AND CYCLOTETRAMETHYLENE TETRANITRAMINE (HMX; OCTOGEN) MIXTURE, WETTED with not less than 15% water, by mass or DESENSITIZED with not less than 10% phlegmatizer by mass	1	1.1D		1	266	0	E0	P112(a) P112(b)		MP20		
0392	HEXANITROSTILBENE	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0393	HEXOTONAL	1	1.1D		1		0	E0	P112(b)		MP20		
0394	TRINITRORESORCINOL (STYPHNIC ACID), WETTED with not less than 20% water, or mixture of alcohol and water, by mass	1	1.1D		1		0	E0	P112(a)	PP26	MP20		
0395	ROCKET MOTORS, LIQUID FUELLED	1	1.2J		1		0	E0	P101		MP23		
0396	ROCKET MOTORS, LIQUID FUELLED	1	1.3J		1		0	E0	P101		MP23		
0397	ROCKETS, LIQUID FUELLED with bursting charge	1	1.1J		1		0	E0	P101		MP23		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0381	CARTRIDGES, POWER DEVICE
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0382	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.
			2 (E)	V2		CV1 CV2 CV3	S1		0383	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.
			4 (E)	V2		CV1 CV2 CV3	S1		0384	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0385	5-NITROBENZOTRIAZOL
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0386	TRINITROBENZENE-SULPHONIC ACID
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0387	TRINITROFLUORENONE
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0388	TRINITROTOLUENE (TNT) AND TRINITROBENZENE MIXTURE or TRINITROTOLUENE (TNT) AND HEXANITROSTILBENE MIXTURE
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0389	TRINITROTOLUENE (TNT) MIXTURE CONTAINING TRINITROBENZENE AND HEXANITROSTILBENE
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0390	TRITONAL
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0391	CYCLOTTRIMETHYLENE-TRINITRAMINE (CYCLONITE; HEXOGEN; RDX) AND CYCLOTETRAMETHYLENE-TETRAMITRAMINE (HMX; OCTOGEN) MIXTURE, WETTED with not less than 15% water, by mass or DESENSITIZED with not less than 10% phlegmatizer by mass
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0392	HEXANITROSTILBENE
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0393	HEXOTONAL
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0394	TRINITRORESORCINOL (STYPHNIC ACID), WETTED with not less than 20% water, or mixture of alcohol and water, by mass
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0395	ROCKET MOTORS, LIQUID FUELLED
			1 (C)	V2		CV1 CV2 CV3	S1		0396	ROCKET MOTORS, LIQUID FUELLED
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0397	ROCKETS, LIQUID FUELLED with bursting charge

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
0398	ROCKETS, LIQUID FUELLED with bursting charge	1	1.2J		1		0	E0	P101		MP23		
0399	BOMBS WITH FLAMMABLE LIQUID with bursting charge	1	1.1J		1		0	E0	P101		MP23		
0400	BOMBS WITH FLAMMABLE LIQUID with bursting charge	1	1.2J		1		0	E0	P101		MP23		
0401	DIPICRYL SULPHIDE, dry or wetted with less than 10% water, by mass	1	1.1D		1		0	E0	P112(a) P112(b) P112(c)		MP20		
0402	AMMONIUM PERCHLORATE	1	1.1D		1	152	0	E0	P112(b) P112(c)		MP20		
0403	FLARES, AERIAL	1	1.4G		1.4		0	E0	P135		MP23		
0404	FLARES, AERIAL	1	1.4S		1.4		0	E0	P135		MP23		
0405	CARTRIDGES, SIGNAL	1	1.4S		1.4		0	E0	P135		MP23 MP24		
0406	DINITROSOBENZENE	1	1.3C		1		0	E0	P114(b)		MP20		
0407	TETRAZOL-1-ACETIC ACID	1	1.4C		1.4		0	E0	P114(b)		MP20		
0408	FUZES, DETONATING with protective features	1	1.1D		1		0	E0	P141		MP21		
0409	FUZES, DETONATING with protective features	1	1.2D		1		0	E0	P141		MP21		
0410	FUZES, DETONATING with protective features	1	1.4D		1.4		0	E0	P141		MP21		
0411	PENTAERYTHRITATE TETRA-NITRATE (PENTAERYTHRITOL TETRA-NITRATE; PETN) with not less than 7% wax, by mass	1	1.1D		1	131	0	E0	P112(b) P112(c)		MP20		
0412	CARTRIDGES FOR WEAPONS with bursting charge	1	1.4E		1.4		0	E0	P130 LP101	PP67 L1	MP21		
0413	CARTRIDGES FOR WEAPONS, BLANK	1	1.2C		1		0	E0	P130		MP22		
0414	CHARGES, PROPELLING, FOR CANNON	1	1.2C		1		0	E0	P130		MP22		
0415	CHARGES, PROPELLING	1	1.2C		1		0	E0	P143	PP76	MP22		
0417	CARTRIDGES FOR WEAPONS, INERT PROJECTILE or CARTRIDGES, SMALL ARMS	1	1.3C		1		0	E0	P130		MP22		
0418	FLARES, SURFACE	1	1.1G		1		0	E0	P135		MP23		
0419	FLARES, SURFACE	1	1.2G		1		0	E0	P135		MP23		
0420	FLARES, AERIAL	1	1.1G		1		0	E0	P135		MP23		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0398	ROCKETS, LIQUID FUELLED with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0399	BOMBS WITH FLAMMABLE LIQUID with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0400	BOMBS WITH FLAMMABLE LIQUID with bursting charge
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0401	DIPICRYL SULPHIDE, dry or wetted with less than 10% water, by mass
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0402	AMMONIUM PERCHLORATE
			2 (E)	V2		CV1 CV2 CV3	S1		0403	FLARES, AERIAL
			4 (E)			CV1 CV2 CV3	S1		0404	FLARES, AERIAL
			4 (E)			CV1 CV2 CV3	S1		0405	CARTRIDGES, SIGNAL
			1 (C5000D)	V2 V3		CV1 CV2 CV3	S1		0406	DINITROBENZENE
			2 (E)	V2		CV1 CV2 CV3	S1		0407	TETRAZOL-1-ACETIC ACID
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0408	FUZES, DETONATING with protective features
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0409	FUZES, DETONATING with protective features
			2 (E)	V2		CV1 CV2 CV3	S1		0410	FUZES, DETONATING with protective features
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0411	PENTAERYTHRITETETRANITRATE (PENTAERYTHRITOL TETRANITRATE; PETN) with not less than 7% wax, by mass
			2 (E)	V2		CV1 CV2 CV3	S1		0412	CARTRIDGES FOR WEAPONS with bursting charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0413	CARTRIDGES FOR WEAPONS, BLANK
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0414	CHARGES, PROPELLING, FOR CANNON
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0415	CHARGES, PROPELLING
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0417	CARTRIDGES FOR WEAPONS, INERT PROJECTILE or CARTRIDGES, SMALL ARMS
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0418	FLARES, SURFACE
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0419	FLARES, SURFACE
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0420	FLARES, AERIAL

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
0421	FLARES, AERIAL	1	1.2G		1		0	E0	P135		MP23		
0424	PROJECTILES, inert with tracer	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23		
0425	PROJECTILES, inert with tracer	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0426	PROJECTILES with burster or expelling charge	1	1.2F		1		0	E0	P130		MP23		
0427	PROJECTILES with burster or expelling charge	1	1.4F		1.4		0	E0	P130		MP23		
0428	ARTICLES, PYROTECHNIC for technical purposes	1	1.1G		1		0	E0	P135		MP23 MP24		
0429	ARTICLES, PYROTECHNIC for technical purposes	1	1.2G		1		0	E0	P135		MP23 MP24		
0430	ARTICLES, PYROTECHNIC for technical purposes	1	1.3G		1		0	E0	P135		MP23 MP24		
0431	ARTICLES, PYROTECHNIC for technical purposes	1	1.4G		1.4		0	E0	P135		MP23 MP24		
0432	ARTICLES, PYROTECHNIC for technical purposes	1	1.4S		1.4		0	E0	P135		MP23 MP24		
0433	POWDER CAKE (POWDER PASTE), WETTED with not less than 17% alcohol, by mass	1	1.1C		1	266	0	E0	P111		MP20		
0434	PROJECTILES with burster or expelling charge	1	1.2G		1		0	E0	P130 LP101	PP67 L1	MP23		
0435	PROJECTILES with burster or expelling charge	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0436	ROCKETS with expelling charge	1	1.2C		1		0	E0	P130 LP101	PP67 L1	MP22		
0437	ROCKETS with expelling charge	1	1.3C		1		0	E0	P130 LP101	PP67 L1	MP22		
0438	ROCKETS with expelling charge	1	1.4C		1.4		0	E0	P130 LP101	PP67 L1	MP22		
0439	CHARGES, SHAPED, without detonator	1	1.2D		1		0	E0	P137	PP70	MP21		
0440	CHARGES, SHAPED, without detonator	1	1.4D		1.4		0	E0	P137	PP70	MP21		
0441	CHARGES, SHAPED, without detonator	1	1.4S		1.4	347	0	E0	P137	PP70	MP23		
0442	CHARGES, EXPLOSIVE, COMMERCIAL without detonator	1	1.1D		1		0	E0	P137		MP21		
0443	CHARGES, EXPLOSIVE, COMMERCIAL without detonator	1	1.2D		1		0	E0	P137		MP21		
0444	CHARGES, EXPLOSIVE, COMMERCIAL without detonator	1	1.4D		1.4		0	E0	P137		MP21		
0445	CHARGES, EXPLOSIVE, COMMERCIAL without detonator	1	1.4S		1.4	347	0	E0	P137		MP23		
0446	CASES, COMBUSTIBLE, EMPTY, WITHOUT PRIMER	1	1.4C		1.4		0	E0	P136		MP22		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0421	FLARES, AERIAL
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0424	PROJECTILES, inert with tracer
			2 (E)	V2		CV1 CV2 CV3	S1		0425	PROJECTILES, inert with tracer
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0426	PROJECTILES with burster or expelling charge
			2 (E)	V2		CV1 CV2 CV3	S1		0427	PROJECTILES with burster or expelling charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0428	ARTICLES, PYROTECHNIC for technical purposes
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0429	ARTICLES, PYROTECHNIC for technical purposes
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0430	ARTICLES, PYROTECHNIC for technical purposes
			2 (E)	V2		CV1 CV2 CV3	S1		0431	ARTICLES, PYROTECHNIC for technical purposes
			4 (E)			CV1 CV2 CV3	S1		0432	ARTICLES, PYROTECHNIC for technical purposes
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0433	POWDER CAKE (POWDER PASTE), WETTED with not less than 17% alcohol, by mass
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0434	PROJECTILES with burster or expelling charge
			2 (E)	V2		CV1 CV2 CV3	S1		0435	PROJECTILES with burster or expelling charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0436	ROCKETS with expelling charge
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0437	ROCKETS with expelling charge
			2 (E)	V2		CV1 CV2 CV3	S1		0438	ROCKETS with expelling charge
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0439	CHARGES, SHAPED, without detonator
			2 (E)	V2		CV1 CV2 CV3	S1		0440	CHARGES, SHAPED, without detonator
			4 (E)			CV1 CV2 CV3	S1		0441	CHARGES, SHAPED, without detonator
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0442	CHARGES, EXPLOSIVE, COMMERCIAL without detonator
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0443	CHARGES, EXPLOSIVE, COMMERCIAL without detonator
			2 (E)	V2		CV1 CV2 CV3	S1		0444	CHARGES, EXPLOSIVE, COMMERCIAL without detonator
			4 (E)			CV1 CV2 CV3	S1		0445	CHARGES, EXPLOSIVE, COMMERCIAL without detonator
			2 (E)	V2		CV1 CV2 CV3	S1		0446	CASES, COMBUSTIBLE, EMPTY, WITHOUT PRIMER

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
0447	CASES, COMBUSTIBLE, EMPTY, WITHOUT PRIMER	1	1.3C		1		0	E0	P136		MP22		
0448	5-MERCAPTOTETRAZOL-1-ACETIC ACID	1	1.4C		1.4		0	E0	P114(b)		MP20		
0449	TORPEDOES, LIQUID FUELLED with or without bursting charge	1	1.1J		1		0	E0	P101		MP23		
0450	TORPEDOES, LIQUID FUELLED with inert head	1	1.3J		1		0	E0	P101		MP23		
0451	TORPEDOES with bursting charge	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0452	GRENADES, PRACTICE, hand or rifle	1	1.4G		1.4		0	E0	P141		MP23		
0453	ROCKETS, LINE-THROWING	1	1.4G		1.4		0	E0	P130		MP23		
0454	IGNITERS	1	1.4S		1.4		0	E0	P142		MP23		
0455	DETONATORS, NON-ELECTRIC for blasting	1	1.4S		1.4	347	0	E0	P131	PP68	MP23		
0456	DETONATORS, ELECTRIC for blasting	1	1.4S		1.4	347	0	E0	P131		MP23		
0457	CHARGES, BURSTING, PLASTICS BONDED	1	1.1D		1		0	E0	P130		MP21		
0458	CHARGES, BURSTING, PLASTICS BONDED	1	1.2D		1		0	E0	P130		MP21		
0459	CHARGES, BURSTING, PLASTICS BONDED	1	1.4D		1.4		0	E0	P130		MP21		
0460	CHARGES, BURSTING, PLASTICS BONDED	1	1.4S		1.4	347	0	E0	P130		MP23		
0461	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.	1	1.1B		1	178 274	0	E0	P101		MP2		
0462	ARTICLES, EXPLOSIVE, N.O.S.	1	1.1C		1	178 274	0	E0	P101		MP2		
0463	ARTICLES, EXPLOSIVE, N.O.S.	1	1.1D		1	178 274	0	E0	P101		MP2		
0464	ARTICLES, EXPLOSIVE, N.O.S.	1	1.1E		1	178 274	0	E0	P101		MP2		
0465	ARTICLES, EXPLOSIVE, N.O.S.	1	1.1F		1	178 274	0	E0	P101		MP2		
0466	ARTICLES, EXPLOSIVE, N.O.S.	1	1.2C		1	178 274	0	E0	P101		MP2		
0467	ARTICLES, EXPLOSIVE, N.O.S.	1	1.2D		1	178 274	0	E0	P101		MP2		
0468	ARTICLES, EXPLOSIVE, N.O.S.	1	1.2E		1	178 274	0	E0	P101		MP2		
0469	ARTICLES, EXPLOSIVE, N.O.S.	1	1.2F		1	178 274	0	E0	P101		MP2		
0470	ARTICLES, EXPLOSIVE, N.O.S.	1	1.3C		1	178 274	0	E0	P101		MP2		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0447	CASES, COMBUSTIBLE, EMPTY, WITHOUT PRIMER
			2 (E)	V2		CV1 CV2 CV3	S1		0448	5-MERCAPTOTETRAZOL-1-ACETIC ACID
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0449	TORPEDOES, LIQUID FUELLED with or without bursting charge
			1 (C)	V2		CV1 CV2 CV3	S1		0450	TORPEDOES, LIQUID FUELLED with inert head
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0451	TORPEDOES with bursting charge
			2 (E)	V2		CV1 CV2 CV3	S1		0452	GRENADES, PRACTICE, hand or rifle
			2 (E)	V2		CV1 CV2 CV3	S1		0453	ROCKETS, LINE-THROWING
			4 (E)			CV1 CV2 CV3	S1		0454	IGNITERS
			4 (E)			CV1 CV2 CV3	S1		0455	DETONATORS, NON-ELECTRIC for blasting
			4 (E)			CV1 CV2 CV3	S1		0456	DETONATORS, ELECTRIC for blasting
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0457	CHARGES, BURSTING, PLASTICS BONDED
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0458	CHARGES, BURSTING, PLASTICS BONDED
			2 (E)	V2		CV1 CV2 CV3	S1		0459	CHARGES, BURSTING, PLASTICS BONDED
			4 (E)			CV1 CV2 CV3	S1		0460	CHARGES, BURSTING, PLASTICS BONDED
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0461	COMPONENTS, EXPLOSIVE TRAIN, N.O.S.
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0462	ARTICLES, EXPLOSIVE, N.O.S.
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0463	ARTICLES, EXPLOSIVE, N.O.S.
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0464	ARTICLES, EXPLOSIVE, N.O.S.
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0465	ARTICLES, EXPLOSIVE, N.O.S.
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0466	ARTICLES, EXPLOSIVE, N.O.S.
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0467	ARTICLES, EXPLOSIVE, N.O.S.
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0468	ARTICLES, EXPLOSIVE, N.O.S.
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0469	ARTICLES, EXPLOSIVE, N.O.S.
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0470	ARTICLES, EXPLOSIVE, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
0471	ARTICLES, EXPLOSIVE, N.O.S.	1	1.4E		1.4	178 274	0	E0	P101		MP2		
0472	ARTICLES, EXPLOSIVE, N.O.S.	1	1.4F		1.4	178 274	0	E0	P101		MP2		
0473	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.1A		1	178 274	0	E0	P101		MP2		
0474	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.1C		1	178 274	0	E0	P101		MP2		
0475	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.1D		1	178 274	0	E0	P101		MP2		
0476	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.1G		1	178 274	0	E0	P101		MP2		
0477	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.3C		1	178 274	0	E0	P101		MP2		
0478	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.3G		1	178 274	0	E0	P101		MP2		
0479	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.4C		1.4	178 274	0	E0	P101		MP2		
0480	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.4D		1.4	178 274	0	E0	P101		MP2		
0481	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.4S		1.4	178 274	0	E0	P101		MP2		
0482	SUBSTANCES, EXPLOSIVE, VERY INSENSITIVE (SUBSTANCES, EVI), N.O.S.	1	1.5D		1.5	178 274	0	E0	P101		MP2		
0483	CYCLOTTRIMETHYLENE-TRINITRAMINE (CYCLONITE; HEXOGEN; RDX), DESENSITIZED	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0484	CYCLOTETRAMETHYLENE TETRA-NITRAMINE (HMX; OCTOGEN), DESENSITIZED	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0485	SUBSTANCES, EXPLOSIVE, N.O.S.	1	1.4G		1.4	178 274	0	E0	P101		MP2		
0486	ARTICLES, EXPLOSIVE, EXTREMELY INSENSITIVE (ARTICLES, EEI)	1	1.6N		1.6		0	E0	P101		MP23		
0487	SIGNALS, SMOKE	1	1.3G		1		0	E0	P135		MP23		
0488	AMMUNITION, PRACTICE	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23		
0489	DINITROGLYCOLURIL (DINGU)	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0490	NITROTRIAZOLONE (NTO)	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0491	CHARGES, PROPELLING	1	1.4C		1.4		0	E0	P143	PP76	MP22		
0492	SIGNALS, RAILWAY TRACK, EXPLOSIVE	1	1.3G		1		0	E0	P135		MP23		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			2 (E)	V2		CV1 CV2 CV3	S1		0471	ARTICLES, EXPLOSIVE, N.O.S.
			2 (E)	V2		CV1 CV2 CV3	S1		0472	ARTICLES, EXPLOSIVE, N.O.S.
			0 (B)	V2		CV1 CV2 CV3	S1		0473	SUBSTANCES, EXPLOSIVE, N.O.S.
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0474	SUBSTANCES, EXPLOSIVE, N.O.S.
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0475	SUBSTANCES, EXPLOSIVE, N.O.S.
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0476	SUBSTANCES, EXPLOSIVE, N.O.S.
			1 (C5000D)	V2 V3		CV1 CV2 CV3	S1		0477	SUBSTANCES, EXPLOSIVE, N.O.S.
			1 (C5000D)	V2 V3		CV1 CV2 CV3	S1		0478	SUBSTANCES, EXPLOSIVE, N.O.S.
			2 (E)	V2		CV1 CV2 CV3	S1		0479	SUBSTANCES, EXPLOSIVE, N.O.S.
			2 (E)	V2		CV1 CV2 CV3	S1		0480	SUBSTANCES, EXPLOSIVE, N.O.S.
			4 (E)			CV1 CV2 CV3	S1		0481	SUBSTANCES, EXPLOSIVE, N.O.S.
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0482	SUBSTANCES, EXPLOSIVE, VERY INSENSITIVE (SUBSTANCES, EVI), N.O.S.
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0483	CYCLOTRIMETHYLENE-TRINITRAMINE (CYCLONITE; HEXOGEN; RDX), DESENSITIZED
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0484	CYCLOTETRAMETHYLENE-TETRA-NITRAMINE (HMX; OCTOGEN), DESENSITIZED
			2 (E)	V2 V3		CV1 CV2 CV3	S1		0485	SUBSTANCES, EXPLOSIVE, N.O.S.
			2 (E)	V2		CV1 CV2 CV3	S1		0486	ARTICLES, EXPLOSIVE, EXTREMELY INSENSITIVE (ARTICLES, EEI)
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0487	SIGNALS, SMOKE
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0488	AMMUNITION, PRACTICE
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0489	DINITROGLYCOURIL (DINGU)
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0490	NITROTRIAZOLONE (NTO)
			2 (E)	V2		CV1 CV2 CV3	S1		0491	CHARGES, PROPELLING
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0492	SIGNALS, RAILWAY TRACK, EXPLOSIVE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
0493	SIGNALS, RAILWAY TRACK, EXPLOSIVE	1	1.4G		1.4		0	E0	P135		MP23		
0494	JET PERFORATING GUNS, CHARGED, oil well, without detonator	1	1.4D		1.4		0	E0	P101		MP21		
0495	PROPELLANT, LIQUID	1	1.3C		1	224	0	E0	P115	PP53 PP54 PP57 PP58	MP20		
0496	OCTONAL	1	1.1D		1		0	E0	P112(b) P112(c)		MP20		
0497	PROPELLANT, LIQUID	1	1.1C		1	224	0	E0	P115	PP53 PP54 PP57 PP58	MP20		
0498	PROPELLANT, SOLID	1	1.1C		1		0	E0	P114(b)		MP20		
0499	PROPELLANT, SOLID	1	1.3C		1		0	E0	P114(b)		MP20		
0500	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting	1	1.4S		1.4	347	0	E0	P131		MP23		
0501	PROPELLANT, SOLID	1	1.4C		1.4		0	E0	P114(b)		MP20		
0502	ROCKETS with inert head	1	1.2C		1		0	E0	P130 LP101	PP67 L1	MP22		
0503	AIR BAG INFLATORS or AIR BAG MODULES or SEAT-BELT PRETENSIONERS	1	1.4G		1.4	235 289	0	E0	P135		MP23		
0504	1H-TETRAZOLE	1	1.1D		1		0	E0	P112(c)	PP48	MP20		
0505	SIGNALS, DISTRESS, ship	1	1.4G		1.4		0	E0	P135		MP23 MP24		
0506	SIGNALS, DISTRESS, ship	1	1.4S		1.4		0	E0	P135		MP23 MP24		
0507	SIGNALS, SMOKE	1	1.4S		1.4		0	E0	P135		MP23 MP24		
0508	1-HYDROXY-BENZOTRIAZOLE, ANHYDROUS, dry or wetted with less than 20% water, by mass	1	1.3C		1		0	E0	P114(b)	PP48 PP50	MP20		
0509	POWDER, SMOKELESS	1	1.4C		1.4		0	E0	P114(b)	PP48	MP20		
1001	ACETYLENE, DISSOLVED	2	4F		2.1		0	E0	P200		MP9		
1002	AIR, COMPRESSED	2	1A		2.2	655	120 ml	E1	P200		MP9	(M)	
1003	AIR, REFRIGERATED LIQUID	2	3O		2.2 +5.1		0	E0	P203		MP9	T75	TP5 TP22
1005	AMMONIA, ANHYDROUS	2	2TC		2.3 +8	23	0	E0	P200		MP9	(M) T50	
1006	ARGON, COMPRESSED	2	1A		2.2	653	120 ml	E1	P200		MP9	(M)	
1008	BORON TRIFLUORIDE	2	2TC		2.3 +8		0	E0	P200		MP9	(M)	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			2 (E)	V2		CV1 CV2 CV3	S1		0493	SIGNALS, RAILWAY TRACK, EXPLOSIVE
			2 (E)	V2		CV1 CV2 CV3	S1		0494	JET PERFORATING GUNS, CHARGED, oil well, without detonator
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0495	PROPELLANT, LIQUID
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0496	OCTONAL
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0497	PROPELLANT, LIQUID
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0498	PROPELLANT, SOLID
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0499	PROPELLANT, SOLID
			4 (E)			CV1 CV2 CV3	S1		0500	DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting
			2 (E)	V2		CV1 CV2 CV3	S1		0501	PROPELLANT, SOLID
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0502	ROCKETS with inert head
			2 (E)	V2		CV1 CV2 CV3	S1		0503	AIR BAG INFLATORS or AIR BAG MODULES or SEAT-BELT PRETENSIONERS
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0504	1H-TETRAZOLE
			2 (E)	V2		CV1 CV2 CV3	S1		0505	SIGNALS, DISTRESS, ship
			4 (E)			CV1 CV2 CV3	S1		0506	SIGNALS, DISTRESS, ship
			4 (E)			CV1 CV2 CV3	S1		0507	SIGNALS, SMOKE
			1 (C5000D)	V2 V3		CV1 CV2 CV3	S1		0508	1-HYDROXY-BENZOTRIAZOLE, ANHYDROUS, dry or wetted with less than 20% water, by mass
			2 (E)	V2		CV1 CV2 CV3	S1		0509	POWDER, SMOKELESS
PxBN(M)	TU17 TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2	239	1001	ACETYLENE, DISSOLVED
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10		20	1002	AIR, COMPRESSED
RxBN	TU7 TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	225	1003	AIR, REFRIGERATED LIQUID
PxBH(M)	TA4 TT8 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	1005	AMMONIA, ANHYDROUS
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		20	1006	ARGON, COMPRESSED
PxBH(M)	TA4 TT9 TT10	AT	1 (C/D)			CV9 CV10 CV36	S14	268	1008	BORON TRIFLUORIDE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1009	BROMOTRIFLUOROMETHANE (REFRIGERANT GAS R 13B1)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1010	BUTADIENES, STABILIZED or BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, having a vapour pressure at 70 °C not exceeding 1.1 Mpa (11 bar) and a density at 50 °C not lower than 0.525 kg/l	2	2F		2.1	618	0	E0	P200		MP9	(M) T50	
1011	BUTANE	2	2F		2.1	652 657 660	0	E0	P200		MP9	(M) T50	
1012	BUTYLENES MIXTURE or 1-BUTYLENE or cis-2-BUTYLENE or trans-2-BUTYLENE	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1013	CARBON DIOXIDE	2	2A		2.2	584 653	120 ml	E1	P200		MP9	(M)	
1016	CARBON MONOXIDE, COMPRESSED	2	1TF		2.3 +2.1		0	E0	P200		MP9	(M)	
1017	CHLORINE	2	2TOC		2.3 +5.1 +8		0	E0	P200		MP9	(M) T50	TP19
1018	CHLORODIFLUOROMETHANE (REFRIGERANT GAS R 22)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1020	CHLOROPENTAFLUOROETHANE (REFRIGERANT GAS R 115)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1021	1-CHLORO-1,2,2,2-TETRAFLUOROETHANE (REFRIGERANT GAS R 124)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1022	CHLOROTRIFLUOROMETHANE (REFRIGERANT GAS R 13)	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
1023	COAL GAS, COMPRESSED	2	1TF		2.3 +2.1		0	E0	P200		MP9	(M)	
1026	CYANOGEN	2	2TF		2.3 +2.1		0	E0	P200		MP9	(M)	
1027	CYCLOPROPANE	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1028	DICHLORODIFLUOROMETHANE (REFRIGERANT GAS R 12)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1029	DICHLOROFLUOROMETHANE (REFRIGERANT GAS R 21)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1030	1,1-DIFLUOROETHANE (REFRIGERANT GAS R 152a)	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1032	DIMETHYLAMINE, ANHYDROUS	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1033	DIMETHYL ETHER	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1035	ETHANE	2	2F		2.1		0	E0	P200		MP9	(M)	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1009	BROMOTRIFLUOROMETHANE (REFRIGERANT GAS R 13B1)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1010	BUTADIENES, STABILIZED or BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, having a vapour pressure at 70 °C not exceeding 1.1 Mpa (11 bar) and a density at 50 °C not lower than 0.525 kg/l
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1011	BUTANE
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1012	BUTYLENES MIXTURE or 1-BUTYLENE or cis-2-BUTYLENE or trans-2-BUTYLENE
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1013	CARBON DIOXIDE
CxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1016	CARBON MONOXIDE, COMPRESSED
P22DH(M)	TA4 TT9 TT10	AT	1 (C/D)			CV9 CV10 CV36	S14	265	1017	CHLORINE
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1018	CHLORODIFLUOROMETHANE (REFRIGERANT GAS R 22)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1020	CHLOROPENTAFLUOROETHANE (REFRIGERANT GAS R 115)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1021	1-CHLORO-1,2,2,2-TETRAFLUOROETHANE (REFRIGERANT GAS R 124)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1022	CHLOROTRIFLUOROMETHANE (REFRIGERANT GAS R 13)
CxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1023	COAL GAS, COMPRESSED
PxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1026	CYANOGEN
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1027	CYCLOPROPANE
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1028	DICHLORODIFLUOROMETHANE (REFRIGERANT GAS R 12)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1029	DICHLOROFLUOROMETHANE (REFRIGERANT GAS R 21)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1030	1,1-DIFLUOROETHANE (REFRIGERANT GAS R 152a)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1032	DIMETHYLAMINE, ANHYDROUS
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1033	DIMETHYL ETHER
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1035	ETHANE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	4.2.5.3
1036	ETHYLAMINE	2	2F		2.1		0	E0	P200		MP9	(M) T50		
1037	ETHYL CHLORIDE	2	2F		2.1		0	E0	P200		MP9	(M) T50		
1038	ETHYLENE, REFRIGERATED LIQUID	2	3F		2.1		0	E0	P203		MP9	T75	TP5	
1039	ETHYL METHYL ETHER	2	2F		2.1		0	E0	P200		MP9	(M)		
1040	ETHYLENE OXIDE	2	2TF		2.3 +2.1	342	0	E0	P200		MP9	(M)		
1040	ETHYLENE OXIDE WITH NITROGEN up to a total pressure of 1 MPa (10 bar) at 50 °C	2	2TF		2.3 +2.1	342	0	E0	P200		MP9	(M) T50	TP20	
1041	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with more than 9% but not more than 87% ethylene oxide	2	2F		2.1		0	E0	P200		MP9	(M) T50		
1043	FERTILIZER AMMONIATING SOLUTION with free ammonia	2	4A		2.2	642								
1044	FIRE EXTINGUISHERS with compressed or liquefied gas	2	6A		2.2	225 594	120 ml	E0	P003		MP9			
1045	FLUORINE, COMPRESSED	2	1TOC		2.3 +5.1 +8		0	E0	P200		MP9			
1046	HELIUM, COMPRESSED	2	1A		2.2	653	120 ml	E1	P200		MP9	(M)		
1048	HYDROGEN BROMIDE, ANHYDROUS	2	2TC		2.3 +8		0	E0	P200		MP9	(M)		
1049	HYDROGEN, COMPRESSED	2	1F		2.1	660	0	E0	P200		MP9	(M)		
1050	HYDROGEN CHLORIDE, ANHYDROUS	2	2TC		2.3 +8		0	E0	P200		MP9	(M)		
1051	HYDROGEN CYANIDE, STABILIZED containing less than 3% water	6.1	TF1	I	6.1 +3	603	0	E5	P200		MP2			
1052	HYDROGEN FLUORIDE, ANHYDROUS	8	CT1	I	8 +6.1		0	E0	P200		MP2	T10	TP2	
1053	HYDROGEN SULPHIDE	2	2TF		2.3 +2.1		0	E0	P200		MP9	(M)		
1055	ISOBUTYLENE	2	2F		2.1		0	E0	P200		MP9	(M) T50		
1056	KRYPTON, COMPRESSED	2	1A		2.2		120 ml	E1	P200		MP9	(M)		
1057	LIGHTERS or LIGHTER REFILLS containing flammable gas	2	6F		2.1	201 654 658	0	E0	P002	PP84 RR5	MP9			
1058	LIQUEFIED GASES, non-flammable, charged with nitrogen, carbon dioxide or air	2	2A		2.2		120 ml	E1	P200		MP9	(M)		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1036	ETHYLAMINE
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1037	ETHYL CHLORIDE
RxBN	TU18 TA4 TT9	FL	2 (B/D)	V5		CV9 CV11 CV36	S2 S17	223	1038	ETHYLENE, REFRIGERATED LIQUID
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1039	ETHYL METHYL ETHER
		FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1040	ETHYLENE OXIDE
PxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1040	ETHYLENE OXIDE WITH NITROGEN up to a total pressure of 1 MPa (10 bar) at 50 °C
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1041	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with more than 9% but not more than 87% ethylene oxide
			(E)						1043	FERTILIZER AMMONIATING SOLUTION with free ammonia
			3 (E)			CV9			1044	FIRE EXTINGUISHERS with compressed or liquefied gas
			1 (D)			CV9 CV10 CV36	S14		1045	FLUORINE, COMPRESSED
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		20	1046	HELIUM, COMPRESSED
PxBH(M)	TA4 TT9 TT10	AT	1 (C/D)			CV9 CV10 CV36	S14	268	1048	HYDROGEN BROMIDE, ANHYDROUS
CxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1049	HYDROGEN, COMPRESSED
PxBH(M)	TA4 TT9 TT10	AT	1 (C/D)			CV9 CV10 CV36	S14	268	1050	HYDROGEN CHLORIDE, ANHYDROUS
			0 (D)			CV1 CV13 CV28	S2 S9 S10 S14		1051	HYDROGEN CYANIDE, STABILIZED containing less than 3% water
L21DH(+)	TU14 TU34 TC1 TE21 TA4 TT9 TM3	AT	1 (C/D)			CV13 CV28 CV34	S14	886	1052	HYDROGEN FLUORIDE, ANHYDROUS
PxDH(M)	TA4 TT9 TT10	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1053	HYDROGEN SULPHIDE
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1055	ISOBUTYLENE
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		20	1056	KRYPTON, COMPRESSED
			2 (D)			CV9	S2		1057	LIGHTERS or LIGHTER REFILLS containing flammable gas
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1058	LIQUEFIED GASES, non- flammable, charged with nitrogen, carbon dioxide or air

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1060	METHYLACETYLENE AND PROPADIENE MIXTURE, STABILIZED such as mixture P1 or mixture P2	2	2F		2.1	581	0	E0	P200		MP9	(M) T50	
1061	METHYLAMINE, ANHYDROUS	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1062	METHYL BROMIDE with not more than 2% chloropicrin	2	2T		2.3	23	0	E0	P200		MP9	(M) T50	
1063	METHYL CHLORIDE (REFRIGERANT GAS R 40)	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1064	METHYL MERCAPTAN	2	2TF		2.3 +2.1		0	E0	P200		MP9	(M) T50	
1065	NEON, COMPRESSED	2	1A		2.2		120 ml	E1	P200		MP9	(M)	
1066	NITROGEN, COMPRESSED	2	1A		2.2	653	120 ml	E1	P200		MP9	(M)	
1067	DINITROGEN TETROXIDE (NITROGEN DIOXIDE)	2	2TOC		2.3 +5.1 +8		0	E0	P200		MP9	T50	TP21
1069	NITROSYL CHLORIDE	2	2TC		2.3 +8		0	E0	P200		MP9		
1070	NITROUS OXIDE	2	2O		2.2 +5.1	584	0	E0	P200		MP9	(M)	
1071	OIL GAS, COMPRESSED	2	1TF		2.3 +2.1		0	E0	P200		MP9	(M)	
1072	OXYGEN, COMPRESSED	2	1O		2.2 +5.1	355 655	0	E0	P200		MP9	(M)	
1073	OXYGEN, REFRIGERATED LIQUID	2	3O		2.2 +5.1		0	E0	P203		MP9	T75	TP5 TP22
1075	PETROLEUM GASES, LIQUEFIED	2	2F		2.1	274 583 639 660	0	E0	P200		MP9	(M) T50	
1076	PHOSGENE	2	2TC		2.3 +8		0	E0	P200		MP9		
1077	PROPYLENE	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1078	REFRIGERANT GAS, N.O.S., such as mixture F1, mixture F2 or mixture F3	2	2A		2.2	274 582	120 ml	E1	P200		MP9	(M) T50	
1079	SULPHUR DIOXIDE	2	2TC		2.3 +8		0	E0	P200		MP9	(M) T50	TP19
1080	SULPHUR HEXAFLUORIDE	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
1081	TETRAFLUOROETHYLENE, STABILIZED	2	2F		2.1		0	E0	P200		MP9	(M)	
1082	TRIFLUOROCHLOROETHYLENE, STABILIZED	2	2TF		2.3 +2.1		0	E0	P200		MP9	(M) T50	
1083	TRIMETHYLAMINE, ANHYDROUS	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1085	VINYL BROMIDE, STABILIZED	2	2F		2.1		0	E0	P200		MP9	(M) T50	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1060	METHYLACETYLENE AND PROPADIENE MIXTURE, STABILIZED such as mixture P1 or mixture P2
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1061	METHYLAMINE, ANHYDROUS
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	1062	METHYL BROMIDE with not more than 2% chloropicrin
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1063	METHYL CHLORIDE (REFRIGERANT GAS R 40)
PxDH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1064	METHYL MERCAPTAN
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		20	1065	NEON, COMPRESSED
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		20	1066	NITROGEN, COMPRESSED
PxBH(M)	TU17 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	1067	DINITROGEN TETROXIDE (NITROGEN DIOXIDE)
			1 (D)			CV9 CV10 CV36	S14		1069	NITROSYL CHLORIDE
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		25	1070	NITROUS OXIDE
CxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1071	OIL GAS, COMPRESSED
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		25	1072	OXYGEN, COMPRESSED
RxBN	TU7 TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	225	1073	OXYGEN, REFRIGERATED LIQUID
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1075	PETROLEUM GASES, LIQUEFIED
P22DH(M)	TU17 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	1076	PHOSGENE
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1077	PROPYLENE
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1078	REFRIGERANT GAS, N.O.S., such as mixture F1, mixture F2 or mixture F3
PxDH(M)	TA4 TT9 TT10	AT	1 (C/D)			CV9 CV10 CV36	S14	268	1079	SULPHUR DIOXIDE
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1080	SULPHUR HEXAFLUORIDE
PxBN(M)	TU40 TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20		1081	TETRAFLUROETHYLENE, STABILIZED
PxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1082	TRIFLUOROCHLOROETHYLENE, STABILIZED
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1083	TRIMETHYLAMINE, ANHYDROUS
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1085	VINYL BROMIDE, STABILIZED

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1086	VINYL CHLORIDE, STABILIZED	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1087	VINYL METHYL ETHER, STABILIZED	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1088	ACETAL	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1089	ACETALDEHYDE	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2 TP7
1090	ACETONE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1091	ACETONE OILS	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1092	ACROLEIN, STABILIZED	6.1	TF1	I	6.1 +3	354	0	E0	P601		MP8 MP17	T22	TP2 TP7 TP35
1093	ACRYLONITRILE, STABILIZED	3	FT1	I	3 +6.1		0	E0	P001		MP7 MP17	T14	TP2
1098	ALLYL ALCOHOL	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
1099	ALLYL BROMIDE	3	FT1	I	3 +6.1		0	E0	P001		MP7 MP17	T14	TP2
1100	ALLYL CHLORIDE	3	FT1	I	3 +6.1		0	E0	P001		MP7 MP17	T14	TP2
1104	AMYL ACETATES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1105	PENTANOLS	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP29
1105	PENTANOLS	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1106	AMYLAMINE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
1106	AMYLAMINE	3	FC	III	3 +8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
1107	AMYL CHLORIDE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1108	1-PENTENE (n-AMYLENE)	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
1109	AMYL FORMATES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1110	n-AMYL METHYL KETONE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1111	AMYL MERCAPTAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1112	AMYL NITRATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1113	AMYL NITRITE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1114	BENZENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1086	VINYL CHLORIDE, STABILIZED
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1087	VINYL METHYL ETHER, STABILIZED
LGBF		FL	2 (D/E)				S2 S20	33	1088	ACETAL
L4BN	TU8	FL	1 (D/E)				S2 S20	33	1089	ACETALDEHYDE
LGBF		FL	2 (D/E)				S2 S20	33	1090	ACETONE
LGBF		FL	2 (D/E)				S2 S20	33	1091	ACETONE OILS
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1092	ACROLEIN, STABILIZED
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1093	ACRYLONITRILE, STABILIZED
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1098	ALLYL ALCOHOL
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1099	ALLYL BROMIDE
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1100	ALLYL CHLORIDE
LGBF		FL	3 (D/E)	V12			S2	30	1104	AMYL ACETATES
LGBF		FL	2 (D/E)				S2 S20	33	1105	PENTANOLS
LGBF		FL	3 (D/E)	V12			S2	30	1105	PENTANOLS
L4BH		FL	2 (D/E)				S2 S20	338	1106	AMYLAMINE
L4BN		FL	3 (D/E)	V12			S2	38	1106	AMYLAMINE
LGBF		FL	2 (D/E)				S2 S20	33	1107	AMYL CHLORIDE
L4BN		FL	1 (D/E)				S2 S20	33	1108	1-PENTENE (n-AMYLENE)
LGBF		FL	3 (D/E)	V12			S2	30	1109	AMYL FORMATES
LGBF		FL	3 (D/E)	V12			S2	30	1110	n-AMYL METHYL KETONE
LGBF		FL	2 (D/E)				S2 S20	33	1111	AMYL MERCAPTAN
LGBF		FL	3 (D/E)	V12			S2	30	1112	AMYL NITRATE
LGBF		FL	2 (D/E)				S2 S20	33	1113	AMYL NITRITE
LGBF		FL	2 (D/E)				S2 S20	33	1114	BENZENE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
1120	BUTANOLS	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP29
1120	BUTANOLS	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1123	BUTYL ACETATES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1123	BUTYL ACETATES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1125	n-BUTYLAMINE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
1126	I-BROMOBUTANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1127	CHLOROBUTANES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1128	n-BUTYL FORMATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1129	BUTYRALDEHYDE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1130	CAMPHOR OIL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1131	CARBON DISULPHIDE	3	FT1	I	3 +6.1		0	E0	P001	PP31	MP7 MP17	T14	TP2 TP7
1133	ADHESIVES containing flammable liquid	3	F1	I	3		500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP27
1133	ADHESIVES containing flammable liquid (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	5 L	E2	P001	PP1	MP19	T4	TP1 TP8
1133	ADHESIVES containing flammable liquid (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001	PP1	MP19	T4	TP1 TP8
1133	ADHESIVES containing flammable liquid	3	F1	III	3	640E	5 L	E1	P001 IBC03 LP01 R001	PP1	MP19	T2	TP1
1133	ADHESIVES containing flammable liquid (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)	3	F1	III	3	640F	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1
1133	ADHESIVES containing flammable liquid (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)	3	F1	III	3	640G	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1
1133	ADHESIVES containing flammable liquid (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	640H	5 L	E1	P001 IBC02 LP01 R001	PP1	MP19	T2	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	2 (D/E)				S2 S20	33	1120	BUTANOLS
LGBF		FL	3 (D/E)	V12			S2	30	1120	BUTANOLS
LGBF		FL	2 (D/E)				S2 S20	33	1123	BUTYL ACETATES
LGBF		FL	3 (D/E)	V12			S2	30	1123	BUTYL ACETATES
L4BH		FL	2 (D/E)				S2 S20	338	1125	n-BUTYLAMINE
LGBF		FL	2 (D/E)				S2 S20	33	1126	1-BROMOBUTANE
LGBF		FL	2 (D/E)				S2 S20	33	1127	CHLOROBUTANES
LGBF		FL	2 (D/E)				S2 S20	33	1128	n-BUTYL FORMATE
LGBF		FL	2 (D/E)				S2 S20	33	1129	BUTYRALDEHYDE
LGBF		FL	3 (D/E)	V12			S2	30	1130	CAMPHOR OIL
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1131	CARBON DISULPHIDE
L4BN		FL	1 (D/E)				S2 S20	33	1133	ADHESIVES containing flammable liquid
L1.5BN		FL	2 (D/E)				S2 S20	33	1133	ADHESIVES containing flammable liquid (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1133	ADHESIVES containing flammable liquid (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1133	ADHESIVES containing flammable liquid
L4BN		FL	3 (D/E)				S2	33	1133	ADHESIVES containing flammable liquid (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)
L1.5BN		FL	3 (D/E)				S2	33	1133	ADHESIVES containing flammable liquid (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)
LGBF		FL	3 (D/E)				S2	33	1133	ADHESIVES containing flammable liquid (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
1134	CHLOROBENZENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1135	ETHYLENE CHLOROHYDRIN	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
1136	COAL TAR DISTILLATES, FLAMMABLE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1136	COAL TAR DISTILLATES, FLAMMABLE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining)	3	F1	I	3		500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP27
1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining) (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	5 L	E2	P001		MP19	T4	TP1 TP8
1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining)	3	F1	III	3	640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)	3	F1	III	3	640F	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)	3	F1	III	3	640G	5 L	E1	P001 LP01 R001		MP19	T2	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	3 (D/E)	V12			S2	30	1134	CHLOROBENZENE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1135	ETHYLENE CHLOROHYDRIN
LGBF		FL	2 (D/E)				S2 S20	33	1136	COAL TAR DISTILLATES, FLAMMABLE
LGBF		FL	3 (D/E)	V12			S2	30	1136	COAL TAR DISTILLATES, FLAMMABLE
L4BN		FL	1 (D/E)				S2 S20	33	1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining)
L1.5BN		FL	2 (D/E)				S2 S20	33	1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining) (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining) (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining)
L4BN		FL	3 (D/E)				S2	33	1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)
L1.5BN		FL	3 (D/E)				S2	33	1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T2	TP1	
1143	CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED	6.1	TF1	I	6.1 +3	324 354	0	E0	P602		MP8 MP17	T20	TP2 TP35	
1144	CROTONYLENE	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2	
1145	CYCLOHEXANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	
1146	CYCLOPENTANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1	
1147	DECAHYDRO-NAPHTHALENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
1148	DIACETONE ALCOHOL	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	
1148	DIACETONE ALCOHOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
1149	DIBUTYL ETHERS	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
1150	1,2-DICHLOROETHYLENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP2	
1152	DICHLOROPENTANES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
1153	ETHYLENE GLYCOL DIETHYL ETHER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	
1153	ETHYLENE GLYCOL DIETHYL ETHER	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
1154	DIETHYLAMINE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1	
1155	DIETHYL ETHER (ETHYL ETHER)	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2	
1156	DIETHYL KETONE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	
1157	DIISOBUTYL KETONE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
1158	DIISOPROPYLAMINE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1	
1159	DIISOPROPYL ETHER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	
1160	DIMETHYLAMINE AQUEOUS SOLUTION	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1	
1161	DIMETHYL CARBONATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	3 (D/E)				S2	33	1139	COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1143	CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED
L4BN		FL	1 (D/E)				S2 S20	339	1144	CROTONYLENE
LGBF		FL	2 (D/E)				S2 S20	33	1145	CYCLOHEXANE
LGBF		FL	2 (D/E)				S2 S20	33	1146	CYCLOPENTANE
LGBF		FL	3 (D/E)	V12			S2	30	1147	DECAHYDRO-NAPHTHALENE
LGBF		FL	2 (D/E)				S2 S20	33	1148	DIACETONE ALCOHOL
LGBF		FL	3 (D/E)	V12			S2	30	1148	DIACETONE ALCOHOL
LGBF		FL	3 (D/E)	V12			S2	30	1149	DIBUTYL ETHERS
LGBF		FL	2 (D/E)				S2 S20	33	1150	1,2-DICHLOROETHYLENE
LGBF		FL	3 (D/E)	V12			S2	30	1152	DICHLOROPENTANES
LGBF		FL	2 (D/E)				S2 S20	33	1153	ETHYLENE GLYCOL DIETHYL ETHER
LGBF		FL	3 (D/E)	V12			S2	30	1153	ETHYLENE GLYCOL DIETHYL ETHER
L4BH		FL	2 (D/E)				S2 S20	338	1154	DIETHYLAMINE
L4BN		FL	1 (D/E)				S2 S20	33	1155	DIETHYL ETHER (ETHYL ETHER)
LGBF		FL	2 (D/E)				S2 S20	33	1156	DIETHYL KETONE
LGBF		FL	3 (D/E)	V12			S2	30	1157	DIISOBUTYL KETONE
L4BH		FL	2 (D/E)				S2 S20	338	1158	DIISOPROPYLAMINE
LGBF		FL	2 (D/E)				S2 S20	33	1159	DIISOPROPYL ETHER
L4BH		FL	2 (D/E)				S2 S20	338	1160	DIMETHYLAMINE AQUEOUS SOLUTION
LGBF		FL	2 (D/E)				S2 S20	33	1161	DIMETHYL CARBONATE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
1162	DIMETHYLDICHLOROSILANE	3	FC	II	3 +8		0	E0	P010		MP19	T10	TP2 TP7
1163	DIMETHYLHYDRAZINE, UNSYMMETRICAL	6.1	TFC	I	6.1 +3 +8	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
1164	DIMETHYL SULPHIDE	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T7	TP2
1165	DIOXANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1166	DIOXOLANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1167	DIVINYL ETHER, STABILIZED	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
1169	EXTRACTS, AROMATIC, LIQUID (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	601 640C	5 L	E2	P001		MP19	T4	TP1 TP8
1169	EXTRACTS, AROMATIC, LIQUID (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	601 640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1169	EXTRACTS, AROMATIC, LIQUID	3	F1	III	3	601 640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1169	EXTRACTS, AROMATIC, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)	3	F1	III	3	601 640F	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1169	EXTRACTS, AROMATIC, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)	3	F1	III	3	601 640G	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1169	EXTRACTS, AROMATIC, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	601 640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T2	TP1
1170	ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	3	F1	II	3	144 601	1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1170	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)	3	F1	III	3	144 601	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1171	ETHYLENE GLYCOL MONOETHYL ETHER	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1172	ETHYLENE GLYCOL MONOETHYL ETHER ACETATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1173	ETHYL ACETATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1175	ETHYLBENZENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH		FL	2 (D/E)				S2 S20	X338	1162	DIMETHYLDICHLOROSILANE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1163	DIMETHYLHYDRAZINE, UNSYMMETRICAL
L1.5BN		FL	2 (D/E)				S2 S20	33	1164	DIMETHYL SULPHIDE
LGBF		FL	2 (D/E)				S2 S20	33	1165	DIOXANE
LGBF		FL	2 (D/E)				S2 S20	33	1166	DIOXOLANE
L4BN		FL	1 (D/E)				S2 S20	339	1167	DIVINYL ETHER, STABILIZED
L1.5BN		FL	2 (D/E)				S2 S20	33	1169	EXTRACTS, AROMATIC, LIQUID (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1169	EXTRACTS, AROMATIC, LIQUID (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1169	EXTRACTS, AROMATIC, LIQUID
L4BN		FL	3 (D/E)				S2	33	1169	EXTRACTS, AROMATIC, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)
L1.5BN		FL	3 (D/E)				S2	33	1169	EXTRACTS, AROMATIC, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)
LGBF		FL	3 (D/E)				S2	33	1169	EXTRACTS, AROMATIC, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1170	ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
LGBF		FL	3 (D/E)	V12			S2	30	1170	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
LGBF		FL	3 (D/E)	V12			S2	30	1171	ETHYLENE GLYCOL MONOETHYL ETHER
LGBF		FL	3 (D/E)	V12			S2	30	1172	ETHYLENE GLYCOL MONOETHYL ETHER ACETATE
LGBF		FL	2 (D/E)				S2 S20	33	1173	ETHYL ACETATE
LGBF		FL	2 (D/E)				S2 S20	33	1175	ETHYLBENZENE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1176	ETHYL BORATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1177	2-ETHYLBUTYL ACETATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1178	2-ETHYLBUTYRALDEHYDE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1179	ETHYL BUTYL ETHER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1180	ETHYL BUTYRATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1181	ETHYL CHLOROACETATE	6.1	TF1	II	6.1 +3		100 ml	E4	P001 IBC02		MP15	T7	TP2
1182	ETHYL CHLOROFORMATE	6.1	TFC	I	6.1 +3 +8	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
1183	ETHYLDICHLOROSILANE	4.3	WFC	I	4.3 +3 +8		0	E0	P401	RR7	MP2	T14	TP2 TP7
1184	ETHYLENE DICHLORIDE	3	FT1	II	3 +6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
1185	ETHYLENEIMINE, STABILIZED	6.1	TF1	I	6.1 +3	354	0	E0	P601		MP2	T22	TP2
1188	ETHYLENE GLYCOL MONOMETHYL ETHER	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1189	ETHYLENE GLYCOL MONOMETHYL ETHER ACETATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1190	ETHYL FORMATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1191	OCTYL ALDEHYDES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1192	ETHYL LACTATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1193	ETHYL METHYL KETONE (METHYL ETHYL KETONE)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1194	ETHYL NITRITE SOLUTION	3	FT1	I	3 +6.1		0	E0	P001		MP7 MP17		
1195	ETHYL PROPIONATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1196	ETHYLTRICHLOROSILANE	3	FC	II	3 +8		0	E0	P010		MP19	T10	TP2 TP7
1197	EXTRACTS, FLAVOURING, LIQUID (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	601 640C	5 L	E2	P001		MP19	T4	TP1 TP8
1197	EXTRACTS, FLAVOURING, LIQUID (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	601 640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1197	EXTRACTS, FLAVOURING, LIQUID	3	F1	III	3	601 640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	2 (D/E)				S2 S20	33	1176	ETHYL BORATE
LGBF		FL	3 (D/E)	V12			S2	30	1177	2-ETHYLBUTYL ACETATE
LGBF		FL	2 (D/E)				S2 S20	33	1178	2-ETHYLBUTYRALDEHYDE
LGBF		FL	2 (D/E)				S2 S20	33	1179	ETHYL BUTYL ETHER
LGBF		FL	3 (D/E)	V12			S2	30	1180	ETHYL BUTYRATE
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	1181	ETHYL CHLOROACETATE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1182	ETHYL CHLOROFORMATE
L10DH	TU14 TU23 TE21 TM2 TM3	FL	0 (B/E)	V1		CV23	S2 S20	X338	1183	ETHYLDICHLOROSILANE
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	1184	ETHYLENE DICHLORIDE
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1185	ETHYLENEIMINE, STABILIZED
LGBF		FL	3 (D/E)	V12			S2	30	1188	ETHYLENE GLYCOL MONOMETHYL ETHER
LGBF		FL	3 (D/E)	V12			S2	30	1189	ETHYLENE GLYCOL MONOMETHYL ETHER ACETATE
LGBF		FL	2 (D/E)				S2 S20	33	1190	ETHYL FORMATE
LGBF		FL	3 (D/E)	V12			S2	30	1191	OCTYL ALDEHYDES
LGBF		FL	3 (D/E)	V12			S2	30	1192	ETHYL LACTATE
LGBF		FL	2 (D/E)				S2 S20	33	1193	ETHYL METHYL KETONE (METHYL ETHYL KETONE)
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1194	ETHYL NITRITE SOLUTION
LGBF		FL	2 (D/E)				S2 S20	33	1195	ETHYL PROPIONATE
L4BH		FL	2 (D/E)				S2 S20	X338	1196	ETHYLTRICHLOROSILANE
L1.5BN		FL	2 (D/E)				S2 S20	33	1197	EXTRACTS, FLAVOURING, LIQUID (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1197	EXTRACTS, FLAVOURING, LIQUID (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1197	EXTRACTS, FLAVOURING, LIQUID

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1197	EXTRACTS, FLAVOURING, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)	3	F1	III	3	601 640F	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1197	EXTRACTS, FLAVOURING, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)	3	F1	III	3	601 640G	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1197	EXTRACTS, FLAVOURING, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	601 640H	5 L	E1	P002 IBC02 LP01 R001		MP19	T2	TP1
1198	FORMALDEHYDE SOLUTION, FLAMMABLE	3	FC	III	3 +8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
1199	FURALDEHYDES	6.1	TF1	II	6.1 +3		100 ml	E4	P001 IBC02		MP15	T7	TP2
1201	FUSEL OIL	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1201	FUSEL OIL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1202	GAS OIL or DIESEL FUEL or HEATING OIL, LIGHT (flash-point not more than 60 °C)	3	F1	III	3	640K 363	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1202	DIESEL FUEL complying with standard EN 590:2004 or GAS OIL or HEATING OIL, LIGHT with a flash-point as specified in EN 590:2004	3	F1	III	3	640L 363	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1202	GAS OIL or DIESEL FUEL or HEATING OIL, LIGHT (flash-point more than 60 °C and not more than 100 °C)	3	F1	III	3	640M 363	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1203	MOTOR SPIRIT or GASOLINE or PETROL	3	F1	II	3	243 534 363	1 L	E2	P001 IBC02 R001	BB2	MP19	T4	TP1
1204	NITROGLYCERIN SOLUTION IN ALCOHOL with not more than 1% nitroglycerin	3	D	II	3	601	1 L	E0	P001 IBC02	PP5	MP2		
1206	HEPTANES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1207	HEXALDEHYDE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1208	HEXANES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable	3	F1	I	3	163	500 ml	E3	P001		MP7 MP17	T11	TP1 TP8

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		FL	3 (D/E)				S2	33	1197	EXTRACTS, FLAVOURING, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)
L1.5BN		FL	3 (D/E)				S2	33	1197	EXTRACTS, FLAVOURING, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)
LGBF		FL	3 (D/E)				S2	33	1197	EXTRACTS, FLAVOURING, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)
L4BN		FL	3 (D/E)	V12			S2	38	1198	FORMALDEHYDE SOLUTION, FLAMMABLE
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	1199	FURALDEHYDES
LGBF		FL	2 (D/E)				S2 S20	33	1201	FUSEL OIL
LGBF		FL	3 (D/E)	V12			S2	30	1201	FUSEL OIL
LGBF		FL	3 (D/E)	V12			S2	30	1202	GAS OIL or DIESEL FUEL or HEATING OIL, LIGHT (flash-point not more than 60 °C)
LGBF		AT	3 (D/E)	V12			S2	30	1202	DIESEL FUEL complying with standard EN 590:2004 or GAS OIL or HEATING OIL, LIGHT with a flash-point as specified in EN 590:2004
LGBV		AT	3 (D/E)	V12				30	1202	GAS OIL or DIESEL FUEL or HEATING OIL, LIGHT (flash-point more than 60 °C and not more than 100 °C)
LGBF	TU9	FL	2 (D/E)				S2 S20	33	1203	MOTOR SPIRIT or GASOLINE or PETROL
			2 (B)				S2 S14		1204	NITROGLYCERIN SOLUTION IN ALCOHOL with not more than 1% nitroglycerin
LGBF		FL	2 (D/E)				S2 S20	33	1206	HEPTANES
LGBF		FL	3 (D/E)	V12			S2	30	1207	HEXALDEHYDE
LGBF		FL	2 (D/E)				S2 S20	33	1208	HEXANES
L4BN		FL	1 (D/E)				S2 S20	33	1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	163 640C	5 L	E2	P001	PP1	MP19	T4	TP1 TP8
1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	163 640D	5 L	E2	P001 IBC02 R001	PP1	MP19	T4	TP1 TP8
1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable	3	F1	III	3	163 640E	5 L	E1	P001 IBC03 LP01 R001	PP1	MP19	T2	TP1
1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)	3	F1	III	3	163 640F	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1
1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)	3	F1	III	3	163 640G	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1
1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	163 640H	5 L	E1	P001 IBC02 LP01 R001	PP1	MP19	T2	TP1
1212	ISOBUTANOL (ISOBUTYL ALCOHOL)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1213	ISOBUTYL ACETATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1214	ISOBUTYLAMINE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
1216	ISOCTENES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1218	ISOPRENE, STABILIZED	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L1.5BN		FL	2 (D/E)				S2 S20	33	1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable
L4BN		FL	3 (D/E)				S2	33	1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)
L1.5BN		FL	3 (D/E)				S2	33	1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)
LGBF		FL	3 (D/E)				S2	33	1210	PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1212	ISOBUTANOL (ISOBUTYL ALCOHOL)
LGBF		FL	2 (D/E)				S2 S20	33	1213	ISOBUTYL ACETATE
L4BH		FL	2 (D/E)				S2 S20	338	1214	ISOBUTYLAMINE
LGBF		FL	2 (D/E)				S2 S20	33	1216	ISOCTENES
L4BN		FL	1 (D/E)				S2 S20	339	1218	ISOPRENE, STABILIZED

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1219	ISOPROPANOL (ISOPROPYL ALCOHOL)	3	F1	II	3	601	1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1220	ISOPROPYL ACETATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1221	ISOPROPYLAMINE	3	FC	I	3 +8		0	E0	P001		MP7 MP17	T11	TP2
1222	ISOPROPYL NITRATE	3	F1	II	3		1 L	E2	P001 IBC02 R001	B7	MP19		
1223	KEROSENE	3	F1	III	3	363	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP2
1224	KETONES, LIQUID, N.O.S. (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	274 640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28
1224	KETONES, LIQUID, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	274 640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28
1224	KETONES, LIQUID, N.O.S.	3	F1	III	3	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
1228	MERCAPTANS, LIQUID, FLAMMABLE, TOXIC, N.O.S. or MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, TOXIC, N.O.S.	3	FT1	II	3 +6.1	274	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27
1228	MERCAPTANS, LIQUID, FLAMMABLE, TOXIC, N.O.S. or MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, TOXIC, N.O.S.	3	FT1	III	3 +6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
1229	MESITYL OXIDE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1230	METHANOL	3	FT1	II	3 +6.1	279	1 L	E2	P001 IBC02		MP19	T7	TP2
1231	METHYL ACETATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1233	METHYLAMYL ACETATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1234	METHYLAL	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T7	TP2
1235	METHYLAMINE, AQUEOUS SOLUTION	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
1237	METHYL BUTYRATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1238	METHYL CHLOROFORMATE	6.1	TFC	I	6.1 +3 +8	354	0	E0	P602		MP8 MP17	T22	TP2 TP35
1239	METHYL CHLORO- METHYL ETHER	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T22	TP2 TP35
1242	METHYLDICHLORO- SILANE	4.3	WFC	I	4.3 +3 +8		0	E0	P401	RR7	MP2	T14	TP2 TP7
1243	METHYL FORMATE	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
1244	METHYLHYDRAZINE	6.1	TFC	I	6.1 +3 +8	354	0	E0	P602		MP8 MP17	T22	TP2 TP35

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	2 (D/E)				S2 S20	33	1219	ISOPROPANOL (ISOPROPYL ALCOHOL)
LGBF		FL	2 (D/E)				S2 S20	33	1220	ISOPROPYL ACETATE
L10CH	TU14 TE21	FL	1 (C/E)				S2 S20	338	1221	ISOPROPYLAMINE
			2 (E)				S2 S20		1222	ISOPROPYL NITRATE
LGBF		FL	3 (D/E)	V12			S2	30	1223	KEROSENE
L1.5BN		FL	2 (D/E)				S2 S20	33	1224	KETONES, LIQUID, N.O.S. (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1224	KETONES, LIQUID, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1224	KETONES, LIQUID, N.O.S.
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	1228	MERCAPTANS, LIQUID, FLAMMABLE, TOXIC, N.O.S. or MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, TOXIC, N.O.S.
L4BH	TU15	FL	3 (D/E)	V12		CV13 CV28	S2	36	1228	MERCAPTANS, LIQUID, FLAMMABLE, TOXIC, N.O.S. or MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, TOXIC, N.O.S.
LGBF		FL	3 (D/E)	V12			S2	30	1229	MESITYL OXIDE
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	1230	METHANOL
LGBF		FL	2 (D/E)				S2 S20	33	1231	METHYL ACETATE
LGBF		FL	3 (D/E)	V12			S2	30	1233	METHYLAMYL ACETATE
L1.5BN		FL	2 (D/E)				S2 S20	33	1234	METHYLAL
L4BH		FL	2 (D/E)				S2 S20	338	1235	METHYLAMINE, AQUEOUS SOLUTION
LGBF		FL	2 (D/E)				S2 S20	33	1237	METHYL BUTYRATE
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1238	METHYL CHLOROFORMATE
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1239	METHYL CHLORO-METHYL ETHER
L10DH	TU14 TU24 TE21 TM2 TM3	FL	0 (B/E)	V1		CV23	S2 S20	X338	1242	METHYLDICHLORO-SILANE
L4BN		FL	1 (D/E)				S2 S20	33	1243	METHYL FORMATE
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1244	METHYLHYDRAZINE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
1245	METHYL ISOBUTYL KETONE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1246	METHYL ISOPROPENYL KETONE, STABILIZED	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1247	METHYL METHACRYLATE MONOMER, STABILIZED	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1248	METHYL PROPIONATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1249	METHYL PROPYL KETONE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1250	METHYLTRICHLORO-SILANE	3	FC	II	3 +8		0	E0	P010		MP19	T10	TP2 TP7
1251	METHYL VINYL KETONE, STABILIZED	6.1	TFC	I	6.1 +3 +8	354	0	E0	P601	RR7	MP8 MP17	T22	TP2 TP37
1259	NICKEL CARBONYL	6.1	TF1	I	6.1 +3		0	E5	P601		MP2		
1261	NITROMETHANE	3	F1	II	3		1 L	E2	P001 R001	RR2	MP19		
1262	OCTANES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound)	3	F1	I	3	163 650	500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP27
1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	163 640C 650	5 L	E2	P001	PP1	MP19	T4	TP1 TP8 TP28
1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	163 640D 650	5 L	E2	P001 IBC02 R001	PP1	MP19	T4	TP1 TP8 TP28
1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound)	3	F1	III	3	163 640E 650	5 L	E1	P001 IBC03 LP01 R001	PP1	MP19	T2	TP1 TP29

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	2 (D/E)				S2 S20	33	1245	METHYL ISOBUTYL KETONE
LGBF		FL	2 (D/E)				S2 S20	339	1246	METHYL ISOPROPENYL KETONE, STABILIZED
LGBF		FL	2 (D/E)				S2 S20	339	1247	METHYL METHACRYLATE MONOMER, STABILIZED
LGBF		FL	2 (D/E)				S2 S20	33	1248	METHYL PROPIONATE
LGBF		FL	2 (D/E)				S2 S20	33	1249	METHYL PROPYL KETONE
L4BH		FL	2 (D/E)				S2 S20	X338	1250	METHYLTRICHLORO-SILANE
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	639	1251	METHYL VINYL KETONE, STABILIZED
L15CH	TU14 TU15 TU31 TE19 TE21 TM3	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1259	NICKEL CARBONYL
			2 (E)				S2 S20		1261	NITROMETHANE
LGBF		FL	2 (D/E)				S2 S20	33	1262	OCTANES
L4BN		FL	1 (D/E)				S2 S20	33	1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound)
L1.5BN		FL	2 (D/E)				S2 S20	33	1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound)

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)	3	F1	III	3	163 640F 650	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1 TP29
1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)	3	F1	III	3	163 640G 650	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1 TP29
1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	163 640H 650	5 L	E1	P001 IBC02 LP01 R001	PP1	MP19	T2	TP1 TP29
1264	PARALDEHYDE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1265	PENTANES, liquid	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
1265	PENTANES, liquid	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T4	TP1
1266	PERFUMERY PRODUCTS with flammable solvents (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	163 640C	5 L	E2	P001		MP19	T4	TP1 TP8
1266	PERFUMERY PRODUCTS with flammable solvents (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	163 640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1266	PERFUMERY PRODUCTS with flammable solvents	3	F1	III	3	163 640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1266	PERFUMERY PRODUCTS with flammable solvents (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)	3	F1	III	3	163 640F	5 L	E1	P001 LP01 R001		MP19	T2	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		FL	3 (D/E)				S2	33	1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)
L1.5BN		FL	3 (D/E)				S2	33	1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)
LGBF		FL	3 (D/E)				S2	33	1263	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound) (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1264	PARALDEHYDE
L4BN		FL	1 (D/E)				S2 S20	33	1265	PENTANES, liquid
L1.5BN		FL	2 (D/E)				S2 S20	33	1265	PENTANES, liquid
L1.5BN		FL	2 (D/E)				S2 S20	33	1266	PERFUMERY PRODUCTS with flammable solvents (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1266	PERFUMERY PRODUCTS with flammable solvents (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1266	PERFUMERY PRODUCTS with flammable solvents
L4BN		FL	3 (D/E)				S2	33	1266	PERFUMERY PRODUCTS with flammable solvents (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
1266	PERFUMERY PRODUCTS with flammable solvents (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)	3	F1	III	3	163 640G	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1266	PERFUMERY PRODUCTS with flammable solvents (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	163 640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T2	TP1
1267	PETROLEUM CRUDE OIL	3	F1	I	3	357	500 ml	E3	P001		MP7 MP17	T11	TP1 TP8
1267	PETROLEUM CRUDE OIL (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	357 640C	1 L	E2	P001		MP19	T4	TP1 TP8
1267	PETROLEUM CRUDE OIL (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	357 640D	1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1267	PETROLEUM CRUDE OIL	3	F1	III	3	357	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S.	3	F1	I	3	363	500 ml	E3	P001		MP7 MP17	T11	TP1 TP8
1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S. (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C 363	1 L	E2	P001		MP19	T7	TP1 TP8 TP28
1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D 363	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28
1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S.	3	F1	III	3	363	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
1272	PINE OIL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1274	n-PROPANOL (PROPYL ALCOHOL, NORMAL)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1274	n-PROPANOL (PROPYL ALCOHOL, NORMAL)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1275	PROPIONALDEHYDE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1
1276	n-PROPYL ACETATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1277	PROPYLAMINE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
1278	I-CHLOROPROPANE	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T7	TP2
1279	1,2-DICHLOROPROPANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L1.5BN		FL	3 (D/E)				S2	33	1266	PERFUMERY PRODUCTS with flammable solvents (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)
LGBF		FL	3 (D/E)				S2	33	1266	PERFUMERY PRODUCTS with flammable solvents (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)
L4BN		FL	1 (D/E)				S2 S20	33	1267	PETROLEUM CRUDE OIL
L1.5BN		FL	2 (D/E)				S2 S20	33	1267	PETROLEUM CRUDE OIL (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1267	PETROLEUM CRUDE OIL (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1267	PETROLEUM CRUDE OIL
L4BN		FL	1 (D/E)				S2 S20	33	1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S.
L1.5BN		FL	2 (D/E)				S2 S20	33	1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S. (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1268	PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S.
LGBF		FL	3 (D/E)	V12			S2	30	1272	PINE OIL
LGBF		FL	2 (D/E)				S2 S20	33	1274	n-PROPANOL (PROPYL ALCOHOL, NORMAL)
LGBF		FL	3 (D/E)	V12			S2	30	1274	n-PROPANOL (PROPYL ALCOHOL, NORMAL)
LGBF		FL	2 (D/E)				S2 S20	33	1275	PROPIONALDEHYDE
LGBF		FL	2 (D/E)				S2 S20	33	1276	n-PROPYL ACETATE
L4BH		FL	2 (D/E)				S2 S20	338	1277	PROPYLAMINE
L1.5BN		FL	2 (D/E)				S2 S20	33	1278	1-CHLOROPROPANE
LGBF		FL	2 (D/E)				S2 S20	33	1279	1,2-DICHLOROPROPANE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1280	PROPYLENE OXIDE	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2 TP7
1281	PROPYL FORMATES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1282	PYRIDINE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP2
1286	ROSIN OIL (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	5 L	E2	P001		MP19	T4	TP1
1286	ROSIN OIL (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	5 L	E2	IBC02 R001		MP19	T4	TP1
1286	ROSIN OIL	3	F1	III	3	640E	5 L	E1	IBC03 LP01 R001		MP19	T2	TP1
1286	ROSIN OIL (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)	3	F1	III	3	640F	5 L	E1	LP01 R001		MP19	T2	TP1
1286	ROSIN OIL (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)	3	F1	III	3	640G	5 L	E1	LP01 R001		MP19	T2	TP1
1286	ROSIN OIL (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	640H	5 L	E1	IBC02 LP01 R001		MP19	T2	TP1
1287	RUBBER SOLUTION (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	5 L	E2	P001		MP19	T4	TP1 TP8
1287	RUBBER SOLUTION (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1287	RUBBER SOLUTION	3	F1	III	3	640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1287	RUBBER SOLUTION (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)	3	F1	III	3	640F	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1287	RUBBER SOLUTION (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)	3	F1	III	3	640G	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1287	RUBBER SOLUTION (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T2	TP1
1288	SHALE OIL	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		FL	1 (D/E)				S2 S20	33	1280	PROPYLENE OXIDE
LGBF		FL	2 (D/E)				S2 S20	33	1281	PROPYL FORMATES
LGBF		FL	2 (D/E)				S2 S20	33	1282	PYRIDINE
L1.5BN		FL	2 (D/E)				S2 S20	33	1286	ROSIN OIL (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1286	ROSIN OIL (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1286	ROSIN OIL
L4BN		FL	3 (D/E)				S2	33	1286	ROSIN OIL (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)
L1.5BN		FL	3 (D/E)				S2	33	1286	ROSIN OIL (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)
LGBF		FL	3 (D/E)				S2	33	1286	ROSIN OIL (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)
L1.5BN		FL	2 (D/E)				S2 S20	33	1287	RUBBER SOLUTION (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1287	RUBBER SOLUTION (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1287	RUBBER SOLUTION
L4BN		FL	3 (D/E)				S2	33	1287	RUBBER SOLUTION (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)
L1.5BN		FL	3 (D/E)				S2	33	1287	RUBBER SOLUTION (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)
LGBF		FL	3 (D/E)				S2	33	1287	RUBBER SOLUTION (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1288	SHALE OIL

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1288	SHALE OIL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1289	SODIUM METHYLATE SOLUTION in alcohol	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1 TP8
1289	SODIUM METHYLATE SOLUTION in alcohol	3	FC	III	3 +8		5 L	E1	P001 IBC02 R001		MP19	T4	TP1
1292	TETRAETHYL SILICATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1293	TINCTURES, MEDICINAL	3	F1	II	3	601	1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1293	TINCTURES, MEDICINAL	3	F1	III	3	601	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1294	TOLUENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1295	TRICHLOROSILANE	4.3	WFC	I	4.3 +3 +8		0	E0	P401	RR7	MP2	T14	TP2 TP7
1296	TRIETHYLAMINE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
1297	TRIMETHYLAMINE, AQUEOUS SOLUTION, not more than 50% trimethylamine, by mass	3	FC	I	3 +8		0	E0	P001		MP7 MP17	T11	TP1
1297	TRIMETHYLAMINE, AQUEOUS SOLUTION, not more than 50% trimethylamine, by mass	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
1297	TRIMETHYLAMINE, AQUEOUS SOLUTION, not more than 50% trimethylamine, by mass	3	FC	III	3 +8		5 L	E1	P001 IBC03 R001		MP19	T7	TP1
1298	TRIMETHYLCHLORO-SILANE	3	FC	II	3 +8		0	E0	P010		MP19	T10	TP2 TP7
1299	TURPENTINE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1300	TURPENTINE SUBSTITUTE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1300	TURPENTINE SUBSTITUTE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1301	VINYL ACETATE, STABILIZED	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1302	VINYL ETHYL ETHER, STABILIZED	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
1303	VINYLDENE CHLORIDE, STABILIZED	3	F1	I	3		0	E3	P001		MP7 MP17	T12	TP2 TP7
1304	VINYL ISOBUTYL ETHER, STABILIZED	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1305	VINYLTRICHLOROSILANE	3	FC	II	3 +8		0	E0	P010		MP19	T10	TP2 TP7
1306	WOOD PRESERVATIVES, LIQUID (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	5 L	E2	P001		MP19	T4	TP1 TP8

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	3 (D/E)	V12			S2	30	1288	SHALE OIL
L4BH		FL	2 (D/E)				S2 S20	338	1289	SODIUM METHYLATE SOLUTION in alcohol
L4BN		FL	3 (D/E)				S2	38	1289	SODIUM METHYLATE SOLUTION in alcohol
LGBF		FL	3 (D/E)	V12			S2	30	1292	TETRAETHYL SILICATE
LGBF		FL	2 (D/E)				S2 S20	33	1293	TINCTURES, MEDICINAL
LGBF		FL	3 (D/E)	V12			S2	30	1293	TINCTURES, MEDICINAL
LGBF		FL	2 (D/E)				S2 S20	33	1294	TOLUENE
L10DH	TU14 TU25 TE21 TM2 TM3	FL	0 (B/E)	V1		CV23	S2 S20	X338	1295	TRICHLOROSILANE
L4BH		FL	2 (D/E)				S2 S20	338	1296	TRIETHYLAMINE
L10CH	TU14 TE21	FL	1 (C/E)				S2 S20	338	1297	TRIMETHYLAMINE, AQUEOUS SOLUTION, not more than 50% trimethylamine, by mass
L4BH		FL	2 (D/E)				S2 S20	338	1297	TRIMETHYLAMINE, AQUEOUS SOLUTION, not more than 50% trimethylamine, by mass
L4BN		FL	3 (D/E)	V12			S2	38	1297	TRIMETHYLAMINE, AQUEOUS SOLUTION, not more than 50% trimethylamine, by mass
L4BH		FL	2 (D/E)				S2 S20	X338	1298	TRIMETHYLCHLOROSILANE
LGBF		FL	3 (D/E)	V12			S2	30	1299	TURPENTINE
LGBF		FL	2 (D/E)				S2 S20	33	1300	TURPENTINE SUBSTITUTE
LGBF		FL	3 (D/E)	V12			S2	30	1300	TURPENTINE SUBSTITUTE
LGBF		FL	2 (D/E)				S2 S20	339	1301	VINYL ACETATE, STABILIZED
L4BN		FL	1 (D/E)				S2 S20	339	1302	VINYL ETHYL ETHER, STABILIZED
L4BN		FL	1 (D/E)				S2 S20	339	1303	VINYLDENE CHLORIDE, STABILIZED
LGBF		FL	2 (D/E)				S2 S20	339	1304	VINYL ISOBUTYL ETHER, STABILIZED
L4BH		FL	2 (D/E)				S2 S20	X338	1305	VINYLTRICHLOROSILANE
L1.5BN		FL	2 (D/E)				S2 S20	33	1306	WOOD PRESERVATIVES, LIQUID (vapour pressure at 50 °C more than 110 kPa)

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1306	WOOD PRESERVATIVES, LIQUID (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1306	WOOD PRESERVATIVES, LIQUID	3	F1	III	3	640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1306	WOOD PRESERVATIVES, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)	3	F1	III	3	640F	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1306	WOOD PRESERVATIVES, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)	3	F1	III	3	640G	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1306	WOOD PRESERVATIVES, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T2	TP1
1307	XYLENES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1307	XYLENES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1308	ZIRCONIUM SUSPENDED IN A FLAMMABLE LIQUID	3	F1	I	3		0	E3	P001	PP33	MP7 MP17		
1308	ZIRCONIUM SUSPENDED IN A FLAMMABLE LIQUID (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	1 L	E2	P001 R001	PP33	MP19		
1308	ZIRCONIUM SUSPENDED IN A FLAMMABLE LIQUID (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	1 L	E2	P001 R001	PP33	MP19		
1308	ZIRCONIUM SUSPENDED IN A FLAMMABLE LIQUID	3	F1	III	3		5 L	E1	P001 R001		MP19		
1309	ALUMINIUM POWDER, COATED	4.1	F3	II	4.1		1 kg	E2	P002 IBC08	PP38 B4	MP11	T3	TP33
1309	ALUMINIUM POWDER, COATED	4.1	F3	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	PP11 B3	MP11	T1	TP33
1310	AMMONIUM PICRATE, WETTED with not less than 10% water, by mass	4.1	D	I	4.1		0	E0	P406	PP26	MP2		
1312	BORNEOL	4.1	F1	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1313	CALCIUM RESINATE	4.1	F3	III	4.1		5 kg	E1	P002 IBC06 R001		MP11	T1	TP33
1314	CALCIUM RESINATE, FUSED	4.1	F3	III	4.1		5 kg	E1	P002 IBC04 R001		MP11	T1	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	2 (D/E)				S2 S20	33	1306	WOOD PRESERVATIVES, LIQUID (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1306	WOOD PRESERVATIVES, LIQUID
L4BN		FL	3 (D/E)				S2	33	1306	WOOD PRESERVATIVES, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)
L1.5BN		FL	3 (D/E)				S2	33	1306	WOOD PRESERVATIVES, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)
LGBF		FL	3 (D/E)				S2	33	1306	WOOD PRESERVATIVES, LIQUID (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1307	XYLENES
LGBF		FL	3 (D/E)	V12			S2	30	1307	XYLENES
L4BN		FL	1 (D/E)				S2 S20	33	1308	ZIRCONIUM SUSPENDED IN A FLAMMABLE LIQUID
L1.5BN		FL	2 (D/E)				S2 S20	33	1308	ZIRCONIUM SUSPENDED IN A FLAMMABLE LIQUID (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1308	ZIRCONIUM SUSPENDED IN A FLAMMABLE LIQUID (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)				S2	30	1308	ZIRCONIUM SUSPENDED IN A FLAMMABLE LIQUID
SGAN		AT	2 (E)	V11				40	1309	ALUMINIUM POWDER, COATED
SGAV		AT	3 (E)		VV1			40	1309	ALUMINIUM POWDER, COATED
			1 (B)				S14		1310	AMMONIUM PICRATE, WETTED with not less than 10% water, by mass
SGAV		AT	3 (E)		VV1			40	1312	BORNEOL
SGAV		AT	3 (E)		VV1			40	1313	CALCIUM RESINATE
SGAV		AT	3 (E)		VV1			40	1314	CALCIUM RESINATE, FUSED

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	(11)
1318	COBALT RESINATE, PRECIPITATED	4.1	F3	III	4.1		5 kg	E1	P002 IBC06 R001		MP11	T1	TP33
1320	DINITROPHENOL, WETTED with not less than 15% water, by mass	4.1	DT	I	4.1 +6.1		0	E0	P406	PP26	MP2		
1321	DINITROPHENOLATES, WETTED with not less than 15% water, by mass	4.1	DT	I	4.1 +6.1		0	E0	P406	PP26	MP2		
1322	DINITRORESORCINOL, WETTED with not less than 15% water, by mass	4.1	D	I	4.1		0	E0	P406	PP26	MP2		
1323	FERROCERIUM	4.1	F3	II	4.1	249	1 kg	E2	P002 IBC08	B4	MP11	T3	TP33
1324	FILMS, NITROCELLULOSE BASE, gelatin coated, except scrap	4.1	F1	III	4.1		5 kg	E1	P002 R001	PP15	MP11		
1325	FLAMMABLE SOLID, ORGANIC, N.O.S.	4.1	F1	II	4.1	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1325	FLAMMABLE SOLID, ORGANIC, N.O.S.	4.1	F1	III	4.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1326	HAFNIUM POWDER, WETTED with not less than 25% water	4.1	F3	II	4.1	586	1 kg	E2	P410 IBC06	PP40	MP11	T3	TP33
1327	Hay, Straw or Bhusa	4.1	F1	NOT SUBJECT TO ADR									
1328	HEXAMETHYLENETE-TRAMINE	4.1	F1	III	4.1		5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33
1330	MANGANESE RESINATE	4.1	F3	III	4.1		5 kg	E1	P002 IBC06 R001		MP11	T1	TP33
1331	MATCHES, 'STRIKE ANYWHERE'	4.1	F1	III	4.1	293	5 kg	E1	P407	PP27	MP12		
1332	METALDEHYDE	4.1	F1	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1333	CERIUM, slabs, ingots or rods	4.1	F3	II	4.1		1 kg	E2	P002 IBC08	B4	MP11		
1334	NAPHTHALENE, CRUDE or NAPHTHALENE, REFINED	4.1	F1	III	4.1	501	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
1336	NITROGUANIDINE (PICRITE), WETTED with not less than 20% water, by mass	4.1	D	I	4.1		0	E0	P406		MP2		
1337	NITROSTARCH, WETTED with not less than 20% water, by mass	4.1	D	I	4.1		0	E0	P406		MP2		
1338	PHOSPHORUS, AMORPHOUS	4.1	F3	III	4.1		5 kg	E1	P410 IBC08 R001	B3	MP11	T1	TP33
1339	PHOSPHORUS HEPTASULPHIDE, free from yellow and white phosphorus	4.1	F3	II	4.1	602	1 kg	E2	P410 IBC04		MP11	T3	TP33
1340	PHOSPHORUS PENTASULPHIDE, free from yellow and white phosphorus	4.3	WF2	II	4.3 +4.1	602	500 g	E2	P410 IBC04		MP14	T3	TP33
1341	PHOSPHORUS SESQUISULPHIDE, free from yellow and white phosphorus	4.1	F3	II	4.1	602	1 kg	E2	P410 IBC04		MP11	T3	TP33
1343	PHOSPHORUS TRISULPHIDE, free from yellow and white phosphorus	4.1	F3	II	4.1	602	1 kg	E2	P410 IBC04		MP11	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAV		AT	3 (E)		VV1			40	1318	COBALT RESINATE, PRECIPITATED
			1 (B)			CV28	S14		1320	DINITROPHENOL, WETTED with not less than 15% water, by mass
			1 (B)			CV28	S14		1321	DINITROPHENOLATES, WETTED with not less than 15% water, by mass
			1 (B)				S14		1322	DINITRORESORCINOL, WETTED with not less than 15% water, by mass
SGAN		AT	2 (E)	V11				40	1323	FERROCERIUM
			3 (E)						1324	FILMS, NITROCELLULOSE BASE, gelatin coated, except scrap
SGAN		AT	2 (E)	V11				40	1325	FLAMMABLE SOLID, ORGANIC, N.O.S.
SGAV		AT	3 (E)		VV1			40	1325	FLAMMABLE SOLID, ORGANIC, N.O.S.
SGAN		AT	2 (E)	V11				40	1326	HAFNIUM POWDER, WETTED with not less than 25% water
NOT SUBJECT TO ADR									1327	Hay, Straw or Bhusa
SGAV		AT	3 (E)		VV1			40	1328	HEXAMETHYLENETE-TRAMINE
SGAV		AT	3 (E)		VV1			40	1330	MANGANESE RESINATE
			4 (E)						1331	MATCHES, 'STRIKE ANYWHERE'
SGAV		AT	3 (E)		VV1			40	1332	METALDEHYDE
			2 (E)	V11					1333	CERIUM, slabs, ingots or rods
SGAV		AT	3 (E)		VV2			40	1334	NAPHTHALENE, CRUDE or NAPHTHALENE, REFINED
			1 (B)				S14		1336	NITROGUANIDINE (PICRITE), WETTED with not less than 20% water, by mass
			1 (B)				S14		1337	NITROSTARCH, WETTED with not less than 20% water, by mass
SGAV		AT	3 (E)		VV1			40	1338	PHOSPHORUS, AMORPHOUS
SGAN		AT	2 (E)					40	1339	PHOSPHORUS HEPTASULPHIDE, free from yellow and white phosphorus
SGAN		AT	0 (D/E)	V1		CV23		423	1340	PHOSPHORUS PENTASULPHIDE, free from yellow and white phosphorus
SGAN		AT	2 (E)					40	1341	PHOSPHORUS SESQUISULPHIDE, free from yellow and white phosphorus
SGAN		AT	2 (E)					40	1343	PHOSPHORUS TRISULPHIDE, free from yellow and white phosphorus

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
1344	TRINITROPHENOL (PICRIC ACID), WETTED with not less than 30% water, by mass	4.1	D	I	4.1		0	E0	P406	PP26	MP2		
1345	RUBBER SCRAP or RUBBER SHODDY, powdered or granulated	4.1	F1	II	4.1		1 kg	E2	P002 IBC08	B4	MP11	T3	TP33
1346	SILICON POWDER, AMORPHOUS	4.1	F3	III	4.1	32	5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33
1347	SILVER PICRATE, WETTED with not less than 30% water, by mass	4.1	D	I	4.1		0	E0	P406	PP25 PP26	MP2		
1348	SODIUM DINITRO-o-CRESOLATE, WETTED with not less than 15% water, by mass	4.1	DT	I	4.1 +6.1		0	E0	P406	PP26	MP2		
1349	SODIUM PICRAMATE, WETTED with not less than 20% water, by mass	4.1	D	I	4.1		0	E0	P406	PP26	MP2		
1350	SULPHUR	4.1	F3	III	4.1	242	5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1 BK1 BK2	TP33
1352	TITANIUM POWDER, WETTED with not less than 25% water	4.1	F3	II	4.1	586	1 kg	E2	P410 IBC06	PP40	MP11	T3	TP33
1353	FIBRES or FABRICS IMPREGNATED WITH WEAKLY NITRATED NITROCELLULOSE, N.O.S.	4.1	F1	III	4.1	502	5 kg	E1	P410 IBC08 R001	B3	MP11		
1354	TRINITROBENZENE, WETTED with not less than 30% water, by mass	4.1	D	I	4.1		0	E0	P406		MP2		
1355	TRINITROBENZOIC ACID, WETTED with not less than 30% water, by mass	4.1	D	I	4.1		0	E0	P406		MP2		
1356	TRINITROTOLUENE (TNT), WETTED with not less than 30% water, by mass	4.1	D	I	4.1		0	E0	P406		MP2		
1357	UREA NITRATE, WETTED with not less than 20% water, by mass	4.1	D	I	4.1	227	0	E0	P406		MP2		
1358	ZIRCONIUM POWDER, WETTED with not less than 25% water	4.1	F3	II	4.1	586	1 kg	E2	P410 IBC06	PP40	MP11	T3	TP33
1360	CALCIUM PHOSPHIDE	4.3	WT2	I	4.3 +6.1		0	E0	P403		MP2		
1361	CARBON, animal or vegetable origin	4.2	S2	II	4.2		0	E2	P002 IBC06	PP12	MP14	T3	TP33
1361	CARBON, animal or vegetable origin	4.2	S2	III	4.2		0	E1	P002 IBC08 LP02 R001	PP12 B3	MP14	T1	TP33
1362	CARBON, ACTIVATED	4.2	S2	III	4.2	646	0	E1	P002 IBC08 LP02 R001	PP11 B3	MP14	T1	TP33
1363	COPRA	4.2	S2	III	4.2		0	E1	P003 IBC08 LP02 R001	PP20 B3 B6	MP14		
1364	COTTON WASTE, OILY	4.2	S2	III	4.2		0	E1	P003 IBC08 LP02 R001	PP19 B3 B6	MP14		
1365	COTTON, WET	4.2	S2	III	4.2		0	E1	P003 IBC08 LP02 R001	PP19 B3 B6	MP14		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B)				S14		1344	TRINITROPHENOL (PICRIC ACID), WETTED with not less than 30% water, by mass
SGAN		AT	4 (E)	V11					40	1345 RUBBER SCRAP or RUBBER SHODDY, powdered or granulated
SGAV		AT	3 (E)		VV1				40	1346 SILICON POWDER, AMORPHOUS
			1 (B)				S14		1347	SILVER PICRATE, WETTED with not less than 30% water, by mass
			1 (B)			CV28	S14		1348	SODIUM DINITRO-o-CRESOLATE, WETTED with not less than 15% water, by mass
			1 (B)				S14		1349	SODIUM PICRAMATE, WETTED with not less than 20% water, by mass
SGAV		AT	3 (E)		VV1				40	1350 SULPHUR
SGAN		AT	2 (E)	V11					40	1352 TITANIUM POWDER, WETTED with not less than 25% water
			3 (E)							1353 FIBRES or FABRICS IMPREGNATED WITH WEAKLY NITRATED NITROCELLULOSE, N.O.S.
			1 (B)				S14		1354	TRINITROBENZENE, WETTED with not less than 30% water, by mass
			1 (B)				S14		1355	TRINITROBENZOIC ACID, WETTED with not less than 30% water, by mass
			1 (B)				S14		1356	TRINITROTOLUENE (TNT), WETTED with not less than 30% water, by mass
			1 (B)				S14		1357	UREA NITRATE, WETTED with not less than 20% water, by mass
SGAN		AT	2 (E)	V11					40	1358 ZIRCONIUM POWDER, WETTED with not less than 25% water
			1 (E)	V1		CV23 CV28	S20		1360	CALCIUM PHOSPHIDE
SGAN	TU11	AT	2 (D/E)	V1 V13					40	1361 CARBON, animal or vegetable origin
SGAV		AT	4 (E)	V1 V13	VV4				40	1361 CARBON, animal or vegetable origin
SGAV		AT	4 (E)	V1	VV4				40	1362 CARBON, ACTIVATED
			3 (E)	V1	VV4				40	1363 COPRA
			3 (E)	V1	VV4				40	1364 COTTON WASTE, OILY
			3 (E)	V1	VV4				40	1365 COTTON, WET

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	(11)
1369	p-NITROSODIMETHYL-ANILINE	4.2	S2	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33
1372	Fibres, animal or fibres, vegetable burnt, wet or damp	4.2	S2	NOT SUBJECT TO ADR									
1373	FIBRES or FABRICS, ANIMAL or VEGETABLE or SYNTHETIC, N.O.S. with oil	4.2	S2	III	4.2		0	E1	P410 IBC08 R001	B3	MP14	T1	TP33
1374	FISH MEAL (FISH SCRAP), UNSTABILIZED	4.2	S2	II	4.2	300	0	E2	P410 IBC08	B4	MP14	T3	TP33
1376	IRON OXIDE, SPENT or IRON SPONGE, SPENT obtained from coal gas purification	4.2	S4	III	4.2	592	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1 BK2	TP33
1378	METAL CATALYST, WETTED with a visible excess of liquid	4.2	S4	II	4.2	274	0	E2	P410 IBC01	PP39	MP14	T3	TP33
1379	PAPER, UNSATURATED OIL TREATED, incompletely dried (including carbon paper)	4.2	S2	III	4.2		0	E1	P410 IBC08 R001	B3	MP14		
1380	PENTABORANE	4.2	ST3	I	4.2 +6.1		0	E0	P601		MP2		
1381	PHOSPHORUS, WHITE or YELLOW, UNDER WATER or IN SOLUTION	4.2	ST3	I	4.2 +6.1	503	0	E0	P405		MP2	T9	TP3 TP31
1381	PHOSPHORUS, WHITE or YELLOW, DRY	4.2	ST4	I	4.2 +6.1	503	0	E0	P405		MP2	T9	TP3 TP31
1382	POTASSIUM SULPHIDE, ANHYDROUS or POTASSIUM SULPHIDE with less than 30% water of crystallization	4.2	S4	II	4.2	504	0	E2	P410 IBC06		MP14	T3	TP33
1383	PYROPHORIC METAL, N.O.S. or PYROPHORIC ALLOY, N.O.S.	4.2	S4	I	4.2	274	0	E0	P404		MP13	T21	TP7 TP33
1384	SODIUM DITHIONITE (SODIUM HYDROSULPHITE)	4.2	S4	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33
1385	SODIUM SULPHIDE, ANHYDROUS or SODIUM SULPHIDE with less than 30% water of crystallization	4.2	S4	II	4.2	504	0	E2	P410 IBC06		MP14	T3	TP33
1386	SEED CAKE with more than 1.5% oil and not more than 11% moisture	4.2	S2	III	4.2		0	E1	P003 IBC08 LP02 R001	PP20 B3 B6	MP14		
1387	Wool waste, wet	4.2	S2	NOT SUBJECT TO ADR									
1389	ALKALI METAL AMALGAM, LIQUID	4.3	W1	I	4.3	182	0	E0	P402	RR8	MP2		
1390	ALKALI METAL AMIDES	4.3	W2	II	4.3	182 505	500 g	E2	P410 IBC07		MP14	T3	TP33
1391	ALKALI METAL DISPERSION or ALKALINE EARTH METAL DISPERSION	4.3	W1	I	4.3	182 183 506	0	E0	P402	RR8	MP2		
1392	ALKALINE EARTH METAL AMALGAM, LIQUID	4.3	W1	I	4.3	183 506	0	E0	P402		MP2		
1393	ALKALINE EARTH METAL ALLOY, N.O.S.	4.3	W2	II	4.3	183 506	500 g	E2	P410 IBC07		MP14	T3	TP33
1394	ALUMINIUM CARBIDE	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33
1395	ALUMINIUM FERROSILICON POWDER	4.3	WT2	II	4.3 +6.1		500 g	E2	P410 IBC05	PP40	MP14	T3	TP33
1396	ALUMINIUM POWDER, UNCOATED	4.3	W2	II	4.3		500 g	E2	P410 IBC07	PP40	MP14	T3	TP33
1396	ALUMINIUM POWDER, UNCOATED	4.3	W2	III	4.3		1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN		AT	2 (D/E)	V1				40	1369	p-NITROSODIMETHYL-ANILINE
NOT SUBJECT TO ADR									1372	Fibres, animal or fibres, vegetable burnt, wet or damp
		AT	3 (E)	V1	VV4			40	1373	FIBRES or FABRICS, ANIMAL or VEGETABLE or SYNTHETIC, N.O.S. with oil
		AT	2 (D/E)	V1				40	1374	FISH MEAL (FISH SCRAP), UNSTABILIZED
SGAV		AT	3 (E)	V1	VV4			40	1376	IRON OXIDE, SPENT or IRON SPONGE, SPENT obtained from coal gas purification
SGAN		AT	2 (D/E)	V1				40	1378	METAL CATALYST, WETTED with a visible excess of liquid
			3 (E)	V1	VV4			40	1379	PAPER, UNSATURATED OIL TREATED, incompletely dried (including carbon paper)
L21DH	TU14 TC1 TE21 TM1	AT	0 (B/E)	V1		CV28	S20	333	1380	PENTABORANE
L10DH(+)	TU14 TU16 TU21 TE3 TE21	AT	0 (B/E)	V1		CV28	S20	46	1381	PHOSPHORUS, WHITE or YELLOW, UNDER WATER or IN SOLUTION
L10DH(+)	TU14 TU16 TU21 TE3 TE21	AT	0 (B/E)	V1		CV28	S20	46	1381	PHOSPHORUS, WHITE or YELLOW, DRY
SGAN		AT	2 (D/E)	V1				40	1382	POTASSIUM SULPHIDE, ANHYDROUS or POTASSIUM SULPHIDE with less than 30% water of crystallization
		AT	0 (B/E)	V1			S20	43	1383	PYROPHORIC METAL, N.O.S. or PYROPHORIC ALLOY, N.O.S.
SGAN		AT	2 (D/E)	V1				40	1384	SODIUM DITHIONITE (SODIUM HYDROSULPHITE)
SGAN		AT	2 (D/E)	V1				40	1385	SODIUM SULPHIDE, ANHYDROUS or SODIUM SULPHIDE with less than 30% water of crystallization
			3 (E)	V1	VV4			40	1386	SEED CAKE with more than 1.5% oil and not more than 11% moisture
NOT SUBJECT TO ADR									1387	Wool waste, wet
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X323	1389	ALKALI METAL AMALGAM, LIQUID
SGAN		AT	0 (D/E)	V1		CV23		423	1390	ALKALI METAL AMIDES
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X323	1391	ALKALI METAL DISPERSION or ALKALINE EARTH METAL DISPERSION
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X323	1392	ALKALINE EARTH METAL AMALGAM, LIQUID
SGAN		AT	2 (D/E)	V1		CV23		423	1393	ALKALINE EARTH METAL ALLOY, N.O.S.
SGAN		AT	2 (D/E)	V1	VV5	CV23		423	1394	ALUMINIUM CARBIDE
SGAN		AT	2 (D/E)	V1		CV23 CV28		462	1395	ALUMINIUM FERROSILICON POWDER
SGAN		AT	2 (D/E)	V1		CV23		423	1396	ALUMINIUM POWDER, UNCOATED
SGAN		AT	3 (E)	V1	VV5	CV23		423	1396	ALUMINIUM POWDER, UNCOATED

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
1397	ALUMINIUM PHOSPHIDE	4.3	WT2	I	4.3 +6.1	507	0	E0	P403		MP2			
1398	ALUMINIUM SILICON POWDER, UNCOATED	4.3	W2	III	4.3	37	1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33	
1400	BARIUM	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	
1401	CALCIUM	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	
1402	CALCIUM CARBIDE	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2	T9	TP7 TP33	
1402	CALCIUM CARBIDE	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	
1403	CALCIUM CYANAMIDE with more than 0.1% calcium carbide	4.3	W2	III	4.3	38	1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33	
1404	CALCIUM HYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2			
1405	CALCIUM SILICIDE	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	
1405	CALCIUM SILICIDE	4.3	W2	III	4.3		1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33	
1407	CAESIUM	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2			
1408	FERROSILICON with 30% or more but less than 90% silicon	4.3	WT2	III	4.3 +6.1	39	1 kg	E1	P003 IBC08 R001	PP20 B4 B6	MP14	T1 BK2	TP33	
1409	METAL HYDRIDES, WATER REACTIVE, N.O.S.	4.3	W2	I	4.3	274 508	0	E0	P403		MP2			
1409	METAL HYDRIDES, WATER REACTIVE, N.O.S.	4.3	W2	II	4.3	274 508	500 g	E2	P410 IBC04		MP14	T3	TP33	
1410	LITHIUM ALUMINIUM HYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2			
1411	LITHIUM ALUMINIUM HYDRIDE, ETHEREAL	4.3	WF1	I	4.3 +3		0	E0	P402	RR8	MP2			
1413	LITHIUM BOROHYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2			
1414	LITHIUM HYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2			
1415	LITHIUM	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2			
1417	LITHIUM SILICON	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	
1418	MAGNESIUM POWDER or MAGNESIUM ALLOYS POWDER	4.3	WS	I	4.3 +4.2		0	E0	P403		MP2			
1418	MAGNESIUM POWDER or MAGNESIUM ALLOYS POWDER	4.3	WS	II	4.3 +4.2		0	E2	P410 IBC05		MP14	T3	TP33	
1418	MAGNESIUM POWDER or MAGNESIUM ALLOYS POWDER	4.3	WS	III	4.3 +4.2		0	E1	P410 IBC08 R001	B4	MP14	T1	TP33	
1419	MAGNESIUM ALUMINIUM PHOSPHIDE	4.3	WT2	I	4.3 +6.1		0	E0	P403		MP2			
1420	POTASSIUM METAL ALLOYS, LIQUID	4.3	W1	I	4.3		0	E0	P402		MP2			
1421	ALKALI METAL ALLOY, LIQUID, N.O.S.	4.3	W1	I	4.3	182	0	E0	P402	RR8	MP2			
1422	POTASSIUM SODIUM ALLOYS, LIQUID	4.3	W1	I	4.3		0	E0	P402		MP2	T9	TP3 TP7 TP31	
1423	RUBIDIUM	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2			
1426	SODIUM BOROHYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2			

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (E)	V1		CV23 CV28	S20		1397	ALUMINIUM PHOSPHIDE
SGAN		AT	3 (E)	V1	VV5	CV23		423	1398	ALUMINIUM SILICON POWDER, UNCOATED
SGAN		AT	2 (D/E)	V1		CV23		423	1400	BARIUM
SGAN		AT	2 (D/E)	V1		CV23		423	1401	CALCIUM
S2.65AN(+)	TU4 TU22 TM2 TA5	AT	1 (B/E)	V1		CV23	S20	X423	1402	CALCIUM CARBIDE
SGAN		AT	2 (D/E)	V1	VV5	CV23		423	1402	CALCIUM CARBIDE
SGAN		AT	0 (E)	V1		CV23		423	1403	CALCIUM CYANAMIDE with more than 0.1% calcium carbide
			1 (E)	V1		CV23	S20		1404	CALCIUM HYDRIDE
SGAN		AT	2 (D/E)	V1	VV7	CV23		423	1405	CALCIUM SILICIDE
SGAN		AT	3 (E)	V1	VV5 VV7	CV23		423	1405	CALCIUM SILICIDE
L10CH(+)	TU2 TU14 TE5 TE21 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	1407	CAESIUM
SGAN		AT	3 (E)	V1	VV1	CV23 CV28		462	1408	FERROSILICON with 30% or more but less than 90% silicon
			1 (E)	V1		CV23	S20		1409	METAL HYDRIDES, WATER REACTIVE, N.O.S.
SGAN		AT	2 (D/E)	V1		CV23		423	1409	METAL HYDRIDES, WATER REACTIVE, N.O.S.
			1 (E)	V1		CV23	S20		1410	LITHIUM ALUMINIUM HYDRIDE
			1 (E)	V1		CV23	S2 S20		1411	LITHIUM ALUMINIUM HYDRIDE, ETHEREAL
			1 (E)	V1		CV23	S20		1413	LITHIUM BOROHYDRIDE
			1 (E)	V1		CV23	S20		1414	LITHIUM HYDRIDE
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	1415	LITHIUM
SGAN		AT	2 (D/E)	V1		CV23		423	1417	LITHIUM SILICON
			1 (E)	V1		CV23	S20		1418	MAGNESIUM POWDER or MAGNESIUM ALLOYS POWDER
SGAN		AT	2 (D/E)	V1		CV23		423	1418	MAGNESIUM POWDER or MAGNESIUM ALLOYS POWDER
SGAN		AT	3 (E)	V1	VV5	CV23		423	1418	MAGNESIUM POWDER or MAGNESIUM ALLOYS POWDER
			1 (E)	V1		CV23 CV28	S20		1419	MAGNESIUM ALUMINIUM PHOSPHIDE
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X323	1420	POTASSIUM METAL ALLOYS, LIQUID
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X323	1421	ALKALI METAL ALLOY, LIQUID, N.O.S.
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X323	1422	POTASSIUM SODIUM ALLOYS, LIQUID
L10CH(+)	TU2 TU14 TE5 TE21 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	1423	RUBIDIUM
			1 (E)	V1		CV23	S20		1426	SODIUM BOROHYDRIDE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1427	SODIUM HYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2		
1428	SODIUM	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2	T9	TP7 TP33
1431	SODIUM METHYLATE	4.2	SC4	II	4.2 +8		0	E2	P410 IBC05		MP14	T3	TP33
1432	SODIUM PHOSPHIDE	4.3	WT2	I	4.3 +6.1		0	E0	P403		MP2		
1433	STANNIC PHOSPHIDES	4.3	WT2	I	4.3 +6.1		0	E0	P403		MP2		
1435	ZINC ASHES	4.3	W2	III	4.3		1 kg	E1	P002 IBC08 R001	B4	MP14	T1	TP33
1436	ZINC POWDER or ZINC DUST	4.3	WS	I	4.3 +4.2		0	E0	P403		MP2		
1436	ZINC POWDER or ZINC DUST	4.3	WS	II	4.3 +4.2		0	E2	P410 IBC07	PP40	MP14	T3	TP33
1436	ZINC POWDER or ZINC DUST	4.3	WS	III	4.3 +4.2		0	E1	P410 IBC08 R001	B4	MP14	T1	TP33
1437	ZIRCONIUM HYDRIDE	4.1	F3	II	4.1		1 kg	E2	P410 IBC04	PP40	MP11	T3	TP33
1438	ALUMINIUM NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
1439	AMMONIUM DICHROMATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1442	AMMONIUM PERCHLORATE	5.1	O2	II	5.1	152	1 kg	E2	P002 IBC06		MP2	T3	TP33
1444	AMMONIUM PERSULPHATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1445	BARIUM CHLORATE, SOLID	5.1	OT2	II	5.1 +6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1446	BARIUM NITRATE	5.1	OT2	II	5.1 +6.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1447	BARIUM PERCHLORATE, SOLID	5.1	OT2	II	5.1 +6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1448	BARIUM PERMANGANATE	5.1	OT2	II	5.1 +6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1449	BARIUM PEROXIDE	5.1	OT2	II	5.1 +6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1450	BROMATES, INORGANIC, N.O.S.	5.1	O2	II	5.1	274 350	1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1451	CAESIUM NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1452	CALCIUM CHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1453	CALCIUM CHLORITE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1454	CALCIUM NITRATE	5.1	O2	III	5.1	208	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
1455	CALCIUM PERCHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1456	CALCIUM PERMANGANATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1457	CALCIUM PEROXIDE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1458	CHLORATE AND BORATE MIXTURE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1458	CHLORATE AND BORATE MIXTURE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33
1459	CHLORATE AND MAGNESIUM CHLORIDE MIXTURE, SOLID	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (E)	V1		CV23	S20		1427	SODIUM HYDRIDE
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	1428	SODIUM
SGAN		AT	2 (D/E)	V1				48	1431	SODIUM METHYLATE
			1 (E)	V1		CV23 CV28	S20		1432	SODIUM PHOSPHIDE
			1 (E)	V1		CV23 CV28	S20		1433	STANNIC PHOSPHIDES
SGAN		AT	3 (E)	V1	VV5	CV23		423	1435	ZINC ASHES
			1 (E)	V1		CV23	S20		1436	ZINC POWDER or ZINC DUST
SGAN		AT	2 (D/E)	V1		CV23		423	1436	ZINC POWDER or ZINC DUST
SGAN		AT	3 (E)	V1	VV5	CV23		423	1436	ZINC POWDER or ZINC DUST
SGAN		AT	2 (E)					40	1437	ZIRCONIUM HYDRIDE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1438	ALUMINIUM NITRATE
SGAN	TU3	AT	2 (E)	V11		CV24		50	1439	AMMONIUM DICHROMATE
		AT	2 (E)	V11	VV8	CV24	S23	50	1442	AMMONIUM PERCHLORATE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1444	AMMONIUM PERSULPHATE
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	1445	BARIUM CHLORATE, SOLID
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	1446	BARIUM NITRATE
SGAN	TU3	AT	2 (E)	V11		CV24 CV28	S23	56	1447	BARIUM PERCHLORATE, SOLID
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	1448	BARIUM PERMANGANATE
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	1449	BARIUM PEROXIDE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1450	BROMATES, INORGANIC, N.O.S.
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1451	CAESIUM NITRATE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1452	CALCIUM CHLORATE
SGAN	TU3	AT	2 (E)	V11		CV24		50	1453	CALCIUM CHLORITE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1454	CALCIUM NITRATE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24	S23	50	1455	CALCIUM PERCHLORATE
SGAN	TU3	AT	2 (E)	V11		CV24		50	1456	CALCIUM PERMANGANATE
SGAN	TU3	AT	2 (E)	V11		CV24		50	1457	CALCIUM PEROXIDE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1458	CHLORATE AND BORATE MIXTURE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1458	CHLORATE AND BORATE MIXTURE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1459	CHLORATE AND MAGNESIUM CHLORIDE MIXTURE, SOLID

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
1459	CHLORATE AND MAGNESIUM CHLORIDE MIXTURE, SOLID	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33	
1461	CHLORATES, INORGANIC, N.O.S.	5.1	O2	II	5.1	274 351	1 kg	E2	P002 IBC06		MP2	T3	TP33	
1462	CHLORITES, INORGANIC, N.O.S.	5.1	O2	II	5.1	274 352 509	1 kg	E2	P002 IBC06		MP2	T3	TP33	
1463	CHROMIUM TRIOXIDE, ANHYDROUS	5.1	OTC	II	5.1 +6.1 +8	510	1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	
1465	DIDYMIUM NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1466	FERRIC NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1467	GUANIDINE NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1469	LEAD NITRATE	5.1	OT2	II	5.1 +6.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	
1470	LEAD PERCHLORATE, SOLID	5.1	OT2	II	5.1 +6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	
1471	LITHIUM HYPOCHLORITE, DRY or LITHIUM HYPOCHLORITE MIXTURE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10			
1471	LITHIUM HYPOCHLORITE, DRY or LITHIUM HYPOCHLORITE MIXTURE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1472	LITHIUM PEROXIDE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	
1473	MAGNESIUM BROMATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	
1474	MAGNESIUM NITRATE	5.1	O2	III	5.1	332	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33	
1475	MAGNESIUM PERCHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	
1476	MAGNESIUM PEROXIDE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	
1477	NITRATES, INORGANIC, N.O.S.	5.1	O2	II	5.1	511	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
1477	NITRATES, INORGANIC, N.O.S.	5.1	O2	III	5.1	511	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1479	OXIDIZING SOLID, N.O.S.	5.1	O2	I	5.1	274	0	E0	P503 IBC05		MP2			
1479	OXIDIZING SOLID, N.O.S.	5.1	O2	II	5.1	274	1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	
1479	OXIDIZING SOLID, N.O.S.	5.1	O2	III	5.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33	
1481	PERCHLORATES, INORGANIC, N.O.S.	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	
1481	PERCHLORATES, INORGANIC, N.O.S.	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33	
1482	PERMANGANATES, INORGANIC, N.O.S.	5.1	O2	II	5.1	274 353	1 kg	E2	P002 IBC06		MP2	T3	TP33	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1459	CHLORATE AND MAGNESIUM CHLORIDE MIXTURE, SOLID
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1461	CHLORATES, INORGANIC, N.O.S.
SGAN	TU3	AT	2 (E)	V11		CV24		50	1462	CHLORITES, INORGANIC, N.O.S.
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		568	1463	CHROMIUM TRIOXIDE, ANHYDROUS
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1465	DIDYMIUM NITRATE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1466	FERRIC NITRATE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1467	GUANIDINE NITRATE
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	1469	LEAD NITRATE
SGAN	TU3	AT	2 (E)	V11		CV24 CV28	S23	56	1470	LEAD PERCHLORATE, SOLID
SGAN	TU3	AT	2 (E)	V11		CV24		50	1471	LITHIUM HYPOCHLORITE, DRY or LITHIUM HYPOCHLORITE MIXTURE
SGAV	TU3	AT	3 (E)			CV24		50	1471	LITHIUM HYPOCHLORITE, DRY or LITHIUM HYPOCHLORITE MIXTURE
SGAN	TU3	AT	2 (E)	V11		CV24		50	1472	LITHIUM PEROXIDE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1473	MAGNESIUM BROMATE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1474	MAGNESIUM NITRATE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24	S23	50	1475	MAGNESIUM PERCHLORATE
SGAN	TU3	AT	2 (E)	V11		CV24		50	1476	MAGNESIUM PEROXIDE
SGAN	TU3	AT	2 (E)	V11		CV24		50	1477	NITRATES, INORGANIC, N.O.S.
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1477	NITRATES, INORGANIC, N.O.S.
			1 (E)	V10		CV24	S20		1479	OXIDIZING SOLID, N.O.S.
SGAN	TU3	AT	2 (E)	V11		CV24		50	1479	OXIDIZING SOLID, N.O.S.
SGAN	TU3	AT	3 (E)			CV24		50	1479	OXIDIZING SOLID, N.O.S.
SGAV	TU3	AT	2 (E)	V11	VV8	CV24	S23	50	1481	PERCHLORATES, INORGANIC, N.O.S.
SGAV	TU3	AT	3 (E)		VV8	CV24	S23	50	1481	PERCHLORATES, INORGANIC, N.O.S.
SGAN	TU3	AT	2 (E)	V11		CV24		50	1482	PERMANGANATES, INORGANIC, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
1482	PERMANGANATES, INORGANIC, N.O.S.	5.1	O2	III	5.1	274 353	5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33
1483	PEROXIDES, INORGANIC, N.O.S.	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1483	PEROXIDES, INORGANIC, N.O.S.	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33
1484	POTASSIUM BROMATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1485	POTASSIUM CHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1486	POTASSIUM NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
1487	POTASSIUM NITRATE AND SODIUM NITRITE MIXTURE	5.1	O2	II	5.1	607	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1488	POTASSIUM NITRITE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1489	POTASSIUM PERCHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1490	POTASSIUM PERMANGANATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1491	POTASSIUM PEROXIDE	5.1	O2	I	5.1		0	E0	P503 IBC06		MP2		
1492	POTASSIUM PERSULPHATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1493	SILVER NITRATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1494	SODIUM BROMATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1495	SODIUM CHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3 BK1 BK2	TP33
1496	SODIUM CHLORITE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1498	SODIUM NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
1499	SODIUM NITRATE AND POTASSIUM NITRATE MIXTURE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
1500	SODIUM NITRITE	5.1	OT2	III	5.1 +6.1		5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33
1502	SODIUM PERCHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1503	SODIUM PERMANGANATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1504	SODIUM PEROXIDE	5.1	O2	I	5.1		0	E0	P503 IBC05		MP2		
1505	SODIUM PERSULPHATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1506	STRONTIUM CHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1507	STRONTIUM NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1508	STRONTIUM PERCHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1509	STRONTIUM PEROXIDE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN	TU3	AT	3 (E)			CV24		50	1482	PERMANGANATES, INORGANIC, N.O.S.
SGAN	TU3	AT	2 (E)	V11		CV24		50	1483	PEROXIDES, INORGANIC, N.O.S.
SGAN	TU3	AT	3 (E)			CV24		50	1483	PEROXIDES, INORGANIC, N.O.S.
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1484	POTASSIUM BROMATE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1485	POTASSIUM CHLORATE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1486	POTASSIUM NITRATE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1487	POTASSIUM NITRATE AND SODIUM NITRITE MIXTURE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24	S23	50	1488	POTASSIUM NITRITE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1489	POTASSIUM PERCHLORATE
SGAN	TU3	AT	2 (E)	V11		CV24		50	1490	POTASSIUM PERMANGANATE
			1 (E)	V10		CV24	S20		1491	POTASSIUM PEROXIDE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1492	POTASSIUM PERSULPHATE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1493	SILVER NITRATE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1494	SODIUM BROMATE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1495	SODIUM CHLORATE
SGAN	TU3	AT	2 (E)	V11		CV24		50	1496	SODIUM CHLORITE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1498	SODIUM NITRATE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1499	SODIUM NITRATE AND POTASSIUM NITRATE MIXTURE
SGAN	TU3	AT	3 (E)			CV24 CV28		56	1500	SODIUM NITRITE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24	S23	50	1502	SODIUM PERCHLORATE
SGAN	TU3	AT	2 (E)	V11		CV24		50	1503	SODIUM PERMANGANATE
			1 (E)	V10		CV24	S20		1504	SODIUM PEROXIDE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1505	SODIUM PERSULPHATE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1506	STRONTIUM CHLORATE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1507	STRONTIUM NITRATE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24	S23	50	1508	STRONTIUM PERCHLORATE
SGAN	TU3	AT	2 (E)	V11		CV24		50	1509	STRONTIUM PEROXIDE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
1510	TETRANITROMETHANE	6.1	TO1	I	6.1 +5.1	354 609	0	E0	P602		MP8 MP17			
1511	UREA HYDROGEN PEROXIDE	5.1	OC2	III	5.1 +8		5 kg	E1	P002 IBC08 R001	B3	MP2	T1	TP33	
1512	ZINC AMMONIUM NITRITE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
1513	ZINC CHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	
1514	ZINC NITRATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
1515	ZINC PERMANGANATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	
1516	ZINC PEROXIDE	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	
1517	ZIRCONIUM PICRAMATE, WETTED with not less than 20% water, by mass	4.1	D	I	4.1		0	E0	P406	PP26	MP2			
1541	ACETONE CYANOHYDRIN, STABILIZED	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2 TP37	
1544	ALKALOIDS, SOLID, N.O.S. or ALKALOID SALTS, SOLID, N.O.S.	6.1	T2	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33	
1544	ALKALOIDS, SOLID, N.O.S. or ALKALOID SALTS, SOLID, N.O.S.	6.1	T2	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1544	ALKALOIDS, SOLID, N.O.S. or ALKALOID SALTS, SOLID, N.O.S.	6.1	T2	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1545	ALLYL ISOTHIOCYANATE, STABILIZED	6.1	TF1	II	6.1 +3		100 ml	E4	P001 IBC02		MP15	T7	TP2	
1546	AMMONIUM ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1547	ANILINE	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2	
1548	ANILINE HYDROCHLORIDE	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1549	ANTIMONY COMPOUND, INORGANIC, SOLID, N.O.S.	6.1	T5	III	6.1	45 274 512	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1550	ANTIMONY LACTATE	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1551	ANTIMONY POTASSIUM TARTRATE	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1553	ARSENIC ACID, LIQUID	6.1	T4	I	6.1		0	E5	P001		MP8 MP17	T20	TP2 TP7	
1554	ARSENIC ACID, SOLID	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1555	ARSENIC BROMIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1556	ARSENIC COMPOUND, LIQUID, N.O.S., inorganic, including: Arsenates, n.o.s., Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	6.1	T4	I	6.1	43 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE19 TE21	AT	1 (B/D)			CV1 CV13 CV28	S9 S14	665	1510	TETRANITROMETHANE
SGAN	TU3	AT	3 (E)			CV24		58	1511	UREA HYDROGEN PEROXIDE
SGAN	TU3	AT	2 (E)	V11		CV24		50	1512	ZINC AMMONIUM NITRITE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1513	ZINC CHLORATE
SGAN	TU3	AT	2 (E)	V11		CV24		50	1514	ZINC NITRATE
SGAN	TU3	AT	2 (E)	V11		CV24		50	1515	ZINC PERMANGANATE
SGAN	TU3	AT	2 (E)	V11		CV24		50	1516	ZINC PEROXIDE
			1 (B)				S14		1517	ZIRCONIUM PICRAMATE, WETTED with not less than 20% water, by mass
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	669	1541	ACETONE CYANOHYDRIN, STABILIZED
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1544	ALKALOIDS, SOLID, N.O.S. or ALKALOID SALTS, SOLID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1544	ALKALOIDS, SOLID, N.O.S. or ALKALOID SALTS, SOLID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1544	ALKALOIDS, SOLID, N.O.S. or ALKALOID SALTS, SOLID, N.O.S.
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	639	1545	ALLYL ISOTHIOCYANATE, STABILIZED
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1546	AMMONIUM ARSENATE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1547	ANILINE
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1548	ANILINE HYDROCHLORIDE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1549	ANTIMONY COMPOUND, INORGANIC, SOLID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1550	ANTIMONY LACTATE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1551	ANTIMONY POTASSIUM TARTRATE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1553	ARSENIC ACID, LIQUID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1554	ARSENIC ACID, SOLID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1555	ARSENIC BROMIDE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1556	ARSENIC COMPOUND, LIQUID, N.O.S., inorganic, including: Arsenates, n.o.s., Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1556	ARSENIC COMPOUND, LIQUID, N.O.S., inorganic, including: Arsenates, n.o.s., Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	6.1	T4	II	6.1	43 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
1556	ARSENIC COMPOUND, LIQUID, N.O.S., inorganic, including: Arsenates, n.o.s., Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	6.1	T4	III	6.1	43 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
1557	ARSENIC COMPOUND, SOLID, N.O.S., inorganic, including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	6.1	T5	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33
1557	ARSENIC COMPOUND, SOLID, N.O.S., inorganic, including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	6.1	T5	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1557	ARSENIC COMPOUND, SOLID, N.O.S., inorganic, including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	6.1	T5	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1558	ARSENIC	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1559	ARSENIC PENTOXIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1560	ARSENIC TRICHLORIDE	6.1	T4	I	6.1		0	E5	P602		MP8 MP17	T14	TP2
1561	ARSENIC TRIOXIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1562	ARSENICAL DUST	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1564	BARIUM COMPOUND, N.O.S.	6.1	T5	II	6.1	177 274 513 587	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1564	BARIUM COMPOUND, N.O.S.	6.1	T5	III	6.1	177 274 513 587	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1565	BARIUM CYANIDE	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
1566	BERYLLIUM COMPOUND, N.O.S.	6.1	T5	II	6.1	274 514	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1566	BERYLLIUM COMPOUND, N.O.S.	6.1	T5	III	6.1	274 514	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1567	BERYLLIUM POWDER	6.1	TF3	II	6.1 +4.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1569	BROMOACETONE	6.1	TF1	II	6.1 +3		0	E4	P602		MP15	T20	TP2
1570	BRUCINE	6.1	T2	I	6.1	43	0	E5	P002 IBC07		MP18	T6	TP33
1571	BARIUM AZIDE, WETTED with not less than 50% water, by mass	4.1	DT	I	4.1 +6.1	568	0	E0	P406		MP2		
1572	CACODYLIC ACID	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1573	CALCIUM ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1556	ARSENIC COMPOUND, LIQUID, N.O.S., inorganic, including: Arsenates, n.o.s., Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1556	ARSENIC COMPOUND, LIQUID, N.O.S., inorganic, including: Arsenates, n.o.s., Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1557	ARSENIC COMPOUND, SOLID, N.O.S., inorganic, including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1557	ARSENIC COMPOUND, SOLID, N.O.S., inorganic, including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1557	ARSENIC COMPOUND, SOLID, N.O.S., inorganic, including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1558	ARSENIC
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1559	ARSENIC PENTOXIDE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1560	ARSENIC TRICHLORIDE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1561	ARSENIC TRIOXIDE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1562	ARSENICAL DUST
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1564	BARIUM COMPOUND, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1564	BARIUM COMPOUND, N.O.S.
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1565	BARIUM CYANIDE
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1566	BERYLLIUM COMPOUND, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1566	BERYLLIUM COMPOUND, N.O.S.
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	64	1567	BERYLLIUM POWDER
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	1569	BROMOACETONE
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1570	BRUCINE
			1 (B)			CV28	S14		1571	BARIUM AZIDE, WETTED with not less than 50% water, by mass
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1572	CACODYLIC ACID
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1573	CALCIUM ARSENATE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
1574	CALCIUM ARSENATE AND CALCIUM ARSENITE MIXTURE, SOLID	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1575	CALCIUM CYANIDE	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33	
1577	CHLORODINITRO-BENZENES, LIQUID	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2	
1578	CHLORONITROBENZENES, SOLID	6.1	T2	II	6.1	279	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1579	4-CHLORO-o-TOLUIDINE HYDROCHLORIDE, SOLID	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1580	CHLOROPICRIN	6.1	T1	I	6.1	354	0	E0	P601		MP8 MP17	T22	TP2 TP37	
1581	CHLOROPICRIN AND METHYL BROMIDE MIXTURE with more than 2% chloropicrin	2	2T		2.3		0	E0	P200		MP9	(M) T50		
1582	CHLOROPICRIN AND METHYL CHLORIDE MIXTURE	2	2T		2.3		0	E0	P200		MP9	(M) T50		
1583	CHLOROPICRIN MIXTURE, N.O.S.	6.1	T1	I	6.1	274 315 515	0	E5	P602		MP8 MP17			
1583	CHLOROPICRIN MIXTURE, N.O.S.	6.1	T1	II	6.1	274 515	100 ml	E4	P001 IBC02		MP15			
1583	CHLOROPICRIN MIXTURE, N.O.S.	6.1	T1	III	6.1	274 515	5 L	E1	P001 IBC03 LP01 R001		MP19			
1585	COPPER ACETOARSENITE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1586	COPPER ARSENITE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1587	COPPER CYANIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1588	CYANIDES, INORGANIC, SOLID, N.O.S.	6.1	T5	I	6.1	47 274	0	E5	P002 IBC07		MP18	T6	TP33	
1588	CYANIDES, INORGANIC, SOLID, N.O.S.	6.1	T5	II	6.1	47 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1588	CYANIDES, INORGANIC, SOLID, N.O.S.	6.1	T5	III	6.1	47 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1589	CYANOGEN CHLORIDE, STABILIZED	2	2TC		2.3 +8		0	E0	P200		MP9			
1590	DICHLOROANILINES, LIQUID	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2	
1591	o-DICHLOROBENZENE	6.1	T1	III	6.1	279	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
1593	DICHLOROMETHANE	6.1	T1	III	6.1	516	5 L	E1	P001 IBC03 LP01 R001	B8	MP19	T7	TP2	
1594	DIETHYL SULPHATE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	
1595	DIMETHYL SULPHATE	6.1	TC1	I	6.1 +8	354	0	E0	P602		MP8 MP17	T20	TP2 TP35	
1596	DINITROANILINES	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1597	DINITROBENZENES, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1574	CALCIUM ARSENATE AND CALCIUM ARSENITE MIXTURE, SOLID
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1575	CALCIUM CYANIDE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1577	CHLORODINITRO-BENZENES, LIQUID
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1578	CHLORONITROBENZENES, SOLID
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1579	4-CHLORO-o-TOLUIDINE HYDROCHLORIDE, SOLID
L15CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	1580	CHLOROPICRIN
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	1581	CHLOROPICRIN AND METHYL BROMIDE MIXTURE with more than 2% chloropicrin
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	1582	CHLOROPICRIN AND METHYL CHLORIDE MIXTURE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1583	CHLOROPICRIN MIXTURE, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1583	CHLOROPICRIN MIXTURE, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1583	CHLOROPICRIN MIXTURE, N.O.S.
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1585	COPPER ACETOARSENITE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1586	COPPER ARSENITE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1587	COPPER CYANIDE
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1588	CYANIDES, INORGANIC, SOLID, N.O.S.
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1588	CYANIDES, INORGANIC, SOLID, N.O.S.
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1588	CYANIDES, INORGANIC, SOLID, N.O.S.
			1 (D)			CV9 CV10 CV36	S14		1589	CYANOGEN CHLORIDE, STABILIZED
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1590	DICHLOROANILINES, LIQUID
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1591	o-DICHLOROBENZENE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1593	DICHLOROMETHANE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1594	DIETHYL SULPHATE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	668	1595	DIMETHYL SULPHATE
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1596	DINITROANILINES
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1597	DINITROBENZENES, LIQUID

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1597	DINITROBENZENES, LIQUID	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2
1598	DINITRO-o-CRESOL	6.1	T2	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1599	DINITROPHENOL SOLUTION	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1599	DINITROPHENOL SOLUTION	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1600	DINITROTOLUENES, MOLTEN	6.1	T1	II	6.1		0	E0				T7	TP3
1601	DISINFECTANT, SOLID, TOXIC, N.O.S.	6.1	T2	I	6.1	274	0	E5	P002 IBC07		MP18	T6	TP33
1601	DISINFECTANT, SOLID, TOXIC, N.O.S.	6.1	T2	II	6.1	274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1601	DISINFECTANT, SOLID, TOXIC, N.O.S.	6.1	T2	III	6.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1602	DYE, LIQUID, TOXIC, N.O.S. or DYE INTERMEDIATE, LIQUID, TOXIC, N.O.S.	6.1	T1	I	6.1	274	0	E5	P001		MP8 MP17		
1602	DYE, LIQUID, TOXIC, N.O.S. or DYE INTERMEDIATE, LIQUID, TOXIC, N.O.S.	6.1	T1	II	6.1	274	100 ml	E4	P001 IBC02		MP15		
1602	DYE, LIQUID, TOXIC, N.O.S. or DYE INTERMEDIATE, LIQUID, TOXIC, N.O.S.	6.1	T1	III	6.1	274	5 L	E1	P001 IBC03 LP01 R001		MP19		
1603	ETHYL BROMOACETATE	6.1	TF1	II	6.1 +3		100 ml	E4	P001 IBC02		MP15	T7	TP2
1604	ETHYLENEDIAMINE	8	CF1	II	8 +3		1 L	E2	P001 IBC02		MP15	T7	TP2
1605	ETHYLENE DIBROMIDE	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
1606	FERRIC ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1607	FERRIC ARSENITE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1608	FEROUS ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1611	HEXAETHYL TETRAPHOSPHATE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1612	HEXAETHYL TETRAPHOSPHATE AND COMPRESSED GAS MIXTURE	2	1T		2.3		0	E0	P200		MP9	(M)	
1613	HYDROCYANIC ACID, AQUEOUS SOLUTION (HYDROGEN CYANIDE, AQUEOUS SOLUTION) with not more than 20% hydrogen cyanide	6.1	TF1	I	6.1 +3	48	0	E5	P601		MP8 MP17	T14	TP2
1614	HYDROGEN CYANIDE, STABILIZED, containing less than 3% water and absorbed in a porous inert material	6.1	TF1	I	6.1 +3	603	0	E5	P099 P601	RR10	MP2		
1616	LEAD ACETATE	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1617	LEAD ARSENATES	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1618	LEAD ARSENITES	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1597	DINITROBENZENES, LIQUID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1598	DINITRO-o-CRESOL
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1599	DINITROPHENOL SOLUTION
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1599	DINITROPHENOL SOLUTION
L4BH	TU15 TE19	AT	0 (D/E)			CV13	S9 S19	60	1600	DINITROTOLUENES, MOLTEN
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1601	DISINFECTANT, SOLID, TOXIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1601	DISINFECTANT, SOLID, TOXIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1601	DISINFECTANT, SOLID, TOXIC, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1602	DYE, LIQUID, TOXIC, N.O.S. or DYE INTERMEDIATE, LIQUID, TOXIC, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1602	DYE, LIQUID, TOXIC, N.O.S. or DYE INTERMEDIATE, LIQUID, TOXIC, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1602	DYE, LIQUID, TOXIC, N.O.S. or DYE INTERMEDIATE, LIQUID, TOXIC, N.O.S.
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	1603	ETHYL BROMOACETATE
L4BN		FL	2 (D/E)				S2	83	1604	ETHYLENEDIAMINE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	1605	ETHYLENE DIBROMIDE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1606	FERRIC ARSENATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1607	FERRIC ARSENITE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1608	FEROUS ARSENATE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1611	HEXAETHYL TETRAPHOSPHATE
CxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	1612	HEXAETHYL TETRAPHOSPHATE AND COMPRESSED GAS MIXTURE
L15DH(+)	TU14 TU15 TE19 TE21	FL	0 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1613	HYDROCYANIC ACID, AQUEOUS SOLUTION (HYDROGEN CYANIDE, AQUEOUS SOLUTION) with not more than 20% hydrogen cyanide
			0 (D)			CV1 CV13 CV28	S2 S9 S10 S14		1614	HYDROGEN CYANIDE, STABILIZED, containing less than 3% water and absorbed in a porous inert material
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1616	LEAD ACETATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1617	LEAD ARSENATES
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1618	LEAD ARSENITES

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1620	LEAD CYANIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1621	LONDON PURPLE	6.1	T5	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1622	MAGNESIUM ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1623	MERCURIC ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1624	MERCURIC CHLORIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1625	MERCURIC NITRATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1626	MERCURIC POTASSIUM CYANIDE	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
1627	MERCUROUS NITRATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1629	MERCURY ACETATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1630	MERCURY AMMONIUM CHLORIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1631	MERCURY BENZOATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1634	MERCURY BROMIDES	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1636	MERCURY CYANIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1637	MERCURY GLUCONATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1638	MERCURY IODIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1639	MERCURY NUCLEATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1640	MERCURY OLEATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1641	MERCURY OXIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1642	MERCURY OXYCYANIDE, DESENSITIZED	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1643	MERCURY POTASSIUM IODIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1644	MERCURY SALICYLATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1645	MERCURY SULPHATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1646	MERCURY THIOCYANATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1647	METHYL BROMIDE AND ETHYLENE DIBROMIDE MIXTURE, LIQUID	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2
1648	ACETONITRILE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP2
1649	MOTOR FUEL ANTI-KNOCK MIXTURE	6.1	T3	I	6.1		0	E5	P602		MP8 MP17	T14	TP2
1650	beta-NAPHTHYLAMINE, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1651	NAPHTHYLTHIOUREA	6.1	T2	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1652	NAPHTHYLUREA	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1653	NICKEL CYANIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1654	NICOTINE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15		
1655	NICOTINE COMPOUND, SOLID, N.O.S. or NICOTINE PREPARATION, SOLID, N.O.S.	6.1	T2	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1620	LEAD CYANIDE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1621	LONDON PURPLE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1622	MAGNESIUM ARSENATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1623	MERCURIC ARSENATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1624	MERCURIC CHLORIDE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1625	MERCURIC NITRATE
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1626	MERCURIC POTASSIUM CYANIDE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1627	MERCUROUS NITRATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1629	MERCURY ACETATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1630	MERCURY AMMONIUM CHLORIDE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1631	MERCURY BENZOATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1634	MERCURY BROMIDES
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1636	MERCURY CYANIDE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1637	MERCURY GLUCONATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1638	MERCURY IODIDE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1639	MERCURY NUCLEATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1640	MERCURY OLEATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1641	MERCURY OXIDE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1642	MERCURY OXYCYANIDE, DESENSITIZED
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1643	MERCURY POTASSIUM IODIDE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1644	MERCURY SALICYLATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1645	MERCURY SULPHATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1646	MERCURY THIOCYANATE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	1647	METHYL BROMIDE AND ETHYLENE DIBROMIDE MIXTURE, LIQUID
LGBF		FL	2 (D/E)				S2 S20	33	1648	ACETONITRILE
L10CH	TU14 TU15 TE19 TE21 TT6	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1649	MOTOR FUEL ANTI-KNOCK MIXTURE
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1650	beta-NAPHTHYLAMINE, SOLID
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1651	NAPHTHYLTHIOUREA
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1652	NAPHTHYLUREA
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1653	NICKEL CYANIDE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1654	NICOTINE
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1655	NICOTINE COMPOUND, SOLID, N.O.S. or NICOTINE PREPARATION, SOLID, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1655	NICOTINE COMPOUND, SOLID, N.O.S. or NICOTINE PREPARATION, SOLID, N.O.S.	6.1	T2	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1655	NICOTINE COMPOUND, SOLID, N.O.S. or NICOTINE PREPARATION, SOLID, N.O.S.	6.1	T2	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1656	NICOTINE HYDROCHLORIDE, LIQUID or SOLUTION	6.1	T1	II	6.1	43	100 ml	E4	P001 IBC02		MP15		
1656	NICOTINE HYDROCHLORIDE, LIQUID or SOLUTION	6.1	T1	III	6.1	43	5 L	E1	P001 IBC03 LP01 R001		MP19		
1657	NICOTINE SALICYLATE	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1658	NICOTINE SULPHATE, SOLUTION	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1658	NICOTINE SULPHATE, SOLUTION	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2
1659	NICOTINE TARTRATE	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1660	NITRIC OXIDE, COMPRESSED	2	ITOC		2.3 +5.1 +8		0	E0	P200		MP9		
1661	NITROANILINES (o-, m-, p-)	6.1	T2	II	6.1	279	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1662	NITROBENZENE	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2
1663	NITROPHENOLS (o-, m-, p-)	6.1	T2	III	6.1	279	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1664	NITROTOLUENES, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1665	NITROXYLENES, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1669	PENTACHLOROETHANE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1670	PERCHLOROMETHYL MERCAPTAN	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
1671	PHENOL, SOLID	6.1	T2	II	6.1	279	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1672	PHENYL CARBYLAMINE CHLORIDE	6.1	T1	I	6.1		0	E5	P602		MP8 MP17	T14	TP2
1673	PHENYLENEDIAMINES (o-, m-, p-)	6.1	T2	III	6.1	279	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1674	PHENYLMERCURIC ACETATE	6.1	T3	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1677	POTASSIUM ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1678	POTASSIUM ARSENITE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1679	POTASSIUM CUPROCYANIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1680	POTASSIUM CYANIDE, SOLID	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
1683	SILVER ARSENITE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1684	SILVER CYANIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1685	SODIUM ARSENATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1655	NICOTINE COMPOUND, SOLID, N.O.S. or NICOTINE PREPARATION, SOLID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1655	NICOTINE COMPOUND, SOLID, N.O.S. or NICOTINE PREPARATION, SOLID, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1656	NICOTINE HYDROCHLORIDE, LIQUID or SOLUTION
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1656	NICOTINE HYDROCHLORIDE, LIQUID or SOLUTION
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1657	NICOTINE SALICYLATE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1658	NICOTINE SULPHATE, SOLUTION
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1658	NICOTINE SULPHATE, SOLUTION
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1659	NICOTINE TARTRATE
			1 (D)			CV9 CV10 CV36	S14		1660	NITRIC OXIDE, COMPRESSED
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1661	NITROANILINES (o-, m-, p-)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1662	NITROBENZENE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1663	NITROPHENOLS (o-, m-, p-)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1664	NITROTOLUENES, LIQUID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1665	NITROXYLENES, LIQUID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1669	PENTACHLOROETHANE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	1670	PERCHLOROMETHYL MERCAPTAN
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1671	PHENOL, SOLID
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1672	PHENYL CARBYLAMINE CHLORIDE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1673	PHENYLENEDIAMINES (o-, m-, p-)
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1674	PHENYLMERCURIC ACETATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1677	POTASSIUM ARSENATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1678	POTASSIUM ARSENITE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1679	POTASSIUM CUPROCYANIDE
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1680	POTASSIUM CYANIDE, SOLID
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1683	SILVER ARSENITE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1684	SILVER CYANIDE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1685	SODIUM ARSENATE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1686	SODIUM ARSENITE, AQUEOUS SOLUTION	6.1	T4	II	6.1	43	100 ml	E4	P001 IBC02		MP15	T7	TP2
1686	SODIUM ARSENITE, AQUEOUS SOLUTION	6.1	T4	III	6.1	43	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2
1687	SODIUM AZIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10		
1688	SODIUM CACODYLATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1689	SODIUM CYANIDE, SOLID	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
1690	SODIUM FLUORIDE, SOLID	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1691	STRONTIUM ARSENITE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1692	STRYCHNINE or STRYCHNINE SALTS	6.1	T2	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
1693	TEAR GAS SUBSTANCE, LIQUID, N.O.S.	6.1	T1	I	6.1	274	0	E5	P001		MP8 MP17		
1693	TEAR GAS SUBSTANCE, LIQUID, N.O.S.	6.1	T1	II	6.1	274	0	E4	P001 IBC02		MP15		
1694	BROMOBENZYL CYANIDES, LIQUID	6.1	T1	I	6.1	138	0	E5	P001		MP8 MP17	T14	TP2
1695	CHLOROACETONE, STABILIZED	6.1	TFC	I	6.1 +3 +8	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
1697	CHLOROACETOPHENONE, SOLID	6.1	T2	II	6.1		0	E4	P002 IBC08	B4	MP10	T3	TP33
1698	DIPHENYLAMINE CHLOROARSINE	6.1	T3	I	6.1		0	E5	P002		MP18	T6	TP33
1699	DIPHENYLCHLOROARSINE, LIQUID	6.1	T3	I	6.1		0	E5	P001		MP8 MP17		
1700	TEAR GAS CANDLES	6.1	TF3	II	6.1 +4.1		0	E0	P600				
1701	XYLYL BROMIDE, LIQUID	6.1	T1	II	6.1		0	E4	P001 IBC02		MP15	T7	TP2
1702	1,1,2,2-TETRACHLOROETHANE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1704	TETRAETHYL DITHIOPYROPHOSPHATE	6.1	T1	II	6.1	43	100 ml	E4	P001 IBC02		MP15	T7	TP2
1707	THALLIUM COMPOUND, N.O.S.	6.1	T5	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1708	TOLUIDINES, LIQUID	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2
1709	2,4-TOLUYLENEDIAMINE, SOLID	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1710	TRICHLOROETHYLENE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1711	XYLIDINES, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1712	ZINC ARSENATE, ZINC ARSENITE or ZINC ARSENATE AND ZINC ARSENITE MIXTURE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1713	ZINC CYANIDE	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
1714	ZINC PHOSPHIDE	4.3	WT2	I	4.3 +6.1		0	E0	P403		MP2		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1686	SODIUM ARSENITE, AQUEOUS SOLUTION
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1686	SODIUM ARSENITE, AQUEOUS SOLUTION
			2 (D/E)	V11		CV13 CV28	S9 S19		1687	SODIUM AZIDE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1688	SODIUM CACODYLATE
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1689	SODIUM CYANIDE, SOLID
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1690	SODIUM FLUORIDE, SOLID
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1691	STRONTIUM ARSENITE
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1692	STRYCHNINE or STRYCHNINE SALTS
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1693	TEAR GAS SUBSTANCE, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1693	TEAR GAS SUBSTANCE, LIQUID, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1694	BROMOBENZYL CYANIDES, LIQUID
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1695	CHLOROACETONE, STABILIZED
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1697	CHLOROACETOPHENONE, SOLID
S10AH	TU15 TE19	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1698	DIPHENYLAMINE CHLOROARSINE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1699	DIPHENYLCHLOROARSINE, LIQUID
			2 (D/E)			CV13 CV28	S9 S19		1700	TEAR GAS CANDLES
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1701	XYLYL BROMIDE, LIQUID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1702	1,1,2,2-TETRACHLOROETHANE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1704	TETRAETHYL DITHIOPYROPHOSPHATE
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1707	THALLIUM COMPOUND, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1708	TOLUIDINES, LIQUID
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1709	2,4-TOLUYLENEDIAMINE, SOLID
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1710	TRICHLOROETHYLENE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1711	XYLIDINES, LIQUID
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1712	ZINC ARSENATE, ZINC ARSENITE or ZINC ARSENATE AND ZINC ARSENITE MIXTURE
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1713	ZINC CYANIDE
			1 (E)	V1		CV23 CV28	S14		1714	ZINC PHOSPHIDE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1715	ACETIC ANHYDRIDE	8	CF1	II	8 +3		1 L	E2	P001 IBC02		MP15	T7	TP2
1716	ACETYL BROMIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
1717	ACETYL CHLORIDE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T8	TP2
1718	BUTYL ACID PHOSPHATE	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1719	CAUSTIC ALKALI LIQUID, N.O.S.	8	C5	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
1719	CAUSTIC ALKALI LIQUID, N.O.S.	8	C5	III	8	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
1722	ALLYL CHLOROFORMATE	6.1	TFC	I	6.1 +3 +8		0	E5	P001		MP8 MP17	T14	TP2
1723	ALLYL IODIDE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP2
1724	ALLYLTRICHLOROSILANE, STABILIZED	8	CF1	II	8 +3		0	E0	P010		MP15	T10	TP2 TP7
1725	ALUMINIUM BROMIDE, ANHYDROUS	8	C2	II	8	588	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1726	ALUMINIUM CHLORIDE, ANHYDROUS	8	C2	II	8	588	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1727	AMMONIUM HYDROGENDIFLUORIDE, SOLID	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1728	AMYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
1729	ANISOYL CHLORIDE	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1730	ANTIMONY PENTACHLORIDE, LIQUID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1731	ANTIMONY PENTACHLORIDE SOLUTION	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1731	ANTIMONY PENTACHLORIDE SOLUTION	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1732	ANTIMONY PENTAFLUORIDE	8	CT1	II	8 +6.1		1 L	E2	P001 IBC02		MP15	T7	TP2
1733	ANTIMONY TRICHLORIDE	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1736	BENZOYL CHLORIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
1737	BENZYL BROMIDE	6.1	TC1	II	6.1 +8		0	E4	P001 IBC02		MP15	T8	TP2
1738	BENZYL CHLORIDE	6.1	TC1	II	6.1 +8		0	E4	P001 IBC02		MP15	T8	TP2
1739	BENZYL CHLOROFORMATE	8	C9	I	8		0	E0	P001		MP8 MP17	T10	TP2
1740	HYDROGENDIFLUORIDES, SOLID, N.O.S.	8	C2	II	8	517	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1740	HYDROGENDIFLUORIDES, SOLID, N.O.S.	8	C2	III	8	517	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1741	BORON TRICHLORIDE	2	2TC		2.3 +8		0	E0	P200		MP9	(M)	
1742	BORON TRIFLUORIDE ACETIC ACID COMPLEX, LIQUID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
1743	BORON TRIFLUORIDE PROPIONIC ACID COMPLEX, LIQUID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		FL	2 (D/E)				S2	83	1715	ACETIC ANHYDRIDE
L4BN		AT	2 (E)					80	1716	ACETYL BROMIDE
L4BH		FL	2 (D/E)				S2 S20	X338	1717	ACETYL CHLORIDE
L4BN		AT	3 (E)	V12				80	1718	BUTYL ACID PHOSPHATE
L4BN		AT	2 (E)					80	1719	CAUSTIC ALKALI LIQUID, N.O.S.
L4BN		AT	3 (E)	V12				80	1719	CAUSTIC ALKALI LIQUID, N.O.S.
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	668	1722	ALLYL CHLOROFORMATE
L4BH		FL	2 (D/E)				S2 S20	338	1723	ALLYL IODIDE
L4BN		FL	2 (D/E)				S2	X839	1724	ALLYLTRICHLOROSILANE, STABILIZED
SGAN		AT	2 (E)	V11				80	1725	ALUMINIUM BROMIDE, ANHYDROUS
SGAN		AT	2 (E)	V11				80	1726	ALUMINIUM CHLORIDE, ANHYDROUS
SGAN		AT	2 (E)	V11				80	1727	AMMONIUM HYDROGENDIFLUORIDE, SOLID
L4BN		AT	2 (E)					X80	1728	AMYLTRICHLOROSILANE
SGAN L4BN		AT	2 (E)	V11				80	1729	ANISOYL CHLORIDE
L4BN		AT	2 (E)					X80	1730	ANTIMONY PENTACHLORIDE, LIQUID
L4BN		AT	2 (E)					80	1731	ANTIMONY PENTACHLORIDE SOLUTION
L4BN		AT	3 (E)	V12				80	1731	ANTIMONY PENTACHLORIDE SOLUTION
L4BN		AT	2 (E)			CV13 CV28		86	1732	ANTIMONY PENTAFLUORIDE
SGAN L4BN		AT	2 (E)	V11				80	1733	ANTIMONY TRICHLORIDE
L4BN		AT	2 (E)					80	1736	BENZOYL CHLORIDE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	1737	BENZYL BROMIDE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	1738	BENZYL CHLORIDE
L10BH		AT	1 (E)				S20	88	1739	BENZYL CHLOROFORMATE
SGAN		AT	2 (E)	V11				80	1740	HYDROGENDIFLUORIDES, SOLID, N.O.S.
SGAV		AT	3 (E)		VV9			80	1740	HYDROGENDIFLUORIDES, SOLID, N.O.S.
		AT	1 (C/D)			CV9 CV10 CV36	S14	268	1741	BORON TRICHLORIDE
L4BN		AT	2 (E)					80	1742	BORON TRIFLUORIDE ACETIC ACID COMPLEX, LIQUID
L4BN		AT	2 (E)					80	1743	BORON TRIFLUORIDE PROPIONIC ACID COMPLEX, LIQUID

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1744	BROMINE or BROMINE SOLUTION	8	CT1	I	8 +6.1		0	E0	P804		MP2	T22	TP2 TP10
1745	BROMINE PENTAFLUORIDE	5.1	OTC	I	5.1 +6.1 +8		0	E0	P200		MP2	T22	TP2
1746	BROMINE TRIFLUORIDE	5.1	OTC	I	5.1 +6.1 +8		0	E0	P200		MP2	T22	TP2
1747	BUTYLTRICHLOROSILANE	8	CF1	II	8 +3		0	E0	P010		MP15	T10	TP2 TP7
1748	CALCIUM HYPOCHLORITE, DRY or CALCIUM HYPOCHLORITE MIXTURE, DRY with more than 39% available chlorine (8.8% available oxygen)	5.1	O2	II	5.1	314	1 kg	E2	P002 IBC08	B4 B13	MP10		
1748	CALCIUM HYPOCHLORITE, DRY or CALCIUM HYPOCHLORITE MIXTURE, DRY with more than 39% available chlorine (8.8% available oxygen)	5.1	O2	III	5.1	316	5 kg	E1	P002 IBC08 R001	B4 B13	MP10		
1749	CHLORINE TRIFLUORIDE	2	2TOC		2.3 +5.1 +8		0	E0	P200		MP9	(M)	
1750	CHLOROACETIC ACID SOLUTION	6.1	TC1	II	6.1 +8		100 ml	E4	P001 IBC02		MP15	T7	TP2
1751	CHLOROACETIC ACID, SOLID	6.1	TC2	II	6.1 +8		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1752	CHLOROACETYL CHLORIDE	6.1	TC1	I	6.1 +8	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
1753	CHLOROPHENYL-TRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
1754	CHLOROSULPHONIC ACID (with or without sulphur trioxide)	8	C1	I	8		0	E0	P001		MP8 MP17	T20	TP2
1755	CHROMIC ACID SOLUTION	8	C1	II	8	518	1 L	E2	P001 IBC02		MP15	T8	TP2
1755	CHROMIC ACID SOLUTION	8	C1	III	8	518	5 L	E1	P001 IBC02 LP01 R001		MP19	T4	TP1
1756	CHROMIC FLUORIDE, SOLID	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1757	CHROMIC FLUORIDE SOLUTION	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1757	CHROMIC FLUORIDE SOLUTION	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1758	CHROMIUM OXYCHLORIDE	8	C1	I	8		0	E0	P001		MP8 MP17	T10	TP2
1759	CORROSIVE SOLID, N.O.S.	8	C10	I	8	274	0	E0	P002 IBC07		MP18	T6	TP33
1759	CORROSIVE SOLID, N.O.S.	8	C10	II	8	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1759	CORROSIVE SOLID, N.O.S.	8	C10	III	8	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1760	CORROSIVE LIQUID, N.O.S.	8	C9	I	8	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
1760	CORROSIVE LIQUID, N.O.S.	8	C9	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
1760	CORROSIVE LIQUID, N.O.S.	8	C9	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L21DH(+)	TU14 TU33 TC5 TE21 TT2 TM3 TM5	AT	1 (C/D)			CV13 CV28	S14	886	1744	BROMINE or BROMINE SOLUTION
L10DH	TU3	AT	1 (B/E)			CV24 CV28	S14	568	1745	BROMINE PENTAFLUORIDE
L10DH	TU3	AT	1 (B/E)			CV24 CV28	S14	568	1746	BROMINE TRIFLUORIDE
L4BN		FL	2 (D/E)				S2	X83	1747	BUTYLTRICHLOROSILANE
SGAN	TU3	AT	2 (E)	V11		CV24 CV35		50	1748	CALCIUM HYPOCHLORITE, DRY or CALCIUM HYPOCHLORITE MIXTURE, DRY with more than 39% available chlorine (8.8% available oxygen)
SGAV	TU3	AT	3 (E)			CV24 CV35		50	1748	CALCIUM HYPOCHLORITE, DRY or CALCIUM HYPOCHLORITE MIXTURE, DRY with more than 39% available chlorine (8.8% available oxygen)
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	1749	CHLORINE TRIFLUORIDE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	1750	CHLOROACETIC ACID SOLUTION
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	68	1751	CHLOROACETIC ACID, SOLID
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	668	1752	CHLOROACETYL CHLORIDE
L4BN		AT	2 (E)					X80	1753	CHLOROPHENYL-TRICHLOROSILANE
L10BH		AT	1 (E)				S20	X88	1754	CHLOROSULPHONIC ACID (with or without sulphur trioxide)
L4BN		AT	2 (E)					80	1755	CHROMIC ACID SOLUTION
L4BN		AT	3 (E)					80	1755	CHROMIC ACID SOLUTION
SGAN		AT	2 (E)	V11				80	1756	CHROMIC FLUORIDE, SOLID
L4BN		AT	2 (E)					80	1757	CHROMIC FLUORIDE SOLUTION
L4BN		AT	3 (E)	V12				80	1757	CHROMIC FLUORIDE SOLUTION
L10BH		AT	1 (E)				S20	X88	1758	CHROMIUM OXYCHLORIDE
S10AN L10BH		AT	1 (E)	V10			S20	88	1759	CORROSIVE SOLID, N.O.S.
SGAN L4BN		AT	2 (E)	V11				80	1759	CORROSIVE SOLID, N.O.S.
SGAV L4BN		AT	3 (E)		VV9			80	1759	CORROSIVE SOLID, N.O.S.
L10BH		AT	1 (E)				S20	88	1760	CORROSIVE LIQUID, N.O.S.
L4BN		AT	2 (E)					80	1760	CORROSIVE LIQUID, N.O.S.
L4BN		AT	3 (E)	V12				80	1760	CORROSIVE LIQUID, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
1761	CUPRIETHYLENEDIAMINE SOLUTION	8	CT1	II	8 +6.1		1 L	E2	P001 IBC02		MP15	T7	TP2	
1761	CUPRIETHYLENEDIAMINE SOLUTION	8	CT1	III	8 +6.1		5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28	
1762	CYCLOHEXENYL-TRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	
1763	CYCLOHEXYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	
1764	DICHLOROACETIC ACID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	
1765	DICHLOROACETYL CHLORIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	
1766	DICHLOROPHENYL-TRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	
1767	DIETHYLDICHLOROSILANE	8	CF1	II	8 +3		0	E0	P010		MP15	T10	TP2 TP7	
1768	DIFLUOROPHOSPHORIC ACID, ANHYDROUS	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	
1769	DIPHENYLDICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	
1770	DIPHENYLMETHYL BROMIDE	8	C10	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
1771	DODECYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	
1773	FERRIC CHLORIDE, ANHYDROUS	8	C2	III	8	590	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1774	FIRE EXTINGUISHER CHARGES, corrosive liquid	8	C11	II	8		1 L	E0	P001	PP4				
1775	FLUOROBORIC ACID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	
1776	FLUOROPHOSPHORIC ACID, ANHYDROUS	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	
1777	FLUOROSULPHONIC ACID	8	C1	I	8		0	E0	P001		MP8 MP17	T10	TP2	
1778	FLUROSILICIC ACID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	
1779	FORMIC ACID with more than 85% acid by mass	8	CF1	II	8 +3		1 L	E2	P001 IBC02		MP15	T7	TP2	
1780	FUMARYL CHLORIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	
1781	HEXADECYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	
1782	HEXAFLUORO-PHOSPHORIC ACID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	
1783	HEXAMETHYLENEDIAMINE SOLUTION	8	C7	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	
1783	HEXAMETHYLENEDIAMINE SOLUTION	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
1784	HEXYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	
1786	HYDROFLUORIC ACID AND SULPHURIC ACID MIXTURE	8	CT1	I	8 +6.1		0	E0	P001		MP8 MP17	T10	TP2	
1787	HYDRIODIC ACID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	
1787	HYDRIODIC ACID	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
1788	HYDROBROMIC ACID	8	C1	II	8	519	1 L	E2	P001 IBC02		MP15	T7	TP2	
1788	HYDROBROMIC ACID	8	C1	III	8	519	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
1789	HYDROCHLORIC ACID	8	C1	II	8	520	1 L	E2	P001 IBC02		MP15	T8	TP2	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	2 (E)			CV13 CV28		86	1761	CUPRIETHYLENEDIAMINE SOLUTION
L4BN		AT	3 (E)	V12		CV13 CV28		86	1761	CUPRIETHYLENEDIAMINE SOLUTION
L4BN		AT	2 (E)					X80	1762	CYCLOHEXYLTRICHLORO-SILANE
L4BN		AT	2 (E)					X80	1763	CYCLOHEXYLTRICHLOROSILANE
L4BN		AT	2 (E)					80	1764	DICHLOROACETIC ACID
L4BN		AT	2 (E)					X80	1765	DICHLOROACETYL CHLORIDE
L4BN		AT	2 (E)					X80	1766	DICHLOROPHENYLTRICHLOROSILANE
L4BN		FL	2 (D/E)				S2	X83	1767	DIETHYLDICHLOROSILANE
L4BN		AT	2 (E)					80	1768	DIFLUOROPHOSPHORIC ACID, ANHYDROUS
L4BN		AT	2 (E)					X80	1769	DIPHENYLDICHLOROSILANE
SGAN L4BN		AT	2 (E)	V11				80	1770	DIPHENYLMETHYL BROMIDE
L4BN		AT	2 (E)					X80	1771	DODECYLTRICHLOROSILANE
SGAV		AT	3 (E)		VV9			80	1773	FERRIC CHLORIDE, ANHYDROUS
			2 (E)						1774	FIRE EXTINGUISHER CHARGES, corrosive liquid
L4BN		AT	2 (E)					80	1775	FLUOROBORIC ACID
L4BN		AT	2 (E)					80	1776	FLUOROPHOSPHORIC ACID, ANHYDROUS
L10BH		AT	1 (E)				S20	88	1777	FLUOROSULPHONIC ACID
L4BN		AT	2 (E)					80	1778	FLUOROSILICIC ACID
L4BN		FL	2 (D/E)				S2	83	1779	FORMIC ACID with more than 85% acid by mass
L4BN		AT	2 (E)					80	1780	FUMARYL CHLORIDE
L4BN		AT	2 (E)					X80	1781	HEXADECYLTRICHLOROSILANE
L4BN		AT	2 (E)					80	1782	HEXAFLUOROPHOSPHORIC ACID
L4BN		AT	2 (E)					80	1783	HEXAMETHYLENEDIAMINE SOLUTION
L4BN		AT	3 (E)	V12				80	1783	HEXAMETHYLENEDIAMINE SOLUTION
L4BN		AT	2 (E)					X80	1784	HEXYLTRICHLOROSILANE
L10DH	TU14 TE21	AT	1 (C/D)			CV13 CV28	S14	886	1786	HYDROFLUORIC ACID AND SULPHURIC ACID MIXTURE
L4BN		AT	2 (E)					80	1787	HYDRIODIC ACID
L4BN		AT	3 (E)	V12				80	1787	HYDRIODIC ACID
L4BN		AT	2 (E)					80	1788	HYDROBROMIC ACID
L4BN		AT	3 (E)	V12				80	1788	HYDROBROMIC ACID
L4BN		AT	2 (E)					80	1789	HYDROCHLORIC ACID

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
1789	HYDROCHLORIC ACID	8	C1	III	8	520	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1790	HYDROFLUORIC ACID with more than 85% hydrogen fluoride	8	CT1	I	8 +6.1	640I	0	E0	P802		MP2	T10	TP2
1790	HYDROFLUORIC ACID with more than 60% but not more than 85% hydrogen fluoride	8	CT1	I	8 +6.1	640J	0	E0	P001	PP81	MP8 MP17	T10	TP2
1790	HYDROFLUORIC ACID with not more than 60% hydrogen fluoride	8	CT1	II	8 +6.1		1 L	E2	P001 IBC02		MP15	T8	TP2
1791	HYPOCHLORITE SOLUTION	8	C9	II	8	521	1 L	E2	P001 IBC02	PP10 B5	MP15	T7	TP2 TP24
1791	HYPOCHLORITE SOLUTION	8	C9	III	8	521	5 L	E1	P001 IBC02 LP01 R001	B5	MP19	T4	TP2 TP24
1792	IODINE MONOCHLORIDE, SOLID	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T7	TP2
1793	ISOPROPYL ACID PHOSPHATE	8	C3	III	8		5 L	E1	P001 IBC02 LP01 R001		MP19	T4	TP1
1794	LEAD SULPHATE with more than 3% free acid	8	C2	II	8	591	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1796	NITRATING ACID MIXTURE with more than 50% nitric acid	8	CO1	I	8 +5.1		0	E0	P001		MP8 MP17	T10	TP2
1796	NITRATING ACID MIXTURE with not more than 50% nitric acid	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
1798	NITROHYDROCHLORIC ACID	8	COT	CARRIAGE PROHIBITED									
1799	NONYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
1800	OCTADECYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
1801	OCTYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
1802	PERCHLORIC ACID with not more than 50% acid, by mass	8	CO1	II	8 +5.1	522	1 L	E2	P001 IBC02		MP3	T7	TP2
1803	PHENOLSULPHONIC ACID, LIQUID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1804	PHENYLTRICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
1805	PHOSPHORIC ACID, SOLUTION	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1806	PHOSPHORUS PENTACHLORIDE	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1807	PHOSPHORUS PENTOXIDE	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1808	PHOSPHORUS TRIBROMIDE	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1809	PHOSPHORUS TRICHLORIDE	6.1	TC3	I	6.1 +8	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
1810	PHOSPHORUS OXYCHLORIDE	6.1	TC3	I	6.1 +8	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
1811	POTASSIUM HYDROGENDIFLUORIDE, SOLID	8	CT2	II	8 +6.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1812	POTASSIUM FLUORIDE, SOLID	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	3 (E)	V12				80	1789	HYDROCHLORIC ACID
L21DH(+)	TU14 TU34 TC1 TE21 TA4 TT9 TM3	AT	1 (C/D)			CV13 CV28	S14	886	1790	HYDROFLUORIC ACID with more than 85% hydrogen fluoride
L10DH	TU14 TE21	AT	1 (C/D)			CV13 CV28	S14	886	1790	HYDROFLUORIC ACID with more than 60% but not more than 85% hydrogen fluoride
L4DH	TU14 TE21	AT	2 (E)			CV13 CV28		86	1790	HYDROFLUORIC ACID with not more than 60% hydrogen fluoride
L4BV(+)	TE11	AT	2 (E)					80	1791	HYPOCHLORITE SOLUTION
L4BV(+)	TE11	AT	3 (E)					80	1791	HYPOCHLORITE SOLUTION
L4BN SGAN		AT	2 (E)	V11				80	1792	IODINE MONOCHLORIDE
L4BN		AT	3 (E)					80	1793	ISOPROPYL ACID PHOSPHATE
SGAN		AT	2 (E)	V11	VV9			80	1794	LEAD SULPHATE with more than 3% free acid
L10BH	TC6 TT1	AT	1 (E)			CV24	S14	885	1796	NITRATING ACID MIXTURE with more than 50% nitric acid
L4BN		AT	2 (E)					80	1796	NITRATING ACID MIXTURE with not more than 50% nitric acid
CARRIAGE PROHIBITED									1798	NITROHYDROCHLORIC ACID
L4BN		AT	2 (E)					X80	1799	NONYLTRICHLOROSILANE
L4BN		AT	2 (E)					X80	1800	OCTADECYLTRICHLOROSILANE
L4BN		AT	2 (E)					X80	1801	OCTYLTRICHLOROSILANE
L4BN		AT	2 (E)			CV24		85	1802	PERCHLORIC ACID with not more than 50% acid, by mass
L4BN		AT	2 (E)					80	1803	PHENOLSULPHONIC ACID, LIQUID
L4BN		AT	2 (E)					X80	1804	PHENYLTRICHLOROSILANE
L4BN		AT	3 (E)	V12				80	1805	PHOSPHORIC ACID, SOLUTION
SGAN		AT	2 (E)	V11				80	1806	PHOSPHORUS PENTACHLORIDE
SGAN		AT	2 (E)	V11				80	1807	PHOSPHORUS PENTOXIDE
L4BN		AT	2 (E)					X80	1808	PHOSPHORUS TRIBROMIDE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	668	1809	PHOSPHORUS TRICHLORIDE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	X668	1810	PHOSPHORUS OXYCHLORIDE
SGAN		AT	2 (E)	V11		CV13 CV28		86	1811	POTASSIUM HYDROGENDIFLUORIDE, SOLID
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1812	POTASSIUM FLUORIDE, SOLID

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
1813	POTASSIUM HYDROXIDE, SOLID	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1814	POTASSIUM HYDROXIDE SOLUTION	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1814	POTASSIUM HYDROXIDE SOLUTION	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1815	PROPIONYL CHLORIDE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
1816	PROPYLTRICHLORO-SILANE	8	CF1	II	8 +3		0	E0	P010		MP15	T10	TP2 TP7
1817	PYROSULPHURYL CHLORIDE	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
1818	SILICON TETRACHLORIDE	8	C1	II	8		0	E0	P010		MP15	T10	TP2 TP7
1819	SODIUM ALUMINATE SOLUTION	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1819	SODIUM ALUMINATE SOLUTION	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1823	SODIUM HYDROXIDE, SOLID	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1824	SODIUM HYDROXIDE SOLUTION	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1824	SODIUM HYDROXIDE SOLUTION	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1825	SODIUM MONOXIDE	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1826	NITRATING ACID MIXTURE, SPENT, with more than 50% nitric acid	8	CO1	I	8 +5.1	113	0	E0	P001		MP8 MP17	T10	TP2
1826	NITRATING ACID MIXTURE, SPENT, with not more than 50% nitric acid	8	C1	II	8	113	1 L	E2	P001 IBC02		MP15	T8	TP2
1827	STANNIC CHLORIDE, ANHYDROUS	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1828	SULPHUR CHLORIDES	8	C1	I	8		0	E0	P602		MP8 MP17	T20	TP2
1829	SULPHUR TRIOXIDE, STABILIZED	8	C1	I	8	623	0	E0	P001		MP8 MP17	T20	TP4 TP25 TP26
1830	SULPHURIC ACID with more than 51% acid	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
1831	SULPHURIC ACID, FUMING	8	CT1	I	8 +6.1		0	E0	P602		MP8 MP17	T20	TP2
1832	SULPHURIC ACID, SPENT	8	C1	II	8	113	1 L	E2	P001 IBC02		MP15	T8	TP2
1833	SULPHUROUS ACID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1834	SULPHURYL CHLORIDE	6.1	TC3	I	6.1 +8	354	0	E0	P602		MP8 MP17	T20	TP2
1835	TETRAMETHYL-AMMONIUM HYDROXIDE SOLUTION	8	C7	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1835	TETRAMETHYL-AMMONIUM HYDROXIDE SOLUTION	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2
1836	THIONYL CHLORIDE	8	C1	I	8		0	E0	P802		MP8 MP17	T10	TP2
1837	THIOPHOSPHORYL CHLORIDE	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1838	TITANIUM TETRACHLORIDE	6.1	TC3	I	6.1 +8	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
1839	TRICHLOROACETIC ACID	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN		AT	2 (E)	V11				80	1813	POTASSIUM HYDROXIDE, SOLID
L4BN		AT	2 (E)					80	1814	POTASSIUM HYDROXIDE SOLUTION
L4BN		AT	3 (E)	V12				80	1814	POTASSIUM HYDROXIDE SOLUTION
L4BH		FL	2 (D/E)				S2 S20	338	1815	PROPIONYL CHLORIDE
L4BN		FL	2 (D/E)				S2	X83	1816	PROPYLTRICHLORO-SILANE
L4BN		AT	2 (E)					X80	1817	PYROSULPHURYL CHLORIDE
L4BN		AT	2 (E)					X80	1818	SILICON TETRACHLORIDE
L4BN		AT	2 (E)					80	1819	SODIUM ALUMINATE SOLUTION
L4BN		AT	3 (E)	V12				80	1819	SODIUM ALUMINATE SOLUTION
SGAN		AT	2 (E)	V11				80	1823	SODIUM HYDROXIDE, SOLID
L4BN		AT	2 (E)					80	1824	SODIUM HYDROXIDE SOLUTION
L4BN		AT	3 (E)	V12				80	1824	SODIUM HYDROXIDE SOLUTION
SGAN		AT	2 (E)	V11				80	1825	SODIUM MONOXIDE
L10BH		AT	1 (E)			CV24	S14	885	1826	NITRATING ACID MIXTURE, SPENT, with more than 50% nitric acid
L4BN		AT	2 (E)					80	1826	NITRATING ACID MIXTURE, SPENT, with not more than 50% nitric acid
L4BN		AT	2 (E)					X80	1827	STANNIC CHLORIDE, ANHYDROUS
L10BH		AT	1 (E)				S20	X88	1828	SULPHUR CHLORIDES
L10BH	TU32 TE13 TT5 TM3	AT	1 (E)				S20	X88	1829	SULPHUR TRIOXIDE, STABILIZED
L4BN		AT	2 (E)					80	1830	SULPHURIC ACID with more than 51% acid
L10BH		AT	1 (C/D)			CV13 CV28	S14	X886	1831	SULPHURIC ACID, FUMING
L4BN		AT	2 (E)					80	1832	SULPHURIC ACID, SPENT
L4BN		AT	2 (E)					80	1833	SULPHUROUS ACID
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	X668	1834	SULPHURYL CHLORIDE
L4BN		AT	2 (E)					80	1835	TETRAMETHYL-AMMONIUM HYDROXIDE SOLUTION
L4BN		AT	3 (E)	V12				80	1835	TETRAMETHYL-AMMONIUM HYDROXIDE SOLUTION
L10BH		AT	1 (E)				S20	X88	1836	THIONYL CHLORIDE
L4BN		AT	2 (E)					X80	1837	THIOPHOSPHORYL CHLORIDE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	X668	1838	TITANIUM TETRACHLORIDE
SGAN L4BN		AT	2 (E)	V11				80	1839	TRICHLOROACETIC ACID

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1840	ZINC CHLORIDE SOLUTION	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1841	ACETALDEHYDE AMMONIA	9	M11	III	9		5 kg	E1	P002 IBC08 LP02 R001	B3 B6	MP10	T1	TP33
1843	AMMONIUM DINITRO- <i>o</i> -CRESOLATE, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1845	Carbon dioxide, solid (Dry ice)	9	M11	NOT SUBJECT TO ADR - When used as a coolant, see 5.5.3									
1846	CARBON TETRACHLORIDE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1847	POTASSIUM SULPHIDE, HYDRATED with not less than 30% water of crystallization	8	C6	II	8	523	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1848	PROPIONIC ACID with not less than 10% and less than 90% acid by mass	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1849	SODIUM SULPHIDE, HYDRATED with not less than 30% water	8	C6	II	8	523	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1851	MEDICINE, LIQUID, TOXIC, N.O.S.	6.1	T1	II	6.1	221 601	100 ml	E4	P001		MP15		
1851	MEDICINE, LIQUID, TOXIC, N.O.S.	6.1	T1	III	6.1	221 601	5 L	E1	P001 LP01 R001		MP19		
1854	BARIUM ALLOYS, PYROPHORIC	4.2	S4	I	4.2		0	E0	P404		MP13	T21	TP7 TP33
1855	CALCIUM, PYROPHORIC or CALCIUM ALLOYS, PYROPHORIC	4.2	S4	I	4.2		0	E0	P404		MP13		
1856	Rags, oily	4.2	S2	NOT SUBJECT TO ADR									
1857	Textile waste, wet	4.2	S2	NOT SUBJECT TO ADR									
1858	HEXAFLUOROPROPYLENE (REFRIGERANT GAS R 1216)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1859	SILICON TETRAFLUORIDE	2	2TC		2.3 +8		0	E0	P200		MP9	(M)	
1860	VINYL FLUORIDE, STABILIZED	2	2F		2.1		0	E0	P200		MP9	(M)	
1862	ETHYL CROTONATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP2
1863	FUEL, AVIATION, TURBINE ENGINE	3	F1	I	3	363	500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP28
1863	FUEL, AVIATION, TURBINE ENGINE (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	363 640C	1 L	E2	P001		MP19	T4	TP1 TP8
1863	FUEL, AVIATION, TURBINE ENGINE (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	363 640D	1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1863	FUEL, AVIATION, TURBINE ENGINE	3	F1	III	3	363	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1865	<i>n</i> -PROPYL NITRATE	3	F1	II	3		1 L	E2	P001 IBC02 R001	B7	MP19		
1866	RESIN SOLUTION, flammable	3	F1	I	3		500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP28

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	3 (E)	V12				80	1840	ZINC CHLORIDE SOLUTION
SGAV		AT	3 (E)		VV3			90	1841	ACETALDEHYDE AMMONIA
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1843	AMMONIUM DINITRO-o-CRESOLATE, SOLID
NOT SUBJECT TO ADR - When used as a coolant, see 5.5.3									1845	Carbon dioxide, solid (Dry ice)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1846	CARBON TETRACHLORIDE
SGAN L4BN		AT	2 (E)	V11				80	1847	POTASSIUM SULPHIDE, HYDRATED with not less than 30% water of crystallization
L4BN		AT	3 (E)	V12				80	1848	PROPIONIC ACID with not less than 10% and less than 90% acid by mass
SGAN L4BN		AT	2 (E)	V11				80	1849	SODIUM SULPHIDE, HYDRATED with not less than 30% water
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1851	MEDICINE, LIQUID, TOXIC, N.O.S.
L4BH	TU15 TE19	AT	2 (E)			CV13 CV28	S9	60	1851	MEDICINE, LIQUID, TOXIC, N.O.S.
		AT	0 (B/E)	V1			S20	43	1854	BARIUM ALLOYS, PYROPHORIC
			0 (E)	V1			S20		1855	CALCIUM, PYROPHORIC or CALCIUM ALLOYS, PYROPHORIC
NOT SUBJECT TO ADR									1856	Rags, oily
NOT SUBJECT TO ADR									1857	Textile waste, wet
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1858	HEXAFLUOROPROPYLENE (REFRIGERANT GAS R 1216)
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	1859	SILICON TETRAFLUORIDE
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1860	VINYL FLUORIDE, STABILIZED
LGBF		FL	2 (D/E)				S2 S20	33	1862	ETHYL CROTONATE
L4BN		FL	1 (D/E)				S2 S20	33	1863	FUEL, AVIATION, TURBINE ENGINE
L1.5BN		FL	2 (D/E)				S2 S20	33	1863	FUEL, AVIATION, TURBINE ENGINE (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1863	FUEL, AVIATION, TURBINE ENGINE (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1863	FUEL, AVIATION, TURBINE ENGINE
			2 (E)				S2 S20		1865	n-PROPYL NITRATE
L4BN		FL	1 (D/E)				S2 S20	33	1866	RESIN SOLUTION, flammable

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1866	RESIN SOLUTION, flammable (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	5 L	E2	P001	PP1	MP19	T4	TP1 TP8
1866	RESIN SOLUTION, flammable (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001	PP1	MP19	T4	TP1 TP8
1866	RESIN SOLUTION, flammable	3	F1	III	3	640E	5 L	E1	P001 IBC03 LP01 R001	PP1	MP19	T2	TP1
1866	RESIN SOLUTION, flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)	3	F1	III	3	640F	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1
1866	RESIN SOLUTION, flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)	3	F1	III	3	640G	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1
1866	RESIN SOLUTION, flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	640H	5 L	E1	P001 IBC02 LP01 R001	PP1	MP19	T2	TP1
1868	DECABORANE	4.1	FT2	II	4.1 +6.1		1 kg	E2	P002 IBC06		MP10	T3	TP33
1869	MAGNESIUM or MAGNESIUM ALLOYS with more than 50% magnesium in pellets, turnings or ribbons	4.1	F3	III	4.1	59	5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33
1870	POTASSIUM BOROXYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2		
1871	TITANIUM HYDRIDE	4.1	F3	II	4.1		1 kg	E2	P410 IBC04	PP40	MP11	T3	TP33
1872	LEAD DIOXIDE	5.1	OT2	III	5.1 +6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33
1873	PERCHLORIC ACID with more than 50% but not more than 72% acid, by mass	5.1	OC1	I	5.1 +8	60	0	E0	P502	PP28	MP3	T10	TP1
1884	BARIUM OXIDE	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1885	BENZIDINE	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1886	BENZYLIDENE CHLORIDE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1887	BROMOCHLOROMETHANE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1888	CHLOROFORM	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2
1889	CYANOGEN BROMIDE	6.1	TC2	I	6.1 +8		0	E5	P002		MP18	T6	TP33
1891	ETHYL BROMIDE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02	B8	MP15	T7	TP2

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L1.5BN		FL	2 (D/E)				S2 S20	33	1866	RESIN SOLUTION, flammable (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1866	RESIN SOLUTION, flammable (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1866	RESIN SOLUTION, flammable
L4BN		FL	3 (D/E)				S2	33	1866	RESIN SOLUTION, flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)
L1.5BN		FL	3 (D/E)				S2	33	1866	RESIN SOLUTION, flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)
LGBF		FL	3 (D/E)				S2	33	1866	RESIN SOLUTION, flammable (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)
SGAN		AT	2 (E)	V11		CV28		46	1868	DECABORANE
SGAV		AT	3 (E)		VV1			40	1869	MAGNESIUM or MAGNESIUM ALLOYS with more than 50% magnesium in pellets, turnings or ribbons
			1 (E)	V1		CV23	S20		1870	POTASSIUM BOROXYDRIDE
SGAN		AT	2 (E)					40	1871	TITANIUM HYDRIDE
SGAN	TU3	AT	3 (E)			CV24 CV28		56	1872	LEAD DIOXIDE
L4DN(+)	TU3 TU28	AT	1 (B/E)			CV24	S20	558	1873	PERCHLORIC ACID with more than 50% but not more than 72% acid, by mass
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1884	BARIUM OXIDE
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1885	BENZIDINE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1886	BENZYLIDENE CHLORIDE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1887	BROMOCHLOROMETHANE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1888	CHLOROFORM
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	668	1889	CYANOGEN BROMIDE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1891	ETHYL BROMIDE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
1892	ETHYLDICHLOROARSINE	6.1	T3	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2 TP37	
1894	PHENYLMERCURIC HYDROXIDE	6.1	T3	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1895	PHENYLMERCURIC NITRATE	6.1	T3	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1897	TETRACHLOROETHYLENE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
1898	ACETYL IODIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	
1902	DIISOCTYL ACID PHOSPHATE	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
1903	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.	8	C9	I	8	274	0	E0	P001		MP8 MP17			
1903	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.	8	C9	II	8	274	1 L	E2	P001 IBC02		MP15			
1903	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.	8	C9	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19			
1905	SELENIC ACID	8	C2	I	8		0	E0	P002 IBC07		MP18	T6	TP33	
1906	SLUDGE ACID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2 TP28	
1907	SODA LIME with more than 4% sodium hydroxide	8	C6	III	8	62	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1908	CHLORITE SOLUTION	8	C9	II	8	521	1 L	E2	P001 IBC02		MP15	T7	TP2 TP24	
1908	CHLORITE SOLUTION	8	C9	III	8	521	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2 TP24	
1910	Calcium oxide	8	C6	NOT SUBJECT TO ADR										
1911	DIBORANE	2	2TF		2.3 +2.1		0	E0	P200		MP9			
1912	METHYL CHLORIDE AND METHYLENE CHLORIDE MIXTURE	2	2F		2.1	228	0	E0	P200		MP9	(M) T50		
1913	NEON, REFRIGERATED LIQUID	2	3A		2.2	593	120 ml	E1	P203		MP9	T75	TP5	
1914	BUTYL PROPIONATES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
1915	CYCLOHEXANONE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
1916	2,2'-DICHLORODIETHYL ETHER	6.1	TF1	II	6.1 +3		100 ml	E4	P001 IBC02		MP15	T7	TP2	
1917	ETHYL ACRYLATE, STABILIZED	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	
1918	ISOPROPYLBENZENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
1919	METHYL ACRYLATE, STABILIZED	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	1892	ETHYLDICHLOROARSINE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1894	PHENYLMERCURIC HYDROXIDE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1895	PHENYLMERCURIC NITRATE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1897	TETRACHLOROETHYLENE
L4BN		AT	2 (E)					80	1898	ACETYL IODIDE
L4BN		AT	3 (E)	V12				80	1902	DIISOCTYL ACID PHOSPHATE
L10BH		AT	1 (E)				S20	88	1903	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.
L4BN		AT	2 (E)					80	1903	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.
L4BN		AT	3 (E)	V12				80	1903	DISINFECTANT, LIQUID, CORROSIVE, N.O.S.
S10AN		AT	1 (E)	V10			S20	88	1905	SELENIC ACID
L4BN		AT	2 (E)					80	1906	SLUDGE ACID
SGAV		AT	3 (E)		VV9			80	1907	SODA LIME with more than 4% sodium hydroxide
L4BV(+)	TE11	AT	2 (E)					80	1908	CHLORITE SOLUTION
L4BV(+)	TE11	AT	3 (E)	V12				80	1908	CHLORITE SOLUTION
NOT SUBJECT TO ADR									1910	Calcium oxide
			1 (D)			CV9 CV10 CV36	S2 S14		1911	DIBORANE
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1912	METHYL CHLORIDE AND METHYLENE CHLORIDE MIXTURE
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	1913	NEON, REFRIGERATED LIQUID
LGBF		FL	3 (D/E)	V12			S2	30	1914	BUTYL PROPIONATES
LGBF		FL	3 (D/E)	V12			S2	30	1915	CYCLOHEXANONE
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	1916	2,2'-DICHLORODIETHYL ETHER
LGBF		FL	2 (D/E)				S2 S20	339	1917	ETHYL ACRYLATE, STABILIZED
LGBF		FL	3 (D/E)	V12			S2	30	1918	ISOPROPYLBENZENE
LGBF		FL	2 (D/E)				S2 S20	339	1919	METHYL ACRYLATE, STABILIZED

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1920	NONANES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1921	PROPYLENEIMINE, STABILIZED	3	FT1	I	3 +6.1		0	E0	P001		MP2	T14	TP2
1922	PYRROLIDINE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
1923	CALCIUM DITHIONITE (CALCIUM HYDROSULPHITE)	4.2	S4	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33
1928	METHYL MAGNESIUM BROMIDE IN ETHYL ETHER	4.3	WF1	I	4.3 +3		0	E0	P402	RR8	MP2		
1929	POTASSIUM DITHIONITE (POTASSIUM HYDROSULPHITE)	4.2	S4	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33
1931	ZINC DITHIONITE (ZINC HYDROSULPHITE)	9	M11	III	9		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1932	ZIRCONIUM SCRAP	4.2	S4	III	4.2	524 592	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
1935	CYANIDE SOLUTION, N.O.S.	6.1	T4	I	6.1	274 525	0	E5	P001		MP8 MP17	T14	TP2 TP27
1935	CYANIDE SOLUTION, N.O.S.	6.1	T4	II	6.1	274 525	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
1935	CYANIDE SOLUTION, N.O.S.	6.1	T4	III	6.1	274 525	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
1938	BROMOACETIC ACID SOLUTION	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1938	BROMOACETIC ACID SOLUTION	8	C3	III	8		5 L	E1	P001 IBC02 LP01 R001		MP19	T7	TP2
1939	PHOSPHORUS OXYBROMIDE	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1940	THIOGLYCOLIC ACID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1941	DIBROMODIFLUOROMETHANE	9	M11	III	9		5 L	E1	P001 LP01 R001		MP15	T11	TP2
1942	AMMONIUM NITRATE with not more than 0.2% total combustible material, including any organic substance calculated as carbon, to the exclusion of any other added substance	5.1	O2	III	5.1	306 611	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
1944	MATCHES, SAFETY (book, card or strike on box)	4.1	F1	III	4.1	293	5 kg	E1	P407 R001		MP11		
1945	MATCHES, WAX 'VESTA'	4.1	F1	III	4.1	293	5 kg	E1	P407 R001		MP11		
1950	AEROSOLS, asphyxiant	2	5A		2.2	190 327 344 625	1 L	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLS, corrosive	2	5C		2.2 +8	190 327 344 625	1 L	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLS, corrosive, oxidizing	2	5CO		2.2 +5.1 +8	190 327 344 625	1 L	E0	P207 LP02	PP87 RR6 L2	MP9		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	3 (D/E)	V12			S2	30	1920	NONANES
L15CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1921	PROPYLENEIMINE, STABILIZED
L4BH		FL	2 (D/E)				S2 S20	338	1922	PYRROLIDINE
SGAN		AT	2 (D/E)	V1				40	1923	CALCIUM DITHIONITE (CALCIUM HYDROSULPHITE)
L10DH	TU4 TU14 TU22 TE21 TM2	FL	0 (B/E)	V1		CV23	S2 S20	X323	1928	METHYL MAGNESIUM BROMIDE IN ETHYL ETHER
SGAN		AT	2 (D/E)	V1				40	1929	POTASSIUM DITHIONITE (POTASSIUM HYDROSULPHITE)
SGAV		AT	3 (E)		VV3			90	1931	ZINC DITHIONITE (ZINC HYDROSULPHITE)
SGAN		AT	3 (E)	V1	VV4			40	1932	ZIRCONIUM SCRAP
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1935	CYANIDE SOLUTION, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1935	CYANIDE SOLUTION, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1935	CYANIDE SOLUTION, N.O.S.
L4BN		AT	2 (E)					80	1938	BROMOACETIC ACID SOLUTION
L4BN		AT	3 (E)					80	1938	BROMOACETIC ACID SOLUTION
SGAN		AT	2 (E)	V11				80	1939	PHOSPHORUS OXYBROMIDE
L4BN		AT	2 (E)					80	1940	THIOGLYCOLIC ACID
L4BN		AT	3 (E)					90	1941	DIBROMODIFLUOROMETHANE
SGAV	TU3	AT	3 (E)		VV8	CV24	S23	50	1942	AMMONIUM NITRATE with not more than 0.2% total combustible material, including any organic substance calculated as carbon, to the exclusion of any other added substance
			4 (E)						1944	MATCHES, SAFETY (book, card or strike on box)
			4 (E)						1945	MATCHES, WAX 'VESTA'
			3 (E)	V14		CV9 CV12			1950	AEROSOLS, asphyxiant
			1 (E)	V14		CV9 CV12			1950	AEROSOLS, corrosive
			1 (E)	V14		CV9 CV12			1950	AEROSOLS, corrosive, oxidizing

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1950	AEROSOLS, flammable	2	5F		2.1	190 327 344 625	1 L	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLS, flammable, corrosive	2	5FC		2.1 +8	190 327 344 625	1 L	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLS, oxidizing	2	5O		2.2 +5.1	190 327 344 625	1 L	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLS, toxic	2	5T		2.2 +6.1	190 327 344 625	120 ml	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLS, toxic, corrosive	2	5TC		2.2 +6.1 +8	190 327 344 625	120 ml	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLS, toxic, flammable	2	5TF		2.1 +6.1	190 327 344 625	120 ml	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLS, toxic, flammable, corrosive	2	5TFC		2.1 +6.1 +8	190 327 344 625	120 ml	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLS, toxic, oxidizing	2	5TO		2.2 +5.1 +6.1	190 327 344 625	120 ml	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLS, toxic, oxidizing, corrosive	2	5TOC		2.2 +5.1 +6.1 +8	190 327 344 625	120 ml	E0	P207 LP02	PP87 RR6 L2	MP9		
1951	ARGON, REFRIGERATED LIQUID	2	3A		2.2	593	120 ml	E1	P203		MP9	T75	TP5
1952	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with not more than 9% ethylene oxide	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
1953	COMPRESSED GAS, TOXIC, FLAMMABLE, N.O.S.	2	1TF		2.3 +2.1	274	0	E0	P200		MP9	(M)	
1954	COMPRESSED GAS, FLAMMABLE, N.O.S.	2	1F		2.1	274 660	0	E0	P200		MP9	(M)	
1955	COMPRESSED GAS, TOXIC, N.O.S.	2	1T		2.3	274	0	E0	P200		MP9	(M)	
1956	COMPRESSED GAS, N.O.S.	2	1A		2.2	274 655	120 ml	E1	P200		MP9	(M)	
1957	DEUTERIUM, COMPRESSED	2	1F		2.1		0	E0	P200		MP9	(M)	
1958	1,2-DICHLORO-1,1,2,2-TETRAFLUOROETHANE (REFRIGERANT GAS R 114)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1959	1,1-DIFLUOROETHYLENE (REFRIGERANT GAS R 1132a)	2	2F		2.1		0	E0	P200		MP9	(M)	
1961	ETHANE, REFRIGERATED LIQUID	2	3F		2.1		0	E0	P203		MP9	T75	TP5
1962	ETHYLENE	2	2F		2.1		0	E0	P200		MP9	(M)	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			2 (D)	V14		CV9 CV12	S2		1950	AEROSOLS, flammable
			1 (D)	V14		CV9 CV12	S2		1950	AEROSOLS, flammable, corrosive
			3 (E)	V14		CV9 CV12			1950	AEROSOLS, oxidizing
			1 (D)	V14		CV9 CV12 CV28			1950	AEROSOLS, toxic
			1 (D)	V14		CV9 CV12 CV28			1950	AEROSOLS, toxic, corrosive
			1 (D)	V14		CV9 CV12 CV28	S2		1950	AEROSOLS, toxic, flammable
			1 (D)	V14		CV9 CV12 CV28	S2		1950	AEROSOLS, toxic, flammable, corrosive
			1 (D)	V14		CV9 CV12 CV28			1950	AEROSOLS, toxic, oxidizing
			1 (D)	V14		CV9 CV12 CV28			1950	AEROSOLS, toxic, oxidizing, corrosive
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	1951	ARGON, REFRIGERATED LIQUID
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1952	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with not more than 9% ethylene oxide
CxBH(M)	TU6 TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1953	COMPRESSED GAS, TOXIC, FLAMMABLE, N.O.S.
CxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1954	COMPRESSED GAS, FLAMMABLE, N.O.S.
CxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	1955	COMPRESSED GAS, TOXIC, N.O.S.
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		20	1956	COMPRESSED GAS, N.O.S.
CxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1957	DEUTERIUM, COMPRESSED
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1958	1,2-DICHLORO-1,1,2,2-TETRAFLUOROETHANE (REFRIGERANT GAS R 114)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1959	1,1-DIFLUOROETHYLENE (REFRIGERANT GAS R 1132a)
RxBN	TU18 TA4 TT9	FL	2 (B/D)	V5		CV9 CV11 CV36	S2 S17	223	1961	ETHANE, REFRIGERATED LIQUID
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1962	ETHYLENE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1963	HELIUM, REFRIGERATED LIQUID	2	3A		2.2	593	120 ml	E1	P203		MP9	T75	TP5 TP34
1964	HYDROCARBON GAS MIXTURE, COMPRESSED, N.O.S.	2	1F		2.1	274	0	E0	P200		MP9	(M)	
1965	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. such as mixtures A, A01, A02, A0, A1, B1, B2, B or C	2	2F		2.1	274 583 652 660	0	E0	P200		MP9	(M) T50	
1966	HYDROGEN, REFRIGERATED LIQUID	2	3F		2.1		0	E0	P203		MP9	T75	TP5 TP23 TP34
1967	INSECTICIDE GAS, TOXIC, N.O.S.	2	2T		2.3	274	0	E0	P200		MP9	(M)	
1968	INSECTICIDE GAS, N.O.S.	2	2A		2.2	274	120 ml	E1	P200		MP9	(M)	
1969	ISOBUTANE	2	2F		2.1	657 660	0	E0	P200		MP9	(M) T50	
1970	KRYPTON, REFRIGERATED LIQUID	2	3A		2.2	593	120 ml	E1	P203		MP9	T75	TP5
1971	METHANE, COMPRESSED or NATURAL GAS, COMPRESSED with high methane content	2	1F		2.1	660	0	E0	P200		MP9	(M)	
1972	METHANE, REFRIGERATED LIQUID or NATURAL GAS, REFRIGERATED LIQUID with high methane content	2	3F		2.1		0	E0	P203		MP9	T75	TP5
1973	CHLORODIFLUORO-METHANE AND CHLOROPENTAFLUORO-ETHANE MIXTURE with fixed boiling point, with approximately 49% chlorodifluoromethane (REFRIGERANT GAS R 502)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1974	CHLORODIFLUOROBROMO-METHANE (REFRIGERANT GAS R 12B1)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1975	NITRIC OXIDE AND DINITROGEN TETROXIDE MIXTURE (NITRIC OXIDE AND NITROGEN DIOXIDE MIXTURE)	2	2TOC		2.3 +5.1 +8		0	E0	P200		MP9		
1976	OCTAFLUOROCYCLOBUTANE (REFRIGERANT GAS RC 318)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1977	NITROGEN, REFRIGERATED LIQUID	2	3A		2.2	345 346 593	120 ml	E1	P203		MP9	T75	TP5
1978	PROPANE	2	2F		2.1	652 657 660	0	E0	P200		MP9	(M) T50	
1982	TETRAFLUOROMETHANE (REFRIGERANT GAS R 14)	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
1983	1-CHLORO-2,2,2-TRIFLUOROETHANE (REFRIGERANT GAS R 133a)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	1963	HELIUM, REFRIGERATED LIQUID
CxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1964	HYDROCARBON GAS MIXTURE, COMPRESSED, N.O.S.
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1965	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S. such as mixtures A, A01, A02, A0, A1, B1, B2, B or C
RxBN	TU18 TA4 TT9	FL	2 (B/D)	V5		CV9 CV11 CV36	S2 S17	223	1966	HYDROGEN, REFRIGERATED LIQUID
PxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	1967	INSECTICIDE GAS, TOXIC, N.O.S.
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1968	INSECTICIDE GAS, N.O.S.
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1969	ISOBUTANE
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	1970	KRYPTON, REFRIGERATED LIQUID
CxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1971	METHANE, COMPRESSED or NATURAL GAS, COMPRESSED with high methane content
RxBN	TU18 TA4 TT9	FL	2 (B/D)	V5		CV9 CV11 CV36	S2 S17	223	1972	METHANE, REFRIGERATED LIQUID or NATURAL GAS, REFRIGERATED LIQUID with high methane content
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1973	CHLORODIFLUORO-METHANE AND CHLOROPENTAFLUOROETHANE MIXTURE with fixed boiling point, with approximately 49% chlorodifluoromethane (REFRIGERANT GAS R 502)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1974	CHLORODIFLUOROBROMO-METHANE (REFRIGERANT GAS R 12B1)
			1 (D)			CV9 CV10 CV36	S14		1975	NITRIC OXIDE AND DINITROGEN TETROXIDE MIXTURE (NITRIC OXIDE AND NITROGEN DIOXIDE MIXTURE)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1976	OCTAFLUOROCYCLOBUTANE (REFRIGERANT GAS RC 318)
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	1977	NITROGEN, REFRIGERATED LIQUID
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1978	PROPANE
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1982	TETRAFLUOROMETHANE (REFRIGERANT GAS R 14)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1983	1-CHLORO-2,2,2-TRIFLUOROETHANE (REFRIGERANT GAS R 133a)

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
1984	TRIFLUOROMETHANE (REFRIGERANT GAS R 23)	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
1986	ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.	3	FT1	I	3 +6.1	274	0	E0	P001		MP7 MP17	T14	TP2 TP27
1986	ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.	3	FT1	II	3 +6.1	274	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27
1986	ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.	3	FT1	III	3 +6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
1987	ALCOHOLS, N.O.S. (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	274 601 640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28
1987	ALCOHOLS, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	274 601 640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28
1987	ALCOHOLS, N.O.S.	3	F1	III	3	274 601	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
1988	ALDEHYDES, FLAMMABLE, TOXIC, N.O.S.	3	FT1	I	3 +6.1	274	0	E0	P001		MP7 MP17	T14	TP2 TP27
1988	ALDEHYDES, FLAMMABLE, TOXIC, N.O.S.	3	FT1	II	3 +6.1	274	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27
1988	ALDEHYDES, FLAMMABLE, TOXIC, N.O.S.	3	FT1	III	3 +6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
1989	ALDEHYDES, N.O.S.	3	F1	I	3	274	0	E3	P001		MP7 MP17	T11	TP1 TP27
1989	ALDEHYDES, N.O.S. (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	274 640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28
1989	ALDEHYDES, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	274 640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28
1989	ALDEHYDES, N.O.S.	3	F1	III	3	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
1990	BENZALDEHYDE	9	M11	III	9		5 L	E1	P001 IBC03 LP01 R001		MP15	T2	TP1
1991	CHLOROPRENE, STABILIZED	3	FT1	I	3 +6.1		0	E0	P001		MP7 MP17	T14	TP2 TP6
1992	FLAMMABLE LIQUID, TOXIC, N.O.S.	3	FT1	I	3 +6.1	274	0	E0	P001		MP7 MP17	T14	TP2 TP27
1992	FLAMMABLE LIQUID, TOXIC, N.O.S.	3	FT1	II	3 +6.1	274	1 L	E2	P001 IBC02		MP19	T7	TP2
1992	FLAMMABLE LIQUID, TOXIC, N.O.S.	3	FT1	III	3 +6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
1993	FLAMMABLE LIQUID, N.O.S.	3	F1	I	3	274	0	E3	P001		MP7 MP17	T11	TP1 TP27
1993	FLAMMABLE LIQUID, N.O.S. (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	274 601 640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28
1993	FLAMMABLE LIQUID, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	274 601 640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28
1993	FLAMMABLE LIQUID, N.O.S.	3	F1	III	3	274 601 640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1984	TRIFLUOROMETHANE (REFRIGERANT GAS R 23)
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1986	ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	1986	ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.
L4BH	TU15	FL	3 (D/E)	V12		CV13 CV28	S2	36	1986	ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.
L1.5BN		FL	2 (D/E)				S2 S20	33	1987	ALCOHOLS, N.O.S. (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1987	ALCOHOLS, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1987	ALCOHOLS, N.O.S.
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1988	ALDEHYDES, FLAMMABLE, TOXIC, N.O.S.
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	1988	ALDEHYDES, FLAMMABLE, TOXIC, N.O.S.
L4BH	TU15	FL	3 (D/E)	V12		CV13 CV28	S2	36	1988	ALDEHYDES, FLAMMABLE, TOXIC, N.O.S.
L4BN		FL	1 (D/E)				S2 S20	33	1989	ALDEHYDES, N.O.S.
L1.5BN		FL	2 (D/E)				S2 S20	33	1989	ALDEHYDES, N.O.S. (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1989	ALDEHYDES, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1989	ALDEHYDES, N.O.S.
LGBV		AT	3 (E)	V12				90	1990	BENZALDEHYDE
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1991	CHLOROPRENE, STABILIZED
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1992	FLAMMABLE LIQUID, TOXIC, N.O.S.
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	1992	FLAMMABLE LIQUID, TOXIC, N.O.S.
L4BH	TU15	FL	3 (D/E)	V12		CV13 CV28	S2	36	1992	FLAMMABLE LIQUID, TOXIC, N.O.S.
L4BN		FL	1 (D/E)				S2 S20	33	1993	FLAMMABLE LIQUID, N.O.S.
L1.5BN		FL	2 (D/E)				S2 S20	33	1993	FLAMMABLE LIQUID, N.O.S. (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1993	FLAMMABLE LIQUID, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1993	FLAMMABLE LIQUID, N.O.S.

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									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
1993	FLAMMABLE LIQUID, N.O.S. (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)	3	F1	III	3	274 601 640F	5 L	E1	P001 LP01 R001		MP19	T4	TP1 TP29
1993	FLAMMABLE LIQUID, N.O.S. (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)	3	F1	III	3	274 601 640G	5 L	E1	P001 LP01 R001		MP19	T4	TP1 TP29
1993	FLAMMABLE LIQUID, N.O.S. (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	274 601 640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T4	TP1 TP29
1994	IRON PENTACARBONYL	6.1	TF1	I	6.1 +3	354	0	E0	P601		MP2	T22	TP2
1999	TARS, LIQUID, including road oils, and cutback bitumens (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	5 L	E2	P001		MP19	T3	TP3 TP29
1999	TARS, LIQUID, including road oils, and cutback bitumens (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001		MP19	T3	TP3 TP29
1999	TARS, LIQUID, including road oils, and cutback bitumens	3	F1	III	3	640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T1	TP3
1999	TARS, LIQUID, including road oils, and cutback bitumens (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)	3	F1	III	3	640F	5 L	E1	P001 LP01 R001		MP19	T1	TP3
1999	TARS, LIQUID, including road oils, and cutback bitumens (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)	3	F1	III	3	640G	5 L	E1	P001 LP01 R001		MP19	T1	TP3
1999	TARS, LIQUID, including road oils, and cutback bitumens (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)	3	F1	III	3	640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T1	TP3
2000	CELLULOID in block, rods, rolls, sheets, tubes, etc., except scrap	4.1	F1	III	4.1	502	5 kg	E1	P002 LP02 R001	PP7	MP11		
2001	COBALT NAPHTHENATES, POWDER	4.1	F3	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		FL	3 (D/E)				S2	33	1993	FLAMMABLE LIQUID, N.O.S. (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)
L1.5BN		FL	3 (D/E)				S2	33	1993	FLAMMABLE LIQUID, N.O.S. (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)
LGBF		FL	3 (D/E)				S2	33	1993	FLAMMABLE LIQUID, N.O.S. (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)
L15CH	TU14 TU15 TU31 TE19 TE21 TM3	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1994	IRON PENTACARBONYL
L1.5BN		FL	2 (D/E)				S2 S20	33	1999	TARS, LIQUID, including road oils, and cutback bitumens (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1999	TARS, LIQUID, including road oils, and cutback bitumens (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1999	TARS, LIQUID, including road oils, and cutback bitumens
L4BN		FL	3 (D/E)				S2	33	1999	TARS, LIQUID, including road oils, and cutback bitumens (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (boiling point not more than 35 °C)
L1.5BN		FL	3 (D/E)				S2	33	1999	TARS, LIQUID, including road oils, and cutback bitumens (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C)
LGBF		FL	3 (D/E)				S2	33	1999	TARS, LIQUID, including road oils, and cutback bitumens (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C not more than 110 kPa)
			3 (E)						2000	CELLULOID in block, rods, rolls, sheets, tubes, etc., except scrap
SGAV		AT	3 (E)		VV1			40	2001	COBALT NAPHTHENATES, POWDER

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2002	CELLULOID, SCRAP	4.2	S2	III	4.2	526 592	0	E1	P002 IBC08 LP02 R001	PP8 B3	MP14		
2004	MAGNESIUM DIAMIDE	4.2	S4	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33
2006	PLASTICS, NITROCELLULOSE-BASED, SELF-HEATING, N.O.S.	4.2	S2	III	4.2	274 528	0	E1	P002 R001		MP14		
2008	ZIRCONIUM POWDER, DRY	4.2	S4	I	4.2	524 540	0	E0	P404		MP13	T21	TP7 TP33
2008	ZIRCONIUM POWDER, DRY	4.2	S4	II	4.2	524 540	0	E2	P410 IBC06		MP14	T3	TP33
2008	ZIRCONIUM POWDER, DRY	4.2	S4	III	4.2	524 540	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
2009	ZIRCONIUM, DRY, finished sheets, strip or coiled wire	4.2	S4	III	4.2	524 592	0	E1	P002 LP02 R001		MP14		
2010	MAGNESIUM HYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2		
2011	MAGNESIUM PHOSPHIDE	4.3	WT2	I	4.3 +6.1		0	E0	P403		MP2		
2012	POTASSIUM PHOSPHIDE	4.3	WT2	I	4.3 +6.1		0	E0	P403		MP2		
2013	STRONTIUM PHOSPHIDE	4.3	WT2	I	4.3 +6.1		0	E0	P403		MP2		
2014	HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 20% but not more than 60% hydrogen peroxide (stabilized as necessary)	5.1	OC1	II	5.1 +8		1 L	E2	P504 IBC02	PP10 B5	MP15	T7	TP2 TP6 TP24
2015	HYDROGEN PEROXIDE, AQUEOUS SOLUTION, STABILIZED with more than 70% hydrogen peroxide	5.1	OC1	I	5.1 +8	640N	0	E0	P501		MP2	T9	TP2 TP6 TP24
2015	HYDROGEN PEROXIDE, AQUEOUS SOLUTION, STABILIZED with more than 60% hydrogen peroxide and not more than 70% hydrogen peroxide	5.1	OC1	I	5.1 +8	640O	0	E0	P501		MP2	T9	TP2 TP6 TP24
2016	AMMUNITION, TOXIC, NON-EXPLOSIVE without burst or expelling charge, non- fuzed	6.1	T2	II	6.1		0	E0	P600		MP10		
2017	AMMUNITION, TEAR- PRODUCING, NON- EXPLOSIVE without burst or expelling charge, non-fuzed	6.1	TC2	II	6.1 +8		0	E0	P600				
2018	CHLOROANILINES, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2019	CHLOROANILINES, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2020	CHLOROPHENOLS, SOLID	6.1	T2	III	6.1	205	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2021	CHLOROPHENOLS, LIQUID	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2022	CRESYLIC ACID	6.1	TC1	II	6.1 +8		100 ml	E4	P001 IBC02		MP15	T7	TP2
2023	EPICHLOROHYDRIN	6.1	TF1	II	6.1 +3	279	100 ml	E4	P001 IBC02		MP15	T7	TP2

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			3 (E)	V1					2002	CELLULOID, SCRAP
SGAN		AT	2 (D/E)	V1					40	MAGNESIUM DIAMIDE
			3 (E)	V1					2006	PLASTICS, NITROCELLULOSE-BASED, SELF-HEATING, N.O.S.
		AT	0 (B/E)	V1			S20		2008	ZIRCONIUM POWDER, DRY
SGAN		AT	2 (D/E)	V1					40	ZIRCONIUM POWDER, DRY
SGAN		AT	3 (E)	V1	VV4				40	ZIRCONIUM POWDER, DRY
			3 (E)	V1	VV4				40	ZIRCONIUM, DRY, finished sheets, strip or coiled wire
			1 (E)	V1		CV23	S20		2010	MAGNESIUM HYDRIDE
			1 (E)	V1		CV23 CV28	S20		2011	MAGNESIUM PHOSPHIDE
			1 (E)	V1		CV23 CV28	S20		2012	POTASSIUM PHOSPHIDE
			1 (E)	V1		CV23 CV28	S20		2013	STRONTIUM PHOSPHIDE
L4BV(+)	TU3 TC2 TE8 TE11 TT1	AT	2 (E)			CV24			58	2014 HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 20% but not more than 60% hydrogen peroxide (stabilized as necessary)
L4DV(+)	TU3 TU28 TC2 TE8 TE9 TT1	OX	1 (B/E)	V5		CV24	S20		559	2015 HYDROGEN PEROXIDE, AQUEOUS SOLUTION, STABILIZED with more than 70% hydrogen peroxide
L4BV(+)	TU3 TU28 TC2 TE7 TE8 TE9 TT1	OX	1 (B/E)	V5		CV24	S20		559	2015 HYDROGEN PEROXIDE, AQUEOUS SOLUTION, STABILIZED with more than 60% hydrogen peroxide and not more than 70% hydrogen peroxide
			2 (D/E)			CV13 CV28	S9 S19		2016	AMMUNITION, TOXIC, NON-EXPLOSIVE without burster or expelling charge, non-fuzed
			2 (D/E)			CV13 CV28	S9 S19		2017	AMMUNITION, TEAR-PRODUCING, NON-EXPLOSIVE without burster or expelling charge, non-fuzed
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19		60	2018 CHLOROANILINES, SOLID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19		60	2019 CHLOROANILINES, LIQUID
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9		60	2020 CHLOROPHENOLS, SOLID
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9		60	2021 CHLOROPHENOLS, LIQUID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19		68	2022 CRESYLIC ACID
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19		63	2023 EPICHLOROHYDRIN

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2024	MERCURY COMPOUND, LIQUID, N.O.S.	6.1	T4	I	6.1	43 274	0	E5	P001		MP8 MP17		
2024	MERCURY COMPOUND, LIQUID, N.O.S.	6.1	T4	II	6.1	43 274	100 ml	E4	P001 IBC02		MP15		
2024	MERCURY COMPOUND, LIQUID, N.O.S.	6.1	T4	III	6.1	43 274	5 L	E1	P001 IBC03 LP01 R001		MP19		
2025	MERCURY COMPOUND, SOLID, N.O.S.	6.1	T5	I	6.1	43 274 529 585	0	E5	P002 IBC07		MP18	T6	TP33
2025	MERCURY COMPOUND, SOLID, N.O.S.	6.1	T5	II	6.1	43 274 529 585	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2025	MERCURY COMPOUND, SOLID, N.O.S.	6.1	T5	III	6.1	43 274 529 585	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2026	PHENYLMERCURIC COMPOUND, N.O.S.	6.1	T3	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33
2026	PHENYLMERCURIC COMPOUND, N.O.S.	6.1	T3	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2026	PHENYLMERCURIC COMPOUND, N.O.S.	6.1	T3	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2027	SODIUM ARSENITE, SOLID	6.1	T5	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2028	BOMBS, SMOKE, NON-EXPLOSIVE with corrosive liquid, without initiating device	8	C11	II	8		0	E0	P803				
2029	HYDRAZINE, ANHYDROUS	8	CFT	I	8 +3 +6.1		0	E0	P001		MP8 MP17		
2030	HYDRAZINE AQUEOUS SOLUTION, with more than 37% hydrazine by mass	8	CT1	I	8 +6.1	530	0	E0	P001		MP8 MP17	T10	TP2
2030	HYDRAZINE AQUEOUS SOLUTION, with more than 37% hydrazine by mass	8	CT1	II	8 +6.1	530	1 L	E2	P001 IBC02		MP15	T7	TP2
2030	HYDRAZINE AQUEOUS SOLUTION, with more than 37% hydrazine by mass	8	CT1	III	8 +6.1	530	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2031	NITRIC ACID, other than red fuming, with more than 70% nitric acid	8	CO1	I	8 +5.1		0	E0	P001	PP81	MP8 MP17	T10	TP2
2031	NITRIC ACID, other than red fuming, with at least 65%, but not more than 70% nitric acid	8	CO1	II	8 +5.1		1 L	E2	P001 IBC02	PP81 B15	MP15	T8	TP2
2031	NITRIC ACID, other than red fuming, with less than 65% nitric acid	8	C1	II	8		1 L	E2	P001 IBC02	PP81 B15	MP15	T8	TP2
2032	NITRIC ACID, RED FUMING	8	COT	I	8 +5.1 +6.1		0	E0	P602		MP8 MP17	T20	TP2
2033	POTASSIUM MONOXIDE	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2034	HYDROGEN AND METHANE MIXTURE, COMPRESSED	2	1F		2.1		0	E0	P200		MP9	(M)	
2035	1,1,1-TRIFLUOROETHANE (REFRIGERANT GAS R 143a)	2	2F		2.1		0	E0	P200		MP9	(M) T50	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2024	MERCURY COMPOUND, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2024	MERCURY COMPOUND, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2024	MERCURY COMPOUND, LIQUID, N.O.S.
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2025	MERCURY COMPOUND, SOLID, N.O.S.
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2025	MERCURY COMPOUND, SOLID, N.O.S.
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2025	MERCURY COMPOUND, SOLID, N.O.S.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2026	PHENYLMERCURIC COMPOUND, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2026	PHENYLMERCURIC COMPOUND, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2026	PHENYLMERCURIC COMPOUND, N.O.S.
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2027	SODIUM ARSENITE, SOLID
			2 (E)						2028	BOMBS, SMOKE, NON- EXPLOSIVE with corrosive liquid, without initiating device
			1 (E)			CV13 CV28	S2 S14		2029	HYDRAZINE, ANHYDROUS
L10BH		AT	1 (C/D)			CV13 CV28	S14	886	2030	HYDRAZINE AQUEOUS SOLUTION, with more than 37% hydrazine by mass
L4BN		AT	2 (E)			CV13 CV28		86	2030	HYDRAZINE AQUEOUS SOLUTION, with more than 37% hydrazine by mass
L4BN		AT	3 (E)	V12		CV13 CV28		86	2030	HYDRAZINE AQUEOUS SOLUTION, with more than 37% hydrazine by mass
L10BH	TC6 TT1	AT	1 (E)			CV24	S14	885	2031	NITRIC ACID, other than red fuming, with more than 70% nitric acid
L4BN		AT	2 (E)					85	2031	NITRIC ACID, other than red fuming, with at least 65%, but not more than 70% nitric acid
L4BN		AT	2 (E)					80	2031	NITRIC ACID, other than red fuming, with less than 65% nitric acid
L10BH	TC6 TT1	AT	1 (C/D)			CV13 CV24 CV28	S14	856	2032	NITRIC ACID, RED FUMING
SGAN		AT	2 (E)	V11				80	2033	POTASSIUM MONOXIDE
CxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2034	HYDROGEN AND METHANE MIXTURE, COMPRESSED
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2035	1,1,1-TRIFLUOROETHANE (REFRIGERANT GAS R 143a)

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2036	XENON	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5A		2.2	191 303 344	1 L	E0	P003	PP17 RR6	MP9		
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5F		2.1	191 303 344	1 L	E0	P003	PP17 RR6	MP9		
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5O		2.2 +5.1	191 303 344	1 L	E0	P003	PP17 RR6	MP9		
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5T		2.3	303 344	120 ml	E0	P003	PP17 RR6	MP9		
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5TC		2.3 +8	303 344	120 ml	E0	P003	PP17 RR6	MP9		
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5TF		2.3 +2.1	303 344	120 ml	E0	P003	PP17 RR6	MP9		
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5TFC		2.3 +2.1 +8	303 344	120 ml	E0	P003	PP17 RR6	MP9		
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5TO		2.3 +5.1	303 344	120 ml	E0	P003	PP17 RR6	MP9		
2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable	2	5TOC		2.3 +5.1 +8	303 344	120 ml	E0	P003	PP17 RR6	MP9		
2038	DINITROTOLUENES, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2044	2,2-DIMETHYLPROPANE	2	2F		2.1		0	E0	P200		MP9	(M)	
2045	ISOBUTYRALDEHYDE (ISOBUTYL ALDEHYDE)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2046	CYMENES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2047	DICHLOROPROPENES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2047	DICHLOROPROPENES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2048	DICYCLOPENTADIENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	2036	XENON
			3 (E)			CV9 CV12			2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable
			2 (D)			CV9 CV12	S2		2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable
			3 (E)			CV9 CV12			2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable
			1 (D)			CV9 CV12			2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable
			1 (D)			CV9 CV12			2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable
			1 (D)			CV9 CV12	S2		2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable
			1 (D)			CV9 CV12	S2		2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable
			1 (D)			CV9 CV12			2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable
			1 (D)			CV9 CV12			2037	RECEPTACLES, SMALL, CONTAINING GAS (GAS CARTRIDGES) without a release device, non-refillable
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2038	DINITROTOLUENES, LIQUID
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2044	2,2-DIMETHYLPROPANE
LGBF		FL	2 (D/E)				S2 S20	33	2045	ISOBUTYRALDEHYDE (ISOBUTYL ALDEHYDE)
LGBF		FL	3 (D/E)	V12			S2	30	2046	CYMENES
LGBF		FL	2 (D/E)				S2 S20	33	2047	DICHLOROPROPENES
LGBF		FL	3 (D/E)	V12			S2	30	2047	DICHLOROPROPENES
LGBF		FL	3 (D/E)	V12			S2	30	2048	DICYCLOPENTADIENE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
2049	DIETHYLBENZENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2050	DIISOBUTYLENE, ISOMERIC COMPOUNDS	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2051	2-DIMETHYLAMINO- ETHANOL	8	CF1	II	8 +3		1 L	E2	P001 IBC02		MP15	T7	TP2
2052	DIPENTENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2053	METHYL ISOBUTYL CARBINOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2054	MORPHOLINE	8	CF1	I	8 +3		0	E0	P001		MP8 MP17	T10	TP2
2055	STYRENE MONOMER, STABILIZED	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2056	TETRAHYDROFURAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2057	TRIPROPYLENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2057	TRIPROPYLENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2058	VALERALDEHYDE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2059	NITROCELLULOSE SOLUTION, FLAMMABLE with not more than 12.6% nitrogen, by dry mass, and not more than 55% nitrocellulose	3	D	I	3	198 531	0	E0	P001		MP7 MP17	T11	TP1 TP8 TP27
2059	NITROCELLULOSE SOLUTION, FLAMMABLE with not more than 12.6% nitrogen, by dry mass, and not more than 55% nitrocellulose (vapour pressure at 50 °C more than 110 kPa)	3	D	II	3	198 531 640C	1 L	E0	P001 IBC02		MP19	T4	TP1 TP8
2059	NITROCELLULOSE SOLUTION, FLAMMABLE with not more than 12.6% nitrogen, by dry mass, and not more than 55% nitrocellulose (vapour pressure at 50 °C not more than 110 kPa)	3	D	II	3	198 531 640D	1 L	E0	P001 IBC02 R001		MP19	T4	TP1 TP8
2059	NITROCELLULOSE SOLUTION, FLAMMABLE with not more than 12.6% nitrogen, by dry mass, and not more than 55% nitrocellulose	3	D	III	3	198 531	5 L	E0	P001 IBC03 LP01 R001		MP19	T2	TP1
2067	AMMONIUM NITRATE BASED FERTILIZER	5.1	O2	III	5.1	186 306 307	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	3 (D/E)	V12			S2	30	2049	DIETHYLBENZENE
LGBF		FL	2 (D/E)				S2 S20	33	2050	DIISOBUTYLENE, ISOMERIC COMPOUNDS
L4BN		FL	2 (D/E)				S2	83	2051	2-DIMETHYLAMINO-ETHANOL
LGBF		FL	3 (D/E)	V12			S2	30	2052	DIPENTENE
LGBF		FL	3 (D/E)	V12			S2	30	2053	METHYL ISOBUTYL CARBINOL
L10BH		FL	1 (D/E)				S2 S14	883	2054	MORPHOLINE
LGBF		FL	3 (D/E)	V12			S2	39	2055	STYRENE MONOMER, STABILIZED
LGBF		FL	2 (D/E)				S2 S20	33	2056	TETRAHYDROFURAN
LGBF		FL	2 (D/E)				S2 S20	33	2057	TRIPROPYLENE
LGBF		FL	3 (D/E)	V12			S2	30	2057	TRIPROPYLENE
LGBF		FL	2 (D/E)				S2 S20	33	2058	VALERALDEHYDE
L4BN		FL	1 (B)				S2 S14	33	2059	NITROCELLULOSE SOLUTION, FLAMMABLE with not more than 12.6% nitrogen, by dry mass, and not more than 55% nitrocellulose
L1.5BN		FL	2 (B)				S2 S14	33	2059	NITROCELLULOSE SOLUTION, FLAMMABLE with not more than 12.6% nitrogen, by dry mass, and not more than 55% nitrocellulose (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (B)				S2 S14	33	2059	NITROCELLULOSE SOLUTION, FLAMMABLE with not more than 12.6% nitrogen, by dry mass, and not more than 55% nitrocellulose (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (B)	V12			S2 S14	30	2059	NITROCELLULOSE SOLUTION, FLAMMABLE with not more than 12.6% nitrogen, by dry mass, and not more than 55% nitrocellulose
SGAV	TU3	AT	3 (E)		VV8	CV24	S23	50	2067	AMMONIUM NITRATE BASED FERTILIZER

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
2071	Ammonium nitrate based fertilizer, uniform mixtures of the nitrogen/phosphate, nitrogen/potash or nitrogen/phosphate/potash type, containing not more than 70% ammonium nitrate and not more than 0.4% total combustible/organic material calculated as carbon or with not more than 45% ammonium nitrate and unrestricted combustible material	9	M11						NOT SUBJECT TO ADR				
2073	AMMONIA SOLUTION, relative density less than 0.880 at 15 °C in water, with more than 35% but not more than 50% ammonia	2	4A		2.2	532	120 ml	E1	P200		MP9	(M)	
2074	ACRYLAMIDE, SOLID	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2075	CHLORAL, ANHYDROUS, STABILIZED	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2076	CRESOLS, LIQUID	6.1	TC1	II	6.1 +8		100 ml	E4	P001 IBC02		MP15	T7	TP2
2077	alpha-NAPHTHYLAMINE	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2078	TOLUENE DIISOCYANATE	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2
2079	DIETHYLENTRIAMINE	8	C7	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2186	HYDROGEN CHLORIDE, REFRIGERATED LIQUID	2	3TC	CARRIAGE PROHIBITED									
2187	CARBON DIOXIDE, REFRIGERATED LIQUID	2	3A		2.2	593	120 ml	E1	P203		MP9	T75	TP5
2188	ARSINE	2	2TF		2.3 +2.1		0	E0	P200		MP9		
2189	DICHLOROSILANE	2	2TFC		2.3 +2.1 +8		0	E0	P200		MP9	(M)	
2190	OXYGEN DIFLUORIDE, COMPRESSED	2	1TOC		2.3 +5.1 +8		0	E0	P200		MP9		
2191	SULPHURYL FLUORIDE	2	2T		2.3		0	E0	P200		MP9	(M)	
2192	GERMANE	2	2TF		2.3 +2.1	632	0	E0	P200		MP9	(M)	
2193	HEXAFLUOROETHANE (REFRIGERANT GAS R 116)	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
2194	SELENIUM HEXAFLUORIDE	2	2TC		2.3 +8		0	E0	P200		MP9		
2195	TELLURIUM HEXAFLUORIDE	2	2TC		2.3 +8		0	E0	P200		MP9		
2196	TUNGSTEN HEXAFLUORIDE	2	2TC		2.3 +8		0	E0	P200		MP9		
2197	HYDROGEN IODIDE, ANHYDROUS	2	2TC		2.3 +8		0	E0	P200		MP9	(M)	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
NOT SUBJECT TO ADR									2071	Ammonium nitrate based fertilizer, uniform mixtures of the nitrogen/phosphate, nitrogen/potash or nitrogen/phosphate/potash type, containing not more than 70% ammonium nitrate and not more than 0.4% total combustible/organic material calculated as carbon or with not more than 45% ammonium nitrate and unrestricted combustible material
PxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10		20	2073	AMMONIA SOLUTION, relative density less than 0.880 at 15 °C in water, with more than 35% but not more than 50% ammonia
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2074	ACRYLAMIDE, SOLID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	69	2075	CHLORAL, ANHYDROUS, STABILIZED
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	2076	CREOLS, LIQUID
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2077	alpha-NAPHTHYLAMINE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2078	TOLUENE DIISOCYANATE
L4BN		AT	2 (E)					80	2079	DIETHYLENTRIAMINE
CARRIAGE PROHIBITED									2186	HYDROGEN CHLORIDE, REFRIGERATED LIQUID
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	2187	CARBON DIOXIDE, REFRIGERATED LIQUID
			1 (D)			CV9 CV10 CV36	S2 S14		2188	ARSINE
PxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	2189	DICHLOROSILANE
			1 (D)			CV9 CV10 CV36	S14		2190	OXYGEN DIFLUORIDE, COMPRESSED
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	2191	SULPHURYL FLUORIDE
		FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	2192	GERMANE
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	2193	HEXAFLUOROETHANE (REFRIGERANT GAS R 116)
			1 (D)			CV9 CV10 CV36	S14		2194	SELENIUM HEXAFLUORIDE
			1 (D)			CV9 CV10 CV36	S14		2195	TELLURIUM HEXAFLUORIDE
			1 (D)			CV9 CV10 CV36	S14		2196	TUNGSTEN HEXAFLUORIDE
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	2197	HYDROGEN IODIDE, ANHYDROUS

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
2198	PHOSPHORUS PENTAFLUORIDE	2	2TC		2.3 +8		0	E0	P200		MP9			
2199	PHOSPHINE	2	2TF		2.3 +2.1	632	0	E0	P200		MP9			
2200	PROPADIENE, STABILIZED	2	2F		2.1		0	E0	P200		MP9	(M)		
2201	NITROUS OXIDE, REFRIGERATED LIQUID	2	3O		2.2 +5.1		0	E0	P203		MP9	T75	TP5 TP22	
2202	HYDROGEN SELENIDE, ANHYDROUS	2	2TF		2.3 +2.1		0	E0	P200		MP9			
2203	SILANE	2	2F		2.1	632	0	E0	P200		MP9	(M)		
2204	CARBONYL SULPHIDE	2	2TF		2.3 +2.1		0	E0	P200		MP9	(M)		
2205	ADIPONITRILE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T3	TP1	
2206	ISOCYANATES, TOXIC, N.O.S. or ISOCYANATE SOLUTION, TOXIC, N.O.S.	6.1	T1	II	6.1	274 551	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
2206	ISOCYANATES, TOXIC, N.O.S. or ISOCYANATE SOLUTION, TOXIC, N.O.S.	6.1	T1	III	6.1	274 551	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28	
2208	CALCIUM HYPOCHLORITE MIXTURE, DRY with more than 10% but not more than 39% available chlorine	5.1	O2	III	5.1	314	5 kg	E1	P002 IBC08 LP02 R001	B3 B13 L3	MP10			
2209	FORMALDEHYDE SOLUTION with not less than 25% formaldehyde	8	C9	III	8	533	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
2210	MANEB or MANEB PREPARATION with not less than 60% maneb	4.2	SW	III	4.2 +4.3	273	0	E1	P002 IBC06 R001		MP14	T1	TP33	
2211	POLYMERIC BEADS, EXPANDABLE, evolving flammable vapour	9	M3	III	None	207 633	5 kg	E1	P002 IBC08 R001	PP14 B3 B6	MP10	T1	TP33	
2212	BLUE ASBESTOS (crocidolite) or BROWN ASBESTOS (amosite, msysorite)	9	M1	II	9	168	1 kg	E2	P002 IBC08	PP37 B4	MP10	T3	TP33	
2213	PARAFORMALDEHYDE	4.1	F1	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	PP12 B3	MP10	T1 BK1 BK2	TP33	
2214	PHTHALIC ANHYDRIDE with more than 0.05% of maleic anhydride	8	C4	III	8	169	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
2215	MALEIC ANHYDRIDE, MOLTEN	8	C3	III	8		0	E0				T4	TP3	
2215	MALEIC ANHYDRIDE	8	C4	III	8		5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33	
2216	Fish meal (Fish scrap), stabilized	9	M11	NOT SUBJECT TO ADR										
2217	SEED CAKE with not more than 1.5% oil and not more than 11% moisture	4.2	S2	III	4.2	142	0	E1	P002 IBC08 LP02 R001	PP20 B3 B6	MP14			
2218	ACRYLIC ACID, STABILIZED	8	CF1	II	8 +3		1 L	E2	P001 IBC02		MP15	T7	TP2	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (D)			CV9 CV10 CV36	S14		2198	PHOSPHORUS PENTAFLUORIDE
			1 (D)			CV9 CV10 CV36	S2 S14		2199	PHOSPHINE
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	2200	PROPADIENE, STABILIZED
RxBN	TU7 TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	225	2201	NITROUS OXIDE, REFRIGERATED LIQUID
			1 (D)			CV9 CV10 CV36	S2 S14		2202	HYDROGEN SELENIDE, ANHYDROUS
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2203	SILANE
PxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	2204	CARBONYL SULPHIDE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2205	ADIPONITRILE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2206	ISOCYANATES, TOXIC, N.O.S. or ISOCYANATE SOLUTION, TOXIC, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2206	ISOCYANATES, TOXIC, N.O.S. or ISOCYANATE SOLUTION, TOXIC, N.O.S.
SGAN	TU3	AT	3 (E)			CV24 CV35		50	2208	CALCIUM HYPOCHLORITE MIXTURE, DRY with more than 10% but not more than 39% available chlorine
L4BN		AT	3 (E)	V12				80	2209	FORMALDEHYDE SOLUTION with not less than 25% formaldehyde
SGAN		AT	3 (E)	V1	VV4			40	2210	MANEB or MANEB PREPARATION with not less than 60% maneb
SGAN	TE20	AT	3 (D/E)		VV3			90	2211	POLYMERIC BEADS, EXPANDABLE, evolving flammable vapour
SGAH	TU15	AT	2 (E)	V11		CV1 CV13 CV28	S19	90	2212	BLUE ASBESTOS (crocidolite) or BROWN ASBESTOS (amosite, mysorite)
SGAV		AT	3 (E)	V13	VV1			40	2213	PARAFORMALDEHYDE
SGAV L4BN		AT	3 (E)		VV9			80	2214	PHTHALIC ANHYDRIDE with more than 0.05% of maleic anhydride
L4BN		AT	0 (E)					80	2215	MALEIC ANHYDRIDE, MOLTEN
SGAV		AT	3 (E)		VV9			80	2215	MALEIC ANHYDRIDE
NOT SUBJECT TO ADR									2216	Fish meal (Fish scrap), stabilized
			3 (E)	V1	VV4			40	2217	SEED CAKE with not more than 1.5% oil and not more than 11% moisture
L4BN		FL	2 (D/E)				S2	839	2218	ACRYLIC ACID, STABILIZED

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	(11)
2219	ALLYL GLYCIDYL ETHER	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2222	ANISOLE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2224	BENZONITRILE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2225	BENZENESULPHONYL CHLORIDE	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2226	BENZOTRICHLORIDE	8	C9	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2227	n-BUTYL METHACRYLATE, STABILIZED	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2232	2-CHLOROETHANAL	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2233	CHLOROANISIDINES	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2234	CHLOROBENZOTRI-FLUORIDES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2235	CHLOROBENZYL CHLORIDES, LIQUID	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2236	3-CHLORO-4-METHYLPHENYL ISOCYANATE, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15		
2237	CHLORONITROANILINES	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2238	CHLOROTOLUENES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2239	CHLOROTOLUIDINES, SOLID	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2240	CHROMOSULPHURIC ACID	8	C1	I	8		0	E0	P001		MP8 MP17	T10	TP2
2241	CYCLOHEPTANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2242	CYCLOHEPTENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2243	CYCLOHEXYL ACETATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2244	CYCLOPENTANOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2245	CYCLOPENTANONE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2246	CYCLOPENTENE	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T7	TP2

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	3 (D/E)	V12			S2	30	2219	ALLYL GLYCIDYL ETHER
LGBF		FL	3 (D/E)	V12			S2	30	2222	ANISOLE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2224	BENZONITRILE
L4BN		AT	3 (E)	V12				80	2225	BENZENESULPHONYL CHLORIDE
L4BN		AT	2 (E)					80	2226	BENZOTRICHLORIDE
LGBF		FL	3 (D/E)	V12			S2	39	2227	n-BUTYL METHACRYLATE, STABILIZED
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	2232	2-CHLOROETHANAL
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2233	CHLOROANISIDINES
LGBF		FL	3 (D/E)	V12			S2	30	2234	CHLOROBENZOTRI-FLUORIDES
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2235	CHLOROBENZYL CHLORIDES, LIQUID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2236	3-CHLORO-4-METHYLPHENYL ISOCYANATE, LIQUID
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2237	CHLORONITROANILINES
LGBF		FL	3 (D/E)	V12			S2	30	2238	CHLOROTOLUENES
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2239	CHLOROTOLUIDINES, SOLID
L10BH		AT	1 (E)				S20	88	2240	CHROMOSULPHURIC ACID
LGBF		FL	2 (D/E)				S2 S20	33	2241	CYCLOHEPTANE
LGBF		FL	2 (D/E)				S2 S20	33	2242	CYCLOHEPTENE
LGBF		FL	3 (D/E)	V12			S2	30	2243	CYCLOHEXYL ACETATE
LGBF		FL	3 (D/E)	V12			S2	30	2244	CYCLOPENTANOL
LGBF		FL	3 (D/E)	V12			S2	30	2245	CYCLOPENTANONE
L1.5BN		FL	2 (D/E)				S2 S20	33	2246	CYCLOPENTENE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	(11)
2247	n-DECANE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2248	DI-n-BUTYLAMINE	8	CF1	II	8 +3		1 L	E2	P001 IBC02		MP15	T7	TP2
2249	DICHLORODIMETHYL ETHER, SYMMETRICAL	6.1	TF1	CARRIAGE PROHIBITED									
2250	DICHLOROPHENYL ISOCYANATES	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2251	BICYCLO[2.2.1]HEPTA-2,5-DIENE, STABILIZED (2,5-NORBORNADIENE, STABILIZED)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP2
2252	1,2-DIMETHOXYETHANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2253	N,N-DIMETHYLANILINE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2254	MATCHES, FUSEE	4.1	F1	III	4.1	293	5 kg	E1	P407 R001		MP11		
2256	CYCLOHEXENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2257	POTASSIUM	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2	T9	TP7 TP33
2258	1,2-PROPYLENEDIAMINE	8	CF1	II	8 +3		1 L	E2	P001 IBC02		MP15	T7	TP2
2259	TRIETHYLENETETRAMINE	8	C7	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2260	TRIPROPYLAMINE	3	FC	III	3 +8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2261	XYLENOLS, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2262	DIMETHYL CARBAMOYL CHLORIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2263	DIMETHYL-CYCLOHEXANES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2264	N,N-DIMETHYL-CYCLOHEXYLAMINE	8	CF1	II	8 +3		1 L	E2	P001 IBC02		MP15	T7	TP2
2265	N,N-DIMETHYL-FORMAMIDE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP2
2266	DIMETHYL-N-PROPYLAMINE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP2
2267	DIMETHYL THIOPHOSPHORYL CHLORIDE	6.1	TC1	II	6.1 +8		100 ml	E4	P001 IBC02		MP15	T7	TP2
2269	3,3'-IMINODIPROPYLAMINE	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2
2270	ETHYLAMINE, AQUEOUS SOLUTION with not less than 50% but not more than 70% ethylamine	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
2271	ETHYL AMYL KETONE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2272	N-ETHYLANILINE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2273	2-ETHYLANILINE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description	
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation				
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2		
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)	
LGBF		FL	3 (D/E)	V12			S2	30	2247	n-DECANE	
L4BN		FL	2 (D/E)				S2	83	2248	DI-n-BUTYLAMINE	
CARRIAGE PROHIBITED									2249	DICHLORODIMETHYL ETHER, SYMMETRICAL	
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2250	DICHLOROPHENYL ISOCYANATES	
LGBF		FL	2 (D/E)				S2 S20	339	2251	BICYCLO[2.2.1]HEPTA-2,5-DIENE, STABILIZED (2,5-NORBORNADIENE, STABILIZED)	
LGBF		FL	2 (D/E)				S2 S20	33	2252	1,2-DIMETHOXYETHANE	
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2253	N,N-DIMETHYLANILINE	
			4 (E)						2254	MATCHES, FUSEE	
LGBF		FL	2 (D/E)				S2 S20	33	2256	CYCLOHEXENE	
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	2257	POTASSIUM	
L4BN		FL	2 (D/E)				S2	83	2258	1,2-PROPYLENEDIAMINE	
L4BN		AT	2 (E)						80	2259	TRIETHYLENETETRAMINE
L4BN		FL	3 (D/E)	V12			S2	38	2260	TRIPROPYLAMINE	
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2261	XYLENOLS, SOLID	
L4BN		AT	2 (E)						80	2262	DIMETHYLCARBAMOYL CHLORIDE
LGBF		FL	2 (D/E)				S2 S20	33	2263	DIMETHYL-CYCLOHEXANES	
L4BN		FL	2 (D/E)				S2	83	2264	N,N-DIMETHYL-CYCLOHEXYLAMINE	
LGBF		FL	3 (D/E)	V12			S2	30	2265	N,N-DIMETHYL-FORMAMIDE	
L4BH		FL	2 (D/E)				S2 S20	338	2266	DIMETHYL-N-PROPYLAMINE	
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	2267	DIMETHYL THIOPHOSPHORYL CHLORIDE	
L4BN		AT	3 (E)	V12					80	2269	3,3'-IMINODIPROPYLAMINE
L4BH		FL	2 (D/E)				S2 S20	338	2270	ETHYLAMINE, AQUEOUS SOLUTION with not less than 50% but not more than 70% ethylamine	
LGBF		FL	3 (D/E)	V12			S2	30	2271	ETHYL AMYL KETONE	
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2272	N-ETHYLANILINE	
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2273	2-ETHYLANILINE	

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2274	N-ETHYL-N-BENZYLANILINE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2275	2-ETHYLBUTANOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2276	2-ETHYLHEXYLAMINE	3	FC	III	3 +8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2277	ETHYL METHACRYLATE, STABILIZED	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2278	n-HEPTENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2279	HEXACHLOROBUTADIENE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2280	HEXAMETHYLENE-DIAMINE, SOLID	8	C8	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2281	HEXAMETHYLENE DIISOCYANATE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2282	HEXANOLS	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2283	ISOBUTYL METHACRYLATE, STABILIZED	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2284	ISOBUTYRONITRILE	3	FT1	II	3 +6.1		1 L	E2	P001 IBC02		MP19	T7	TP2
2285	ISOCYANATOBENZO-TRIFLUORIDES	6.1	TF1	II	6.1 +3		100 ml	E4	P001 IBC02		MP15	T7	TP2
2286	PENTAMETHYLHEPTANE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2287	ISOHEPTENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2288	ISOHEXENE	3	F1	II	3		1 L	E2	P001 IBC02 R001	B8	MP19	T11	TP1
2289	ISOPHORONEDIAMINE	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2290	ISOPHORONE DIISOCYANATE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2
2291	LEAD COMPOUND, SOLUBLE, N.O.S.	6.1	T5	III	6.1	199 274 535	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2293	4-METHOXY-4-METHYLPENTAN-2-ONE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2294	N-METHYLANILINE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2295	METHYL CHLOROACETATE	6.1	TF1	I	6.1 +3		0	E5	P001		MP8 MP17	T14	TP2

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2274	N-ETHYL-N-BENZYLANILINE
LGBF		FL	3 (D/E)	V12			S2	30	2275	2-ETHYLBUTANOL
L4BN		FL	3 (D/E)	V12			S2	38	2276	2-ETHYLHEXYLAMINE
LGBF		FL	2 (D/E)				S2 S20	339	2277	ETHYL METHACRYLATE, STABILIZED
LGBF		FL	2 (D/E)				S2 S20	33	2278	n-HEPTENE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2279	HEXACHLOROBUTADIENE
SGAV L4BN		AT	3 (E)		VV9			80	2280	HEXAMETHYLENE-DIAMINE, SOLID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2281	HEXAMETHYLENE DIISOCYANATE
LGBF		FL	3 (D/E)	V12			S2	30	2282	HEXANOLS
LGBF		FL	3 (D/E)	V12			S2	39	2283	ISOBUTYL METHACRYLATE, STABILIZED
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2284	ISOBUTYRONITRILE
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2285	ISOCYANATOBENZO-TRIFLUORIDES
LGBF		FL	3 (D/E)	V12			S2	30	2286	PENTAMETHYLHEPTANE
LGBF		FL	2 (D/E)				S2 S20	33	2287	ISOHEPTENE
LGBF		FL	2 (D/E)				S2 S20	33	2288	ISOHEXENE
L4BN		AT	3 (E)	V12				80	2289	ISOPHORONEDIAMINE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2290	ISOPHORONE DIISOCYANATE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2291	LEAD COMPOUND, SOLUBLE, N.O.S.
LGBF		FL	3 (D/E)	V12			S2	30	2293	4-METHOXY-4-METHYLPENTAN-2-ONE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2294	N-METHYLANILINE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2295	METHYL CHLOROACETATE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2296	METHYLCYCLOHEXANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2297	METHYLCYCLOHEXANONE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2298	METHYLCYCLOPENTANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2299	METHYL DICHOROACETATE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2300	2-METHYL-5-ETHYLPYRIDINE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2301	2-METHYLFURAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2302	5-METHYLHEXAN-2-ONE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2303	ISOPROPENYLBENZENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2304	NAPHTHALENE, MOLTEN	4.1	F2	III	4.1	536	0	E0				T1	TP3
2305	NITROBENZENE-SULPHONIC ACID	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2306	NITROBENZOTRI-FLUORIDES, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2307	3-NITRO-4-CHLORO-BENZOTRIFLUORIDE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP10	T7	TP2
2308	NITROSYLSULPHURIC ACID, LIQUID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
2309	OCTADIENES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2310	PENTANE-2,4-DIONE	3	FT1	III	3 +6.1		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2311	PHENETIDINES	6.1	T1	III	6.1	279	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2312	PHENOL, MOLTEN	6.1	T1	II	6.1		0	E0				T7	TP3
2313	PICOLINES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2315	POLYCHLORINATED BIPHENYLS, LIQUID	9	M2	II	9	305	1 L	E2	P906 IBC02		MP15	T4	TP1
2316	SODIUM CUPROCYANIDE, SOLID	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
2317	SODIUM CUPROCYANIDE SOLUTION	6.1	T4	I	6.1		0	E5	P001		MP8 MP17	T14	TP2
2318	SODIUM HYDROSULPHIDE with less than 25% water of crystallization	4.2	S4	II	4.2	504	0	E2	P410 IBC06		MP14	T3	TP33
2319	TERPENE HYDROCARBONS, N.O.S.	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	2 (D/E)				S2 S20	33	2296	METHYLCYCLOHEXANE
LGBF		FL	3 (D/E)	V12			S2	30	2297	METHYLCYCLOHEXANONE
LGBF		FL	2 (D/E)				S2 S20	33	2298	METHYLCYCLOPENTANE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2299	METHYL DICHOROACETATE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2300	2-METHYL-5-ETHYLPYRIDINE
LGBF		FL	2 (D/E)				S2 S20	33	2301	2-METHYLFURAN
LGBF		FL	3 (D/E)	V12			S2	30	2302	5-METHYLHEXAN-2-ONE
LGBF		FL	3 (D/E)	V12			S2	30	2303	ISOPROPENYLBENZENE
LGBV	TU27 TE4 TE6	AT	3 (E)					44	2304	NAPHTHALENE, MOLTEN
SGAN L4BN		AT	2 (E)	V11				80	2305	NITROBENZENE-SULPHONIC ACID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2306	NITROBENZOTRI-FLUORIDES, LIQUID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2307	3-NITRO-4-CHLORO-BENZOTRIFLUORIDE
L4BN		AT	2 (E)					X80	2308	NITROSYLSULPHURIC ACID, LIQUID
LGBF		FL	2 (D/E)				S2 S20	33	2309	OCTADIENES
L4BH	TU15	FL	3 (D/E)	V12		CV13 CV28	S2	36	2310	PENTANE-2,4-DIONE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2311	PHENETIDINES
L4BH	TU15 TE19	AT	0 (D/E)			CV13	S9 S19	60	2312	PHENOL, MOLTEN
LGBF		FL	3 (D/E)	V12			S2	30	2313	PICOLINES
L4BH	TU15	AT	0 (D/E)		VV15	CV1 CV13 CV28	S19	90	2315	POLYCHLORINATED BIPHENYLS, LIQUID
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2316	SODIUM CUPROCYANIDE, SOLID
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2317	SODIUM CUPROCYANIDE SOLUTION
SGAN		AT	2 (D/E)	V1				40	2318	SODIUM HYDROSULPHIDE with less than 25% water of crystallization
LGBF		FL	3 (D/E)	V12			S2	30	2319	TERPENE HYDROCARBONS, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2320	TETRAETHYLENE-PENTAMINE	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2321	TRICHLOROBENZENES, LIQUID	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2322	TRICHLOROBUTENE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2323	TRIETHYL PHOSPHITE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2324	TRIIISOBUTYLENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2325	1,3,5-TRIMETHYLBENZENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2326	TRIMETHYLCYCLO-HEXYLAMINE	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2327	TRIMETHYLHEXA-METHYLENEDIAMINES	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2328	TRIMETHYLHEXA-METHYLENE DIISOCYANATE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2
2329	TRIMETHYL PHOSPHITE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2330	UNDECANE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2331	ZINC CHLORIDE, ANHYDROUS	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2332	ACETALDEHYDE OXIME	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2333	ALLYL ACETATE	3	FT1	II	3 +6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2334	ALLYLAMINE	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
2335	ALLYL ETHYL ETHER	3	FT1	II	3 +6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2336	ALLYL FORMATE	3	FT1	I	3 +6.1		0	E0	P001		MP7 MP17	T14	TP2
2337	PHENYL MERCAPTAN	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
2338	BENZOTRIFLUORIDE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2339	2-BROMOBUTANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2340	2-BROMOETHYL ETHYL ETHER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	3 (E)	V12				80	2320	TETRAETHYLENE-PENTAMINE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2321	TRICHLOROBENZENES, LIQUID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2322	TRICHLOROBUTENE
LGBF		FL	3 (D/E)	V12			S2	30	2323	TRIETHYL PHOSPHITE
LGBF		FL	3 (D/E)	V12			S2	30	2324	TRISOBUTYLENE
LGBF		FL	3 (D/E)	V12			S2	30	2325	1,3,5-TRIMETHYLBENZENE
L4BN		AT	3 (E)	V12				80	2326	TRIMETHYLCYCLO-HEXYLAMINE
L4BN		AT	3 (E)	V12				80	2327	TRIMETHYLHEXA-METHYLENEDIAMINES
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2328	TRIMETHYLHEXA-METHYLENE DIISOCYANATE
LGBF		FL	3 (D/E)	V12			S2	30	2329	TRIMETHYL PHOSPHITE
LGBF		FL	3 (D/E)	V12			S2	30	2330	UNDECANE
SGAV		AT	3 (E)		VV9			80	2331	ZINC CHLORIDE, ANHYDROUS
LGBF		FL	3 (D/E)	V12			S2	30	2332	ACETALDEHYDE OXIME
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2333	ALLYL ACETATE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2334	ALLYLAMINE
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2335	ALLYL ETHYL ETHER
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2336	ALLYL FORMATE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2337	PHENYL MERCAPTAN
LGBF		FL	2 (D/E)				S2 S20	33	2338	BENZOTRIFLUORIDE
LGBF		FL	2 (D/E)				S2 S20	33	2339	2-BROMOBUTANE
LGBF		FL	2 (D/E)				S2 S20	33	2340	2-BROMOETHYL ETHYL ETHER

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2341	1-BROMO-3-METHYLBUTANE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2342	BROMOMETHYL-PROPANES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2343	2-BROMOPENTANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2344	BROMOPROPANES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2344	BROMOPROPANES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2345	3-BROMOPROPYNE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2346	BUTANEDIONE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2347	BUTYL MERCAPTAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2348	BUTYL ACRYLATES, STABILIZED	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2350	BUTYL METHYL ETHER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2351	BUTYL NITRITES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2351	BUTYL NITRITES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2352	BUTYL VINYL ETHER, STABILIZED	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2353	BUTYRYL CHLORIDE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T8	TP2
2354	CHLOROMETHYL ETHYL ETHER	3	FT1	II	3 +6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2356	2-CHLOROPROPANE	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
2357	CYCLOHEXYLAMINE	8	CF1	II	8 +3		1 L	E2	P001 IBC02		MP15	T7	TP2
2358	CYCLOOCTATETRAENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2359	DIALLYLAMINE	3	FTC	II	3 +6.1 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
2360	DIALLYL ETHER	3	FT1	II	3 +6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2361	DIISOBUTYLAMINE	3	FC	III	3 +8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2362	1,1-DICHLOROETHANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2363	ETHYL MERCAPTAN	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
2364	n-PROPYLBENZENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	3 (D/E)	V12			S2	30	2341	1-BROMO-3-METHYLBUTANE
LGBF		FL	2 (D/E)				S2 S20	33	2342	BROMOMETHYL-PROPANES
LGBF		FL	2 (D/E)				S2 S20	33	2343	2-BROMOPENTANE
LGBF		FL	2 (D/E)				S2 S20	33	2344	BROMOPROPANES
LGBF		FL	3 (D/E)	V12			S2	30	2344	BROMOPROPANES
LGBF		FL	2 (D/E)				S2 S20	33	2345	3-BROMOPROPYNE
LGBF		FL	2 (D/E)				S2 S20	33	2346	BUTANEDIONE
LGBF		FL	2 (D/E)				S2 S20	33	2347	BUTYL MERCAPTAN
LGBF		FL	3 (D/E)	V12			S2	39	2348	BUTYL ACRYLATES, STABILIZED
LGBF		FL	2 (D/E)				S2 S20	33	2350	BUTYL METHYL ETHER
LGBF		FL	2 (D/E)				S2 S20	33	2351	BUTYL NITRITES
LGBF		FL	3 (D/E)	V12			S2	30	2351	BUTYL NITRITES
LGBF		FL	2 (D/E)				S2 S20	339	2352	BUTYL VINYL ETHER, STABILIZED
L4BH		FL	2 (D/E)				S2 S20	338	2353	BUTYRYL CHLORIDE
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2354	CHLOROMETHYL ETHYL ETHER
L4BN		FL	1 (D/E)				S2 S20	33	2356	2-CHLOROPROPANE
L4BN		FL	2 (D/E)				S2	83	2357	CYCLOHEXYLAMINE
LGBF		FL	2 (D/E)				S2 S20	33	2358	CYCLOOCTATETRAENE
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	338	2359	DIALLYLAMINE
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2360	DIALLYL ETHER
L4BN		FL	3 (D/E)	V12			S2	38	2361	DIISOBUTYLAMINE
LGBF		FL	2 (D/E)				S2 S20	33	2362	1,1-DICHLOROETHANE
L4BN		FL	1 (D/E)				S2 S20	33	2363	ETHYL MERCAPTAN
LGBF		FL	3 (D/E)	V12			S2	30	2364	n-PROPYLBENZENE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
2366	DIETHYL CARBONATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2367	alpha-METHYL- VALERALDEHYDE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2368	alpha-PINENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2370	1-HEXENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2371	ISOPENTENES	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
2372	1,2-DI-(DIMETHYLAMINO) ETHANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2373	DIETHOXYMETHANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2374	3,3-DIETHOXYPROPENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2375	DIETHYL SULPHIDE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1
2376	2,3-DIHYDROPYRAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2377	1,1-DIMETHOXYETHANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1
2378	2-DIMETHYLAMINO- ACETONITRILE	3	FT1	II	3 +6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2379	1,3- DIMETHYLBUTYLAMINE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
2380	DIMETHYLDIETHOXY- SILANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2381	DIMETHYL DISULPHIDE	3	FT1	II	3 +6.1		1 L	E2	P001 IBC02		MP19	T7	TP2 TP39
2382	DIMETHYLHYDRAZINE, SYMMETRICAL	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2383	DIPROPYLAMINE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
2384	DI-n-PROPYL ETHER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2385	ETHYL ISOBUTYRATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2386	1-ETHYLPYPERIDINE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
2387	FLUOROBENZENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2388	FLUOROTOLUENES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2389	FURAN	3	F1	I	3		0	E3	P001		MP7 MP17	T12	TP2
2390	2-IODOBUTANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2391	IODOMETHYLPROPANES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	3 (D/E)	V12			S2	30	2366	DIETHYL CARBONATE
LGBF		FL	2 (D/E)				S2 S20	33	2367	alpha-METHYL-VALERALDEHYDE
LGBF		FL	3 (D/E)	V12			S2	30	2368	alpha-PINENE
LGBF		FL	2 (D/E)				S2 S20	33	2370	1-HEXENE
L4BN		FL	1 (D/E)				S2 S20	33	2371	ISOPENTENES
LGBF		FL	2 (D/E)				S2 S20	33	2372	1,2-DI-(DIMETHYLAMINO) ETHANE
LGBF		FL	2 (D/E)				S2 S20	33	2373	DIETHOXYMETHANE
LGBF		FL	2 (D/E)				S2 S20	33	2374	3,3-DIETHOXYPROPENE
LGBF		FL	2 (D/E)				S2 S20	33	2375	DIETHYL SULPHIDE
LGBF		FL	2 (D/E)				S2 S20	33	2376	2,3-DIHYDROPYRAN
LGBF		FL	2 (D/E)				S2 S20	33	2377	1,1-DIMETHOXYETHANE
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2378	2-DIMETHYLAMINO-ACETONITRILE
L4BH		FL	2 (D/E)				S2 S20	338	2379	1,3-DIMETHYLBUTYLAMINE
LGBF		FL	2 (D/E)				S2 S20	33	2380	DIMETHYLDIETHOXY-SILANE
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2381	DIMETHYL DISULPHIDE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2382	DIMETHYLHYDRAZINE, SYMMETRICAL
L4BH		FL	2 (D/E)				S2 S20	338	2383	DIPROPYLAMINE
LGBF		FL	2 (D/E)				S2 S20	33	2384	DI-n-PROPYL ETHER
LGBF		FL	2 (D/E)				S2 S20	33	2385	ETHYL ISOBUTYRATE
L4BH		FL	2 (D/E)				S2 S20	338	2386	1-ETHYLPYPERIDINE
LGBF		FL	2 (D/E)				S2 S20	33	2387	FLUOROBENZENE
LGBF		FL	2 (D/E)				S2 S20	33	2388	FLUOROTOLUENES
L4BN		FL	1 (D/E)				S2 S20	33	2389	FURAN
LGBF		FL	2 (D/E)				S2 S20	33	2390	2-IODOBUTANE
LGBF		FL	2 (D/E)				S2 S20	33	2391	IODOMETHYLPROPANES

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
2392	IODOPROPANES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2393	ISOBUTYL FORMATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2394	ISOBUTYL PROPIONATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2395	ISOBUTYRYL CHLORIDE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP2
2396	METHACRYLALDEHYDE, STABILIZED	3	FT1	II	3 +6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2397	3-METHYLBUTAN-2-ONE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2398	METHYL tert-BUTYL ETHER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1
2399	1-METHYLPYPERIDINE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
2400	METHYL ISOVALERATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2401	PIPERIDINE	8	CF1	I	8 +3		0	E0	P001		MP8 MP17	T10	TP2
2402	PROPANETHIOLS	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2403	ISOPROPENYL ACETATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2404	PROPIONITRILE	3	FT1	II	3 +6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2405	ISOPROPYL BUTYRATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2406	ISOPROPYL ISOBUTYRATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2407	ISOPROPYL CHLOROFORMATE	6.1	TFC	I	6.1 +3 +8	354	0	E0	P602		MP8 MP17		
2409	ISOPROPYL PROPIONATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2410	1,2,3,6- TETRAHYDOPYRIDINE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2411	BUTYRONITRILE	3	FT1	II	3 +6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2412	TETRAHYDROTHIOPHENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2413	TETRAPROPYL ORTHOTITANATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2414	THIOPHENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2416	TRIMETHYL BORATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1
2417	CARBONYL FLUORIDE	2	2TC		2.3 +8		0	E0	P200		MP9	(M)	
2418	SULPHUR TETRAFLUORIDE	2	2TC		2.3 +8		0	E0	P200		MP9		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	3 (D/E)	V12			S2	30	2392	IODOPROPANES
LGBF		FL	2 (D/E)				S2 S20	33	2393	ISOBUTYL FORMATE
LGBF		FL	3 (D/E)	V12			S2	30	2394	ISOBUTYL PROPIONATE
L4BH		FL	2 (D/E)				S2 S20	338	2395	ISOBUTYRYL CHLORIDE
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2396	METHACRYLALDEHYDE, STABILIZED
LGBF		FL	2 (D/E)				S2 S20	33	2397	3-METHYLBUTAN-2-ONE
LGBF		FL	2 (D/E)				S2 S20	33	2398	METHYL tert-BUTYL ETHER
L4BH		FL	2 (D/E)				S2 S20	338	2399	1-METHYLPYPERIDINE
LGBF		FL	2 (D/E)				S2 S20	33	2400	METHYL ISOVALERATE
L10BH		FL	1 (D/E)				S2 S14	883	2401	PIPERIDINE
LGBF		FL	2 (D/E)				S2 S20	33	2402	PROPANETHIOLS
LGBF		FL	2 (D/E)				S2 S20	33	2403	ISOPROPENYL ACETATE
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2404	PROPIONITRILE
LGBF		FL	3 (D/E)	V12			S2	30	2405	ISOPROPYL BUTYRATE
LGBF		FL	2 (D/E)				S2 S20	33	2406	ISOPROPYL ISOBUTYRATE
			1 (D)			CV1 CV13 CV28	S2 S9 S14		2407	ISOPROPYL CHLOROFORMATE
LGBF		FL	2 (D/E)				S2 S20	33	2409	ISOPROPYL PROPIONATE
LGBF		FL	2 (D/E)				S2 S20	33	2410	1,2,3,6-TETRAHYDROPYRIDINE
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2411	BUTYRONITRILE
LGBF		FL	2 (D/E)				S2 S20	33	2412	TETRAHYDROTHIOPHENE
LGBF		FL	3 (D/E)	V12			S2	30	2413	TETRAPROPYL ORTHOTITANATE
LGBF		FL	2 (D/E)				S2 S20	33	2414	THIOPHENE
LGBF		FL	2 (D/E)				S2 S20	33	2416	TRIMETHYL BORATE
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	2417	CARBONYL FLUORIDE
			1 (D)			CV9 CV10 CV36	S14		2418	SULPHUR TETRAFLUORIDE

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							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2419	BROMOTRIFLUORO-ETHYLENE	2	2F		2.1		0	E0	P200		MP9	(M)	
2420	HEXAFLUOROACETONE	2	2TC		2.3 +8		0	E0	P200		MP9	(M)	
2421	NITROGEN TRIOXIDE	2	2TOC	CARRIAGE PROHIBITED									
2422	OCTAFLUOROBUT-2-ENE (REFRIGERANT GAS R 1318)	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
2424	OCTAFLUOROPROPANE (REFRIGERANT GAS R 218)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
2426	AMMONIUM NITRATE, LIQUID, hot concentrated solution, in a concentration of more than 80% but not more than 93%	5.1	O1		5.1	252 644	0	E0				T7	TP1 TP16 TP17
2427	POTASSIUM CHLORATE, AQUEOUS SOLUTION	5.1	O1	II	5.1		1 L	E2	P504 IBC02		MP2	T4	TP1
2427	POTASSIUM CHLORATE, AQUEOUS SOLUTION	5.1	O1	III	5.1		5 L	E1	P504 IBC02 R001		MP2	T4	TP1
2428	SODIUM CHLORATE, AQUEOUS SOLUTION	5.1	O1	II	5.1		1 L	E2	P504 IBC02		MP2	T4	TP1
2428	SODIUM CHLORATE, AQUEOUS SOLUTION	5.1	O1	III	5.1		5 L	E1	P504 IBC02 R001		MP2	T4	TP1
2429	CALCIUM CHLORATE, AQUEOUS SOLUTION	5.1	O1	II	5.1		1 L	E2	P504 IBC02		MP2	T4	TP1
2429	CALCIUM CHLORATE, AQUEOUS SOLUTION	5.1	O1	III	5.1		5 L	E1	P504 IBC02 R001		MP2	T4	TP1
2430	ALKYLPHENOLS, SOLID, N.O.S. (including C ₂ -C ₁₂ homologues)	8	C4	I	8		0	E0	P002 IBC07		MP18	T6	TP33
2430	ALKYLPHENOLS, SOLID, N.O.S. (including C ₂ -C ₁₂ homologues)	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2430	ALKYLPHENOLS, SOLID, N.O.S. (including C ₂ -C ₁₂ homologues)	8	C4	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2431	ANISIDINES	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2432	N,N-DIETHYLANILINE	6.1	T1	III	6.1	279	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2433	CHLORONITROTOLUENES, LIQUID	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2434	DIBENZYL-DICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
2435	ETHYLPHENYL-DICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
2436	THIOACETIC ACID	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2437	METHYLPHENYL-DICHLOROSILANE	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
2438	TRIMETHYLACETYL CHLORIDE	6.1	TFC	I	6.1 +3 +8		0	E5	P001		MP8 MP17	T14	TP2
2439	SODIUM HYDROGENDIFLUORIDE	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2419	BROMOTRIFLUORO-ETHYLENE
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	2420	HEXAFLUOROACETONE
CARRIAGE PROHIBITED									2421	NITROGEN TRIOXIDE
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	2422	OCTAFLUOROBUT-2-ENE (REFRIGERANT GAS R 1318)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	2424	OCTAFLUOROPROPANE (REFRIGERANT GAS R 218)
L4BV(+)	TU3 TU12 TU29 TC3 TE9 TE10 TA1	AT	0 (E)				S23	59	2426	AMMONIUM NITRATE, LIQUID, hot concentrated solution, in a concentration of more than 80% but not more than 93%
L4BN	TU3	AT	2 (E)			CV24		50	2427	POTASSIUM CHLORATE, AQUEOUS SOLUTION
LGBV	TU3	AT	3 (E)			CV24		50	2427	POTASSIUM CHLORATE, AQUEOUS SOLUTION
L4BN	TU3	AT	2 (E)			CV24		50	2428	SODIUM CHLORATE, AQUEOUS SOLUTION
LGBV	TU3	AT	3 (E)			CV24		50	2428	SODIUM CHLORATE, AQUEOUS SOLUTION
L4BN	TU3	AT	2 (E)			CV24		50	2429	CALCIUM CHLORATE, AQUEOUS SOLUTION
LGBV	TU3	AT	3 (E)			CV24		50	2429	CALCIUM CHLORATE, AQUEOUS SOLUTION
S10AN L10BH		AT	1 (E)	V10			S20	88	2430	ALKYLPHENOLS, SOLID, N.O.S. (including C ₂ -C ₁₂ homologues)
SGAN L4BN		AT	2 (E)	V11				80	2430	ALKYLPHENOLS, SOLID, N.O.S. (including C ₂ -C ₁₂ homologues)
SGAV L4BN		AT	3 (E)		VV9			80	2430	ALKYLPHENOLS, SOLID, N.O.S. (including C ₂ -C ₁₂ homologues)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2431	ANISIDINES
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2432	N,N-DIETHYLANILINE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2433	CHLORONITROTOLUENES, LIQUID
L4BN		AT	2 (E)					X80	2434	DIBENZYL-DICHLOROSILANE
L4BN		AT	2 (E)					X80	2435	ETHYLPHENYL-DICHLOROSILANE
LGBF		FL	2 (D/E)				S2 S20	33	2436	THIOACETIC ACID
L4BN		AT	2 (E)					X80	2437	METHYLPHENYL-DICHLOROSILANE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2438	TRIMETHYLACETYL CHLORIDE
SGAN		AT	2 (E)	V11				80	2439	SODIUM HYDROGENDIFLUORIDE

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							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2440	STANNIC CHLORIDE PENTAHYDRATE	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2441	TITANIUM TRICHLORIDE, PYROPHORIC or TITANIUM TRICHLORIDE MIXTURE, PYROPHORIC	4.2	SC4	I	4.2 +8	537	0	E0	P404		MP13		
2442	TRICHLOROACETYL CHLORIDE	8	C3	II	8		0	E2	P001		MP15	T7	TP2
2443	VANADIUM OXYTRICHLORIDE	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2444	VANADIUM TETRACHLORIDE	8	C1	I	8		0	E0	P802		MP8 MP17	T10	TP2
2446	NITROCRESOLS, SOLID	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2447	PHOSPHORUS, WHITE, MOLTEN	4.2	ST3	I	4.2 +6.1		0	E0				T21	TP3 TP7 TP26
2448	SULPHUR, MOLTEN	4.1	F3	III	4.1	538	0	E0				T1	TP3
2451	NITROGEN TRIFLUORIDE	2	2O		2.2 +5.1		0	E0	P200		MP9	(M)	
2452	ETHYLACETYLENE, STABILIZED	2	2F		2.1		0	E0	P200		MP9	(M)	
2453	ETHYL FLUORIDE (REFRIGERANT GAS R 161)	2	2F		2.1		0	E0	P200		MP9	(M)	
2454	METHYL FLUORIDE (REFRIGERANT GAS R 41)	2	2F		2.1		0	E0	P200		MP9	(M)	
2455	METHYL NITRITE	2	2A	CARRIAGE PROHIBITED									
2456	2-CHLOROPROPENE	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
2457	2,3-DIMETHYLBUTANE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1
2458	HEXADIENES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2459	2-METHYL-1-BUTENE	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
2460	2-METHYL-2-BUTENE	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T7	TP1
2461	METHYLPENTADIENE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2463	ALUMINIUM HYDRIDE	4.3	W2	I	4.3		0	E0	P403		MP2		
2464	BERYLLIUM NITRATE	5.1	OT2	II	5.1 +6.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
2465	DICHLOROISOCYANURIC ACID, DRY or DICHLOROISOCYANURIC ACID SALTS	5.1	O2	II	5.1	135	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2466	POTASSIUM SUPEROXIDE	5.1	O2	I	5.1		0	E0	P503 IBC06		MP2		
2468	TRICHLOROISOCYANURIC ACID, DRY	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2469	ZINC BROMATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33

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Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAV		AT	3 (E)		VV9			80	2440	STANNIC CHLORIDE PENTAHYDRATE
			0 (E)	VI			S20		2441	TITANIUM TRICHLORIDE, PYROPHORIC or TITANIUM TRICHLORIDE MIXTURE, PYROPHORIC
L4BN		AT	2 (E)					X80	2442	TRICHLOROACETYL CHLORIDE
L4BN		AT	2 (E)					80	2443	VANADIUM OXYTRICHLORIDE
L10BH		AT	1 (E)				S20	X88	2444	VANADIUM TETRACHLORIDE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2446	NITROCRESOLS, SOLID
L10DH(+)	TU14 TU16 TU21 TE3 TE21	AT	0 (B/E)				S20	446	2447	PHOSPHORUS, WHITE, MOLTEN
LGBV(+)	TU27 TE4 TE6	AT	3 (E)					44	2448	SULPHUR, MOLTEN
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		25	2451	NITROGEN TRIFLUORIDE
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	2452	ETHYLACETYLENE, STABILIZED
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2453	ETHYL FLUORIDE (REFRIGERANT GAS R 161)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2454	METHYL FLUORIDE (REFRIGERANT GAS R 41)
CARRIAGE PROHIBITED									2455	METHYL NITRITE
L4BN		FL	1 (D/E)				S2 S20	33	2456	2-CHLOROPROPENE
LGBF		FL	2 (D/E)				S2 S20	33	2457	2,3-DIMETHYLBUTANE
LGBF		FL	2 (D/E)				S2 S20	33	2458	HEXADIENES
L4BN		FL	1 (D/E)				S2 S20	33	2459	2-METHYL-1-BUTENE
L1.5BN		FL	2 (D/E)				S2 S20	33	2460	2-METHYL-2-BUTENE
LGBF		FL	2 (D/E)				S2 S20	33	2461	METHYLPENTADIENE
			1 (E)	VI		CV23	S20		2463	ALUMINIUM HYDRIDE
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	2464	BERYLLIUM NITRATE
SGAN	TU3	AT	2 (E)	V11		CV24		50	2465	DICHLOROISOCYANURIC ACID, DRY or DICHLOROISOCYANURIC ACID SALTS
			1 (E)	V10		CV24	S20		2466	POTASSIUM SUPEROXIDE
SGAN	TU3	AT	2 (E)	V11		CV24		50	2468	TRICHLOROISOCYANURIC ACID, DRY
SGAV	TU3	AT	3 (E)		VV8	CV24		50	2469	ZINC BROMATE

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							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
2470	PHENYLACETONITRILE, LIQUID	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2471	OSMIUM TETROXIDE	6.1	T5	I	6.1		0	E5	P002 IBC07	PP30	MP18	T6	TP33
2473	SODIUM ARSANILATE	6.1	T3	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2474	THIOPHOSGENE	6.1	T1	I	6.1	279 354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2475	VANADIUM TRICHLORIDE	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2477	METHYL ISOTHIOCYANATE	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2478	ISOCYANATES, FLAMMABLE, TOXIC, N.O.S. or ISOCYANATE SOLUTION, FLAMMABLE, TOXIC, N.O.S.	3	FT1	II	3 +6.1	274 539	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27
2478	ISOCYANATES, FLAMMABLE, TOXIC, N.O.S. or ISOCYANATE SOLUTION, FLAMMABLE, TOXIC, N.O.S.	3	FT1	III	3 +6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
2480	METHYL ISOCYANATE	6.1	TF1	I	6.1 +3	354	0	E0	P601		MP2	T22	TP2
2481	ETHYL ISOCYANATE	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2482	n-PROPYL ISOCYANATE	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2483	ISOPROPYL ISOCYANATE	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2484	tert-BUTYL ISOCYANATE	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2485	n-BUTYL ISOCYANATE	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2486	ISOBUTYL ISOCYANATE	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2487	PHENYL ISOCYANATE	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2488	CYCLOHEXYL ISOCYANATE	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2490	DICHLOROISOPROPYL ETHER	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2491	ETHANOLAMINE or ETHANOLAMINE SOLUTION	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2493	HEXAMETHYLENIMINE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
2495	IODINE PENTAFLUORIDE	5.1	OTC	I	5.1 +6.1 +8		0	E0	P200		MP2		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2470	PHENYLACETONITRILE, LIQUID
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2471	OSMIUM TETROXIDE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2473	SODIUM ARSANILATE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	2474	THIOPHOSGENE
SGAV		AT	3 (E)		VV9			80	2475	VANADIUM TRICHLORIDE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2477	METHYL ISOTHIOCYANATE
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2478	ISOCYANATES, FLAMMABLE, TOXIC, N.O.S. or ISOCYANATE SOLUTION, FLAMMABLE, TOXIC, N.O.S.
L4BH	TU15	FL	3 (D/E)	V12		CV13 CV28	S2	36	2478	ISOCYANATES, FLAMMABLE, TOXIC, N.O.S. or ISOCYANATE SOLUTION, FLAMMABLE, TOXIC, N.O.S.
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2480	METHYL ISOCYANATE
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2481	ETHYL ISOCYANATE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2482	n-PROPYL ISOCYANATE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2483	ISOPROPYL ISOCYANATE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2484	tert-BUTYL ISOCYANATE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2485	n-BUTYL ISOCYANATE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2486	ISOBUTYL ISOCYANATE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2487	PHENYL ISOCYANATE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2488	CYCLOHEXYL ISOCYANATE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2490	DICHLOROISOPROPYL ETHER
L4BN		AT	3 (E)	V12				80	2491	ETHANOLAMINE or ETHANOLAMINE SOLUTION
L4BH		FL	2 (D/E)				S2 S20	338	2493	HEXAMETHYLENIMINE
L10DH	TU3	AT	1 (B/E)			CV24 CV28	S20	568	2495	IODINE PENTAFLUORIDE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2496	PROPIONIC ANHYDRIDE	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2498	1,2,3,6-TETRAHYDROBENZAL-DEHYDE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2501	TRIS-(1-AZIRIDINYL) PHOSPHINE OXIDE SOLUTION	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2501	TRIS-(1-AZIRIDINYL) PHOSPHINE OXIDE SOLUTION	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2502	VALERYL CHLORIDE	8	CF1	II	8 +3		1 L	E2	P001 IBC02		MP15	T7	TP2
2503	ZIRCONIUM TETRACHLORIDE	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2504	TETRABROMOETHANE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2505	AMMONIUM FLUORIDE	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2506	AMMONIUM HYDROGEN SULPHATE	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2507	CHLOROPLATINIC ACID, SOLID	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2508	MOLYBDENUM PENTACHLORIDE	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2509	POTASSIUM HYDROGEN SULPHATE	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2511	2-CHLOROPROPIONIC ACID	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2
2512	AMINOPHENOLS (o-, m-, p-)	6.1	T2	III	6.1	279	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2513	BROMOACETYL BROMIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
2514	BROMOBENZENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2515	BROMOFORM	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2516	CARBON TETRABROMIDE	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2517	1-CHLORO-1,1-DIFLUOROETHANE (REFRIGERANT GAS R 142b)	2	2F		2.1		0	E0	P200		MP9	(M) T50	
2518	1,5,9-CYCLODODECATRIENE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	3 (E)	V12				80	2496	PROPIONIC ANHYDRIDE
LGBF		FL	3 (D/E)	V12			S2	30	2498	1,2,3,6-TETRAHYDROBENZAL-DEHYDE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2501	TRIS-(1-AZIRIDINYL) PHOSPHINE OXIDE SOLUTION
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2501	TRIS-(1-AZIRIDINYL) PHOSPHINE OXIDE SOLUTION
L4BN		FL	2 (D/E)				S2	83	2502	VALERYL CHLORIDE
SGAV		AT	3 (E)		VV9			80	2503	ZIRCONIUM TETRACHLORIDE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2504	TETRABROMOETHANE
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2505	AMMONIUM FLUORIDE
SGAV		AT	2 (E)	V11	VV9			80	2506	AMMONIUM HYDROGEN SULPHATE
SGAV		AT	3 (E)		VV9			80	2507	CHLOROPLATINIC ACID, SOLID
SGAV		AT	3 (E)		VV9			80	2508	MOLYBDENUM PENTACHLORIDE
SGAV		AT	2 (E)	V11	VV9			80	2509	POTASSIUM HYDROGEN SULPHATE
L4BN		AT	3 (E)	V12				80	2511	2-CHLOROPROPIONIC ACID
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2512	AMINOPHENOLS (o-, m-, p-)
L4BN		AT	2 (E)					X80	2513	BROMOACETYL BROMIDE
LGBF		FL	3 (D/E)	V12			S2	30	2514	BROMOBENZENE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2515	BROMOFORM
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2516	CARBON TETRABROMIDE
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2517	1-CHLORO-1,1-DIFLUOROETHANE (REFRIGERANT GAS R 142b)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2518	1,5,9-CYCLODODECATRIENE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2520	CYCLOOCTADIENES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2521	DIKETENE, STABILIZED	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2522	2-DIMETHYLAMINOETHYL METHACRYLATE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2524	ETHYL ORTHOFORMATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2525	ETHYL OXALATE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2526	FURFURYLAMINE	3	FC	III	3 +8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2527	ISOBUTYL ACRYLATE, STABILIZED	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2528	ISOBUTYL ISOBUTYRATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2529	ISOBUTYRIC ACID	3	FC	III	3 +8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2531	METHACRYLIC ACID, STABILIZED	8	C3	II	8		1 L	E2	P001 IBC02 LP01		MP15	T7	TP2 TP18 TP30
2533	METHYL TRICHLOROACETATE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2534	METHYLCHLOROSILANE	2	2TFC		2.3 +2.1 +8		0	E0	P200		MP9	(M)	
2535	4-METHYLMORPHOLINE (N-METHYLMORPHOLINE)	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
2536	METHYLTETRAHYDRO-FURAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2538	NITRONAPHTHALENE	4.1	F1	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2541	TERPINOLENE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2542	TRIBUTYLAMINE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2545	HAFNIUM POWDER, DRY	4.2	S4	I	4.2	540	0	E0	P404		MP13		
2545	HAFNIUM POWDER, DRY	4.2	S4	II	4.2	540	0	E2	P410 IBC06		MP14	T3	TP33
2545	HAFNIUM POWDER, DRY	4.2	S4	III	4.2	540	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
2546	TITANIUM POWDER, DRY	4.2	S4	I	4.2	540	0	E0	P404		MP13		
2546	TITANIUM POWDER, DRY	4.2	S4	II	4.2	540	0	E2	P410 IBC06		MP14	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	3 (D/E)	V12			S2	30	2520	CYCLOOCTADIENES
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2521	DIKETENE, STABILIZED
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	69	2522	2-DIMETHYLAMINOETHYL METHACRYLATE
LGBF		FL	3 (D/E)	V12			S2	30	2524	ETHYL ORTHOFORMATE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2525	ETHYL OXALATE
L4BN		FL	3 (D/E)	V12			S2	38	2526	FURFURYLAMINE
LGBF		FL	3 (D/E)	V12			S2	39	2527	ISOBUTYL ACRYLATE, STABILIZED
LGBF		FL	3 (D/E)	V12			S2	30	2528	ISOBUTYL ISOBUTYRATE
L4BN		FL	3 (D/E)	V12			S2	38	2529	ISOBUTYRIC ACID
L4BN		AT	2 (E)					89	2531	METHACRYLIC ACID, STABILIZED
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2533	METHYL TRICHLOROACETATE
		FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	2534	METHYLCHLOROSILANE
L4BH		FL	2 (D/E)				S2 S20	338	2535	4-METHYLMORPHOLINE (N-METHYLMORPHOLINE)
LGBF		FL	2 (D/E)				S2 S20	33	2536	METHYLTETRAHYDROFURAN
SGAV		AT	3 (E)		VV1			40	2538	NITRONAPHTHALENE
LGBF		FL	3 (D/E)	V12			S2	30	2541	TERPINOLENE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2542	TRIBUTYLAMINE
			0 (E)	V1			S20		2545	HAFNIUM POWDER, DRY
SGAN		AT	2 (D/E)	V1				40	2545	HAFNIUM POWDER, DRY
SGAN		AT	3 (E)	V1	VV4			40	2545	HAFNIUM POWDER, DRY
			0 (E)	V1			S20		2546	TITANIUM POWDER, DRY
SGAN		AT	2 (D/E)	V1				40	2546	TITANIUM POWDER, DRY

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
2546	TITANIUM POWDER, DRY	4.2	S4	III	4.2	540	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33	
2547	SODIUM SUPEROXIDE	5.1	O2	I	5.1		0	E0	P503 IBC06		MP2			
2548	CHLORINE PENTAFLUORIDE	2	2TOC		2.3 +5.1 +8		0	E0	P200		MP9			
2552	HEXAFLUOROACETONE HYDRATE, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	
2554	METHYLALLYL CHLORIDE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	
2555	NITROCELLULOSE WITH WATER (not less than 25% water, by mass)	4.1	D	II	4.1	541	0	E0	P406		MP2			
2556	NITROCELLULOSE WITH ALCOHOL (not less than 25% alcohol, by mass, and not more than 12.6% nitrogen, by dry mass)	4.1	D	II	4.1	541	0	E0	P406		MP2			
2557	NITROCELLULOSE, with not more than 12.6% nitrogen, by dry mass, MIXTURE WITH or WITHOUT PLASTICIZER, WITH or WITHOUT PIGMENT	4.1	D	II	4.1	241 541	0	E0	P406		MP2			
2558	EPIBROMOHYDRIN	6.1	TF1	I	6.1 +3		0	E5	P001		MP8 MP17	T14	TP2	
2560	2-METHYLPENTAN-2-OL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
2561	3-METHYL-1-BUTENE	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2	
2564	TRICHLOROACETIC ACID SOLUTION	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	
2564	TRICHLOROACETIC ACID SOLUTION	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
2565	DICYCLOHEXYLAMINE	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
2567	SODIUM PENTACHLOROPHENATE	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
2570	CADMIUM COMPOUND	6.1	T5	I	6.1	274 596	0	E5	P002 IBC07		MP18	T6	TP33	
2570	CADMIUM COMPOUND	6.1	T5	II	6.1	274 596	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
2570	CADMIUM COMPOUND	6.1	T5	III	6.1	274 596	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
2571	ALKYLSULPHURIC ACIDS	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2 TP28	
2572	PHENYLHYDRAZINE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	
2573	THALLIUM CHLORATE	5.1	OT2	II	5.1 +6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33	
2574	TRICRESYL PHOSPHATE with more than 3% ortho isomer	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	
2576	PHOSPHORUS OXYBROMIDE, MOLTEN	8	C1	II	8		0	E0				T7	TP3	
2577	PHENYLACETYL CHLORIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN		AT	3 (E)	V1	VV4			40	2546	TITANIUM POWDER, DRY
			1 (E)	V10		CV24	S20		2547	SODIUM SUPEROXIDE
			1 (D)			CV9 CV10 CV36	S14		2548	CHLORINE PENTAFLUORIDE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2552	HEXAFLUOROACETONE HYDRATE, LIQUID
LGBF		FL	2 (D/E)				S2 S20	33	2554	METHYLALYL CHLORIDE
			2 (B)				S14		2555	NITROCELLULOSE WITH WATER (not less than 25% water, by mass)
			2 (B)				S14		2556	NITROCELLULOSE WITH ALCOHOL (not less than 25% alcohol, by mass, and not more than 12.6% nitrogen, by dry mass)
			2 (B)				S14		2557	NITROCELLULOSE, with not more than 12.6% nitrogen, by dry mass, MIXTURE WITH or WITHOUT PLASTICIZER, WITH or WITHOUT PIGMENT
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2558	EPIBROMOHYDRIN
LGBF		FL	3 (D/E)	V12			S2	30	2560	2-METHYLPENTAN-2-OL
L4BN		FL	1 (D/E)				S2 S20	33	2561	3-METHYL-1-BUTENE
L4BN		AT	2 (E)					80	2564	TRICHLOROACETIC ACID SOLUTION
L4BN		AT	3 (E)	V12				80	2564	TRICHLOROACETIC ACID SOLUTION
L4BN		AT	3 (E)	V12				80	2565	DICYCLOHEXYLAMINE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2567	SODIUM PENTACHLOROPHENATE
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2570	CADMIUM COMPOUND
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2570	CADMIUM COMPOUND
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2570	CADMIUM COMPOUND
L4BN		AT	2 (E)					80	2571	ALKYLSULPHURIC ACIDS
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2572	PHENYLHYDRAZINE
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	2573	THALLIUM CHLORATE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2574	TRICRESYL PHOSPHATE with more than 3% ortho isomer
L4BN		AT	2 (E)					80	2576	PHOSPHORUS OXYBROMIDE, MOLTEN
L4BN		AT	2 (E)					80	2577	PHENYLACETYL CHLORIDE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2578	PHOSPHORUS TRIOXIDE	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2579	PIPERAZINE	8	C8	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2580	ALUMINIUM BROMIDE SOLUTION	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2581	ALUMINIUM CHLORIDE SOLUTION	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2582	FERRIC CHLORIDE SOLUTION	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2583	ALKYLSULPHONIC ACIDS, SOLID or ARYLSULPHONIC ACIDS, SOLID with more than 5% free sulphuric acid	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2584	ALKYLSULPHONIC ACIDS, LIQUID or ARYLSULPHONIC ACIDS, LIQUID with more than 5% free sulphuric acid	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
2585	ALKYLSULPHONIC ACIDS, SOLID or ARYLSULPHONIC ACIDS, SOLID with not more than 5% free sulphuric acid	8	C4	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2586	ALKYLSULPHONIC ACIDS, LIQUID or ARYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2587	BENZOQUINONE	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2588	PESTICIDE, SOLID, TOXIC, N.O.S.	6.1	T7	I	6.1	61 274 648	0	E5	P002 IBC02		MP18	T6	TP33
2588	PESTICIDE, SOLID, TOXIC, N.O.S.	6.1	T7	II	6.1	61 274 648	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2588	PESTICIDE, SOLID, TOXIC, N.O.S.	6.1	T7	III	6.1	61 274 648	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2589	VINYL CHLOROACETATE	6.1	TF1	II	6.1 +3		100 ml	E4	P001 IBC02		MP15	T7	TP2
2590	WHITE ASBESTOS (chrysotile, actinolite, anthophyllite, tremolite)	9	M1	III	9	168 542	5 kg	E1	P002 IBC08 R001	PP37 B4	MP10	T1	TP33
2591	XENON, REFRIGERATED LIQUID	2	3A		2.2	593	120 ml	E1	P203		MP9	T75	TP5
2599	CHLOROTRIFLUORO-METHANE AND TRIFLUOROMETHANE AZEOTROPIC MIXTURE with approximately 60% chlorotrifluoromethane (REFRIGERANT GAS R 503)	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
2601	CYCLOBUTANE	2	2F		2.1		0	E0	P200		MP9	(M)	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAV		AT	3 (E)		VV9			80	2578	PHOSPHORUS TRIOXIDE
SGAV L4BN		AT	3 (E)		VV9			80	2579	PIPERAZINE
L4BN		AT	3 (E)	V12				80	2580	ALUMINIUM BROMIDE SOLUTION
L4BN		AT	3 (E)	V12				80	2581	ALUMINIUM CHLORIDE SOLUTION
L4BN		AT	3 (E)	V12				80	2582	FERRIC CHLORIDE SOLUTION
SGAN L4BN		AT	2 (E)	V11				80	2583	ALKYLSULPHONIC ACIDS, SOLID or ARYLSULPHONIC ACIDS, SOLID with more than 5% free sulphuric acid
L4BN		AT	2 (E)					80	2584	ALKYLSULPHONIC ACIDS, LIQUID or ARYLSULPHONIC ACIDS, LIQUID with more than 5% free sulphuric acid
SGAV		AT	3 (E)		VV9			80	2585	ALKYLSULPHONIC ACIDS, SOLID or ARYLSULPHONIC ACIDS, SOLID with not more than 5% free sulphuric acid
L4BN		AT	3 (E)	V12				80	2586	ALKYLSULPHONIC ACIDS, LIQUID or ARYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2587	BENZOQUINONE
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2588	PESTICIDE, SOLID, TOXIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2588	PESTICIDE, SOLID, TOXIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2588	PESTICIDE, SOLID, TOXIC, N.O.S.
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2589	VINYL CHLOROACETATE
SGAH	TU15	AT	3 (E)	V11		CV13 CV28		90	2590	WHITE ASBESTOS (chrysotile, actinolite, anthophyllite, tremolite)
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	2591	XENON, REFRIGERATED LIQUID
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	2599	CHLOROTRIFLUORO-METHANE AND TRIFLUOROMETHANE AZEOTROPIC MIXTURE with approximately 60% chlorotrifluoromethane (REFRIGERANT GAS R 503)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2601	CYCLOBUTANE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2602	DICHLORODIFLUOROMETHANE AND 1,1-DIFLUOROETHANE AZEOTROPIC MIXTURE with approximately 74% dichlorodifluoromethane (REFRIGERANT GAS R 500)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
2603	CYCLOHEPTATRIENE	3	FT1	II	3 +6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2604	BORON TRIFLUORIDE DIETHYL ETHERATE	8	CF1	I	8 +3		0	E0	P001		MP8 MP17	T10	TP2
2605	METHOXYMETHYL ISOCYANATE	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2606	METHYL ORTHOSILICATE	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2607	ACROLEIN DIMER, STABILIZED	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2608	NITROPROPANES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2609	TRIALLYL BORATE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19		
2610	TRIALLYLAMINE	3	FC	III	3 +8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2611	PROPYLENE CHLOROHYDRIN	6.1	TF1	II	6.1 +3		100 ml	E4	P001 IBC02		MP15	T7	TP2
2612	METHYL PROPYL ETHER	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T7	TP2
2614	METHALLYL ALCOHOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2615	ETHYL PROPYL ETHER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2616	TRISOPROPYL BORATE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2616	TRISOPROPYL BORATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2617	METHYLCYCLOHEXANOLS, flammable	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2618	VINYLTOLUENES, STABILIZED	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2619	BENZYLDIMETHYLAMINE	8	CF1	II	8 +3		1 L	E2	P001 IBC02		MP15	T7	TP2
2620	AMYL BUTYRATES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2621	ACETYL METHYL CARBINOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2622	GLYCIDALDEHYDE	3	FT1	II	3 +6.1		1 L	E2	P001 IBC02	B8	MP19	T7	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	2602	DICHLORODIFLUOROMETHANE AND 1,1-DIFLUOROETHANE AZEOTROPIC MIXTURE with approximately 74% dichlorodifluoromethane (REFRIGERANT GAS R 500)
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2603	CYCLOHEPTATRIENE
L10BH		FL	1 (D/E)				S2 S14	883	2604	BORON TRIFLUORIDE DIETHYL ETHERATE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2605	METHOXYMETHYL ISOCYANATE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2606	METHYL ORTHOSILICATE
LGBF		FL	3 (D/E)	V12			S2	39	2607	ACROLEIN DIMER, STABILIZED
LGBF		FL	3 (D/E)	V12			S2	30	2608	NITROPROPANES
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2609	TRIALLYL BORATE
L4BN		FL	3 (D/E)	V12			S2	38	2610	TRIALLYLAMINE
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2611	PROPYLENE CHLOROHYDRIN
L1.5BN		FL	2 (D/E)				S2 S20	33	2612	METHYL PROPYL ETHER
LGBF		FL	3 (D/E)	V12			S2	30	2614	METHALLYL ALCOHOL
LGBF		FL	2 (D/E)				S2 S20	33	2615	ETHYL PROPYL ETHER
LGBF		FL	2 (D/E)				S2 S20	33	2616	TRISOPROPYL BORATE
LGBF		FL	3 (D/E)	V12			S2	30	2616	TRISOPROPYL BORATE
LGBF		FL	3 (D/E)	V12			S2	30	2617	METHYLCYCLOHEXANOLS, flammable
LGBF		FL	3 (D/E)	V12			S2	39	2618	VINYLTOLUENES, STABILIZED
L4BN		FL	2 (D/E)				S2	83	2619	BENZYLDIMETHYLAMINE
LGBF		FL	3 (D/E)	V12			S2	30	2620	AMYL BUTYRATES
LGBF		FL	3 (D/E)	V12			S2	30	2621	ACETYL METHYL CARBINOL
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2622	GLYCIDALDEHYDE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
2623	FIRELIGHTERS, SOLID with flammable liquid	4.1	F1	III	4.1		5 kg	E1	P002 LP02 R001	PP15	MP11		
2624	MAGNESIUM SILICIDE	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33
2626	CHLORIC ACID, AQUEOUS SOLUTION with not more than 10% chloric acid	5.1	O1	II	5.1	613	1 L	E2	P504 IBC02		MP2	T4	TP1
2627	NITRITES, INORGANIC, N.O.S.	5.1	O2	II	5.1	103 274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2628	POTASSIUM FLUOROACETATE	6.1	T2	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
2629	SODIUM FLUOROACETATE	6.1	T2	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
2630	SELENATES or SELENITES	6.1	T5	I	6.1	274	0	E5	P002 IBC07		MP18	T6	TP33
2642	FLUOROACETIC ACID	6.1	T2	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
2643	METHYL BROMOACETATE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2644	METHYL IODIDE	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2645	PHENACYL BROMIDE	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2646	HEXACHLORO-CYCLO-PENTADIENE	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
2647	MALONONITRILE	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2648	1,2-DIBROMOBUTAN-3-ONE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15		
2649	1,3-DICHLOROACETONE	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2650	1,1-DICHLORO-1-NITROETHANE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2651	4,4'-DIAMINODIPHENYL-METHANE	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2653	BENZYL IODIDE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2655	POTASSIUM FLUROSILICATE	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2656	QUINOLINE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2657	SELENIUM DISULPHIDE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2659	SODIUM CHLOROACETATE	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2660	NITROTOLUIDINES (MONO)	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2661	HEXACHLOROACETONE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2664	DIBROMOMETHANE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			4 (E)						2623	FIRELIGHTERS, SOLID with flammable liquid
SGAN		AT	2 (D/E)	V1		CV23			423	2624 MAGNESIUM SILICIDE
L4BN	TU3	AT	2 (E)			CV24			50	2626 CHLORIC ACID, AQUEOUS SOLUTION with not more than 10% chloric acid
SGAN	TU3	AT	2 (E)	V11		CV24			50	2627 NITRITES, INORGANIC, N.O.S.
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14		66	2628 POTASSIUM FLUOROACETATE
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14		66	2629 SODIUM FLUOROACETATE
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14		66	2630 SELENATES or SELENITES
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14		66	2642 FLUOROACETIC ACID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19		60	2643 METHYL BROMOACETATE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14		66	2644 METHYL IODIDE
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19		60	2645 PHENACYL BROMIDE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14		66	2646 HEXACHLOROCYCLOPENTADIENE
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19		60	2647 MALONONITRILE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19		60	2648 1,2-DIBROMOBUTAN-3-ONE
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19		60	2649 1,3-DICHLOROACETONE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19		60	2650 1,1-DICHLORO-1-NITROETHANE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9		60	2651 4,4'-DIAMINODIPHENYL-METHANE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19		60	2653 BENZYL IODIDE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9		60	2655 POTASSIUM FLUROSILICATE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9		60	2656 QUINOLINE
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19		60	2657 SELENIUM DISULPHIDE
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9		60	2659 SODIUM CHLOROACETATE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9		60	2660 NITROTOLUIDINES (MONO)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9		60	2661 HEXACHLOROACETONE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9		60	2664 DIBROMOMETHANE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2667	BUTYLTOLUENES	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2668	CHLOROACETONITRILE	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2669	CHLOROCRESOLS SOLUTION	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2669	CHLOROCRESOLS SOLUTION	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2
2670	CYANURIC CHLORIDE	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2671	AMINOPYRIDINES (o-, m-, p-)	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2672	AMMONIA SOLUTION, relative density between 0.880 and 0.957 at 15 °C in water, with more than 10% but not more than 35% ammonia	8	C5	III	8	543	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1
2673	2-AMINO-4- CHLOROPHENOL	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2674	SODIUM FLUOROSILICATE	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2676	STIBINE	2	2TF		2.3 +2.1		0	E0	P200		MP9		
2677	RUBIDIUM HYDROXIDE SOLUTION	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2677	RUBIDIUM HYDROXIDE SOLUTION	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2678	RUBIDIUM HYDROXIDE	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2679	LITHIUM HYDROXIDE SOLUTION	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2679	LITHIUM HYDROXIDE SOLUTION	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2
2680	LITHIUM HYDROXIDE	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2681	CAESIUM HYDROXIDE SOLUTION	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2681	CAESIUM HYDROXIDE SOLUTION	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2682	CAESIUM HYDROXIDE	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2683	AMMONIUM SULPHIDE SOLUTION	8	CFT	II	8 +3 +6.1		1 L	E2	P001 IBC01		MP15	T7	TP2
2684	3-DIETHYLAMINOPROPYL- AMINE	3	FC	III	3 +8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2685	N,N-DIETHYLETHYLENE- DIAMINE	8	CF1	II	8 +3		1 L	E2	P001 IBC02		MP15	T7	TP2
2686	2-DIETHYLAMINO- ETHANOL	8	CF1	II	8 +3		1 L	E2	P001 IBC02		MP15	T7	TP2
2687	DICYCLOHEXYL- AMMONIUM NITRITE	4.1	F3	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2667	BUTYLTOLUENES
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2668	CHLOROACETONITRILE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2669	CHLOROCRESOLS SOLUTION
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2669	CHLOROCRESOLS SOLUTION
SGAN L4BN		AT	2 (E)	V11				80	2670	CYANURIC CHLORIDE
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2671	AMINOPYRIDINES (o-, m-, p-)
L4BN		AT	3 (E)	V12				80	2672	AMMONIA SOLUTION, relative density between 0.880 and 0.957 at 15 °C in water, with more than 10% but not more than 35% ammonia
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2673	2-AMINO-4- CHLOROPHENOL
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2674	SODIUM FLUOROSILICATE
			1 (D)			CV9 CV10 CV36	S2 S14		2676	STIBINE
L4BN		AT	2 (E)					80	2677	RUBIDIUM HYDROXIDE SOLUTION
L4BN		AT	3 (E)	V12				80	2677	RUBIDIUM HYDROXIDE SOLUTION
SGAN		AT	2 (E)	V11				80	2678	RUBIDIUM HYDROXIDE
L4BN		AT	2 (E)					80	2679	LITHIUM HYDROXIDE SOLUTION
L4BN		AT	3 (E)	V12				80	2679	LITHIUM HYDROXIDE SOLUTION
SGAN		AT	2 (E)	V11				80	2680	LITHIUM HYDROXIDE
L4BN		AT	2 (E)					80	2681	CAESIUM HYDROXIDE SOLUTION
L4BN		AT	3 (E)	V12				80	2681	CAESIUM HYDROXIDE SOLUTION
SGAN		AT	2 (E)	V11				80	2682	CAESIUM HYDROXIDE
L4BN		FL	2 (D/E)			CV13 CV28	S2	86	2683	AMMONIUM SULPHIDE SOLUTION
L4BN		FL	3 (D/E)	V12			S2	38	2684	3-DIETHYLAMINOPROPYL- AMINE
L4BN		FL	2 (D/E)				S2	83	2685	N,N-DIETHYLETHYLENE- DIAMINE
L4BN		FL	2 (D/E)				S2	83	2686	2-DIETHYLAMINO- ETHANOL
SGAV		AT	3 (E)		VV1			40	2687	DICYCLOHEXYL- AMMONIUM NITRITE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2688	I-BROMO-3-CHLOROPROPANE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2689	GLYCEROL alpha-MONOCHLOROHYDRIN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2690	N,n-BUTYLIMIDAZOLE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2691	PHOSPHORUS PENTABROMIDE	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2692	BORON TRIBROMIDE	8	C1	I	8		0	E0	P602		MP8 MP17	T20	TP2
2693	BISULPHITES, AQUEOUS SOLUTION, N.O.S.	8	C1	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
2698	TETRAHYDROPHTHALIC ANHYDRIDES with more than 0.05% of maleic anhydride	8	C4	III	8	169	5 kg	E1	P002 IBC08 LP02 R001	PP14 B3	MP10	T1	TP33
2699	TRIFLUOROACETIC ACID	8	C3	I	8		0	E0	P001		MP8 MP17	T10	TP2
2705	I-PENTOL	8	C9	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2707	DIMETHYLDIOXANES	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2707	DIMETHYLDIOXANES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2709	BUTYLBENZENES	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2710	DIPROPYL KETONE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2713	ACRIDINE	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2714	ZINC RESINATE	4.1	F3	III	4.1		5 kg	E1	P002 IBC06 R001		MP11	T1	TP33
2715	ALUMINIUM RESINATE	4.1	F3	III	4.1		5 kg	E1	P002 IBC06 R001		MP11	T1	TP33
2716	1,4-BUTYNYDIOL	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2717	CAMPHOR, synthetic	4.1	F1	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2719	BARIUM BROMATE	5.1	OT2	II	5.1 +6.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
2720	CHROMIUM NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2721	COPPER CHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
2722	LITHIUM NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2723	MAGNESIUM CHLORATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2688	1-BROMO-3-CHLOROPROPANE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2689	GLYCEROL alpha-MONOCHLOROHYDRIN
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2690	N,n-BUTYLIMIDAZOLE
SGAN		AT	2 (E)	V11				80	2691	PHOSPHORUS PENTABROMIDE
L10BH		AT	1 (E)				S20	X88	2692	BORON TRIBROMIDE
L4BN		AT	3 (E)	V12				80	2693	BISULPHITES, AQUEOUS SOLUTION, N.O.S.
SGAV L4BN		AT	3 (E)		VV9			80	2698	TETRAHYDROPHTHALIC ANHYDRIDES with more than 0.05% of maleic anhydride
L10BH		AT	1 (E)				S20	88	2699	TRIFLUOROACETIC ACID
L4BN		AT	2 (E)					80	2705	1-PENTOL
LGBF		FL	2 (D/E)				S2 S20	33	2707	DIMETHYLDIOXANES
LGBF		FL	3 (D/E)	V12			S2	30	2707	DIMETHYLDIOXANES
LGBF		FL	3 (D/E)	V12			S2	30	2709	BUTYLBENZENES
LGBF		FL	3 (D/E)	V12			S2	30	2710	DIPROPYL KETONE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2713	ACRIDINE
SGAV		AT	3 (E)		VV1			40	2714	ZINC RESINATE
SGAV		AT	3 (E)		VV1			40	2715	ALUMINIUM RESINATE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2716	1,4-BUTYNEEDIOL
SGAV		AT	3 (E)		VV1			40	2717	CAMPHOR, synthetic
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	2719	BARIUM BROMATE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	2720	CHROMIUM NITRATE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	2721	COPPER CHLORATE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	2722	LITHIUM NITRATE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	2723	MAGNESIUM CHLORATE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2724	MANGANESE NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2725	NICKEL NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2726	NICKEL NITRITE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2727	THALLIUM NITRATE	6.1	TO2	II	6.1 +5.1		500 g	E4	P002 IBC06		MP10	T3	TP33
2728	ZIRCONIUM NITRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2729	HEXACHLOROBENZENE	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2730	NITROANISOLE, LIQUID	6.1	T1	III	6.1	279	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2732	NITROBROMOBENZENES, LIQUID	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2733	AMINES, FLAMMABLE, CORROSIVE, N.O.S. or POLYAMINES, FLAMMABLE, CORROSIVE, N.O.S.	3	FC	I	3 +8	274 544	0	E0	P001		MP7 MP17	T14	TP1 TP27
2733	AMINES, FLAMMABLE, CORROSIVE, N.O.S. or POLYAMINES, FLAMMABLE, CORROSIVE, N.O.S.	3	FC	II	3 +8	274 544	1 L	E2	P001 IBC02		MP19	T11	TP1 TP27
2733	AMINES, FLAMMABLE, CORROSIVE, N.O.S. or POLYAMINES, FLAMMABLE, CORROSIVE, N.O.S.	3	FC	III	3 +8	274 544	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
2734	AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.	8	CF1	I	8 +3	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
2734	AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.	8	CF1	II	8 +3	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
2735	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.	8	C7	I	8	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
2735	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.	8	C7	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP1 TP27
2735	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.	8	C7	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
2738	N-BUTYLANILINE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAV	TU3	AT	3 (E)		VV8	CV24		50	2724	MANGANESE NITRATE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	2725	NICKEL NITRATE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	2726	NICKEL NITRITE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	65	2727	THALLIUM NITRATE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	2728	ZIRCONIUM NITRATE
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2729	HEXACHLOROBENZENE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2730	NITROANISOLES, LIQUID
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2732	NITROBROMOBENZENES, LIQUID
L10CH	TU14 TE21	FL	1 (C/E)				S2 S20	338	2733	AMINES, FLAMMABLE, CORROSIVE, N.O.S. or POLYAMINES, FLAMMABLE, CORROSIVE, N.O.S.
L4BH		FL	2 (D/E)				S2 S20	338	2733	AMINES, FLAMMABLE, CORROSIVE, N.O.S. or POLYAMINES, FLAMMABLE, CORROSIVE, N.O.S.
L4BN		FL	3 (D/E)	V12			S2	38	2733	AMINES, FLAMMABLE, CORROSIVE, N.O.S. or POLYAMINES, FLAMMABLE, CORROSIVE, N.O.S.
L10BH		FL	1 (D/E)				S2 S14	883	2734	AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.
L4BN		FL	2 (D/E)				S2	83	2734	AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.
L10BH		AT	1 (E)				S20	88	2735	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.
L4BN		AT	2 (E)					80	2735	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.
L4BN		AT	3 (E)	V12				80	2735	AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2738	N-BUTYLANILINE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	(11)
2739	BUTYRIC ANHYDRIDE	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2740	n-PROPYL CHLOROFORMATE	6.1	TFC	I	6.1 +3 +8		0	E5	P602		MP8 MP17	T20	TP2
2741	BARIUM HYPOCHLORITE with more than 22% available chlorine	5.1	OT2	II	5.1 +6.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
2742	CHLOROFORMATES, TOXIC, CORROSIVE, FLAMMABLE, N.O.S.	6.1	TFC	II	6.1 +3 +8	274 561	100 ml	E4	P001 IBC01		MP15		
2743	n-BUTYL CHLOROFORMATE	6.1	TFC	II	6.1 +3 +8		100 ml	E4	P001		MP15	T20	TP2
2744	CYCLOBUTYL CHLOROFORMATE	6.1	TFC	II	6.1 +3 +8		100 ml	E4	P001 IBC01		MP15	T7	TP2
2745	CHLOROMETHYL CHLOROFORMATE	6.1	TC1	II	6.1 +8		100 ml	E4	P001 IBC02		MP15	T7	TP2
2746	PHENYL CHLOROFORMATE	6.1	TC1	II	6.1 +8		100 ml	E4	P001 IBC02		MP15	T7	TP2
2747	tert-BUTYLCYCLOHEXYL CHLOROFORMATE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2748	2-ETHYLHEXYL CHLOROFORMATE	6.1	TC1	II	6.1 +8		100 ml	E4	P001 IBC02		MP15	T7	TP2
2749	TETRAMETHYLSILANE	3	F1	I	3		0	E3	P001		MP7 MP17	T14	TP2
2750	1,3-DICHLOROPROPANOL-2	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2751	DIETHYLTHIO-PHOSPHORYL CHLORIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2752	1,2-EPOXY-3-ETHOXYPROPANE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2753	N-ETHYLBENZYL-TOLUIDINES, LIQUID	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1
2754	N-ETHYLTOLUIDINES	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2757	CARBAMATE PESTICIDE, SOLID, TOXIC	6.1	T7	I	6.1	61 274 648	0	E5	P002 IBC07		MP18	T6	TP33
2757	CARBAMATE PESTICIDE, SOLID, TOXIC	6.1	T7	II	6.1	61 274 648	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2757	CARBAMATE PESTICIDE, SOLID, TOXIC	6.1	T7	III	6.1	61 274 648	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2758	CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	I	3 +6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2758	CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	II	3 +6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2759	ARSENICAL PESTICIDE, SOLID, TOXIC	6.1	T7	I	6.1	61 274 648	0	E5	P002 IBC07		MP18	T6	TP33
2759	ARSENICAL PESTICIDE, SOLID, TOXIC	6.1	T7	II	6.1	61 274 648	500 g	E4	P002 IBC08	B4	MP10	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	3 (E)	V12				80	2739	BUTYRIC ANHYDRIDE
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	668	2740	n-PROPYL CHLOROFORMATE
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	2741	BARIUM HYPOCHLORITE with more than 22% available chlorine
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	638	2742	CHLOROFORMATES, TOXIC, CORROSIVE, FLAMMABLE, N.O.S.
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	638	2743	n-BUTYL CHLOROFORMATE
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	638	2744	CYCLOBUTYL CHLOROFORMATE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	2745	CHLOROMETHYL CHLOROFORMATE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	2746	PHENYL CHLOROFORMATE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2747	tert-BUTYLCYCLOHEXYL CHLOROFORMATE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	2748	2-ETHYLHEXYL CHLOROFORMATE
L4BN		FL	1 (D/E)				S2 S20	33	2749	TETRAMETHYLSILANE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2750	1,3-DICHLOROPROPANOL-2
L4BN		AT	2 (E)					80	2751	DIETHYLTHIO-PHOSPHORYL CHLORIDE
LGBF		FL	3 (D/E)	V12			S2	30	2752	1,2-EPOXY-3-ETHOXYPROPANE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2753	N-ETHYLBENZYL-TOLUIDINES, LIQUID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2754	N-ETHYLTOLUIDINES
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2757	CARBAMATE PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2757	CARBAMATE PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2757	CARBAMATE PESTICIDE, SOLID, TOXIC
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2758	CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2758	CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2759	ARSENICAL PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2759	ARSENICAL PESTICIDE, SOLID, TOXIC

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
2759	ARSENICAL PESTICIDE, SOLID, TOXIC	6.1	T7	III	6.1	61 274 648	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2760	ARSENICAL PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	I	3 +6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2760	ARSENICAL PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	II	3 +6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2761	ORGANOCHLORINE PESTICIDE, SOLID, TOXIC	6.1	T7	I	6.1	61 274 648	0	E5	P002 IBC07		MP18	T6	TP33
2761	ORGANOCHLORINE PESTICIDE, SOLID, TOXIC	6.1	T7	II	6.1	61 274 648	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2761	ORGANOCHLORINE PESTICIDE, SOLID, TOXIC	6.1	T7	III	6.1	61 274 648	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2762	ORGANOCHLORINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	I	3 +6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2762	ORGANOCHLORINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	II	3 +6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2763	TRIAZINE PESTICIDE, SOLID, TOXIC	6.1	T7	I	6.1	61 274 648	0	E5	P002 IBC07		MP18	T6	TP33
2763	TRIAZINE PESTICIDE, SOLID, TOXIC	6.1	T7	II	6.1	61 274 648	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2763	TRIAZINE PESTICIDE, SOLID, TOXIC	6.1	T7	III	6.1	61 274 648	5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33
2764	TRIAZINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	I	3 +6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2764	TRIAZINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	II	3 +6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2771	THIOCARBAMATE PESTICIDE, SOLID, TOXIC	6.1	T7	I	6.1	61 274 648	0	E5	P002 IBC07		MP18	T6	TP33
2771	THIOCARBAMATE PESTICIDE, SOLID, TOXIC	6.1	T7	II	6.1	61 274 648	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2771	THIOCARBAMATE PESTICIDE, SOLID, TOXIC	6.1	T7	III	6.1	61 274 648	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2772	THIOCARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	I	3 +6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2772	THIOCARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	II	3 +6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2775	COPPER BASED PESTICIDE, SOLID, TOXIC	6.1	T7	I	6.1	61 274 648	0	E5	P002 IBC07		MP18	T6	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2759	ARSENICAL PESTICIDE, SOLID, TOXIC
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2760	ARSENICAL PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2760	ARSENICAL PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2761	ORGANOCHLORINE PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2761	ORGANOCHLORINE PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2761	ORGANOCHLORINE PESTICIDE, SOLID, TOXIC
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2762	ORGANOCHLORINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2762	ORGANOCHLORINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2763	TRIAZINE PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2763	TRIAZINE PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2763	TRIAZINE PESTICIDE, SOLID, TOXIC
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2764	TRIAZINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2764	TRIAZINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2771	THIOCARBAMATE PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2771	THIOCARBAMATE PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2771	THIOCARBAMATE PESTICIDE, SOLID, TOXIC
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2772	THIOCARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2772	THIOCARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2775	COPPER BASED PESTICIDE, SOLID, TOXIC

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2775	COPPER BASED PESTICIDE, SOLID, TOXIC	6.1	T7	II	6.1	61 274 648	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2775	COPPER BASED PESTICIDE, SOLID, TOXIC	6.1	T7	III	6.1	61 274 648	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2776	COPPER BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	I	3 +6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2776	COPPER BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	II	3 +6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2777	MERCURY BASED PESTICIDE, SOLID, TOXIC	6.1	T7	I	6.1	61 274 648	0	E5	P002 IBC07		MP18	T6	TP33
2777	MERCURY BASED PESTICIDE, SOLID, TOXIC	6.1	T7	II	6.1	61 274 648	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2777	MERCURY BASED PESTICIDE, SOLID, TOXIC	6.1	T7	III	6.1	61 274 648	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2778	MERCURY BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	I	3 +6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2778	MERCURY BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	II	3 +6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2779	SUBSTITUTED NITROPHENOL PESTICIDE, SOLID, TOXIC	6.1	T7	I	6.1	61 274 648	0	E5	P002 IBC07		MP18	T6	TP33
2779	SUBSTITUTED NITROPHENOL PESTICIDE, SOLID, TOXIC	6.1	T7	II	6.1	61 274 648	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2779	SUBSTITUTED NITROPHENOL PESTICIDE, SOLID, TOXIC	6.1	T7	III	6.1	61 274 648	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2780	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	I	3 +6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2780	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	II	3 +6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2781	BIPYRIDILUM PESTICIDE, SOLID, TOXIC	6.1	T7	I	6.1	61 274 648	0	E5	P002 IBC07		MP18	T6	TP33
2781	BIPYRIDILUM PESTICIDE, SOLID, TOXIC	6.1	T7	II	6.1	61 274 648	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2781	BIPYRIDILUM PESTICIDE, SOLID, TOXIC	6.1	T7	III	6.1	61 274 648	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2775	COPPER BASED PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2775	COPPER BASED PESTICIDE, SOLID, TOXIC
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2776	COPPER BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2776	COPPER BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2777	MERCURY BASED PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2777	MERCURY BASED PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2777	MERCURY BASED PESTICIDE, SOLID, TOXIC
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2778	MERCURY BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2778	MERCURY BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2779	SUBSTITUTED NITROPHENOL PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2779	SUBSTITUTED NITROPHENOL PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2779	SUBSTITUTED NITROPHENOL PESTICIDE, SOLID, TOXIC
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2780	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2780	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2781	BIPYRIDILUM PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2781	BIPYRIDILUM PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2781	BIPYRIDILUM PESTICIDE, SOLID, TOXIC

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2782	BIPYRIDILIUM PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	I	3 +6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2782	BIPYRIDILIUM PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	II	3 +6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2783	ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC	6.1	T7	I	6.1	61 274 648	0	E5	P002 IBC07		MP18	T6	TP33
2783	ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC	6.1	T7	II	6.1	61 274 648	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2783	ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC	6.1	T7	III	6.1	61 274 648	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2784	ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	I	3 +6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2784	ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	II	3 +6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2785	4-THIAPENTANAL	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2786	ORGANOTIN PESTICIDE, SOLID, TOXIC	6.1	T7	I	6.1	61 274 648	0	E5	P002 IBC07		MP18	T6	TP33
2786	ORGANOTIN PESTICIDE, SOLID, TOXIC	6.1	T7	II	6.1	61 274 648	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2786	ORGANOTIN PESTICIDE, SOLID, TOXIC	6.1	T7	III	6.1	61 274 648	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2787	ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	I	3 +6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2787	ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	II	3 +6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2788	ORGANOTIN COMPOUND, LIQUID, N.O.S.	6.1	T3	I	6.1	43 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2788	ORGANOTIN COMPOUND, LIQUID, N.O.S.	6.1	T3	II	6.1	43 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2788	ORGANOTIN COMPOUND, LIQUID, N.O.S.	6.1	T3	III	6.1	43 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
2789	ACETIC ACID, GLACIAL or ACETIC ACID SOLUTION, more than 80% acid, by mass	8	CF1	II	8 +3		1 L	E2	P001 IBC02		MP15	T7	TP2
2790	ACETIC ACID SOLUTION, not less than 50% but not more than 80% acid, by mass	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2782	BIPYRIDILIUM PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2782	BIPYRIDILIUM PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2783	ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2783	ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2783	ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2784	ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2784	ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2785	4-THIAPENTANAL
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2786	ORGANOTIN PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2786	ORGANOTIN PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2786	ORGANOTIN PESTICIDE, SOLID, TOXIC
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2787	ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2787	ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2788	ORGANOTIN COMPOUND, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2788	ORGANOTIN COMPOUND, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2788	ORGANOTIN COMPOUND, LIQUID, N.O.S.
L4BN		FL	2 (D/E)				S2	83	2789	ACETIC ACID, GLACIAL or ACETIC ACID SOLUTION, more than 80% acid, by mass
L4BN		AT	2 (E)					80	2790	ACETIC ACID SOLUTION, not less than 50% but not more than 80% acid, by mass

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
2790	ACETIC ACID SOLUTION, more than 10% and less than 50% acid, by mass	8	C3	III	8	597 647	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2793	FERROUS METAL BORINGS, SHAVINGS, TURNINGS or CUTTINGS in a form liable to self-heating	4.2	S4	III	4.2	592	0	E1	P003 IBC08 LP02 R001	PP20 B3 B6	MP14		
2794	BATTERIES, WET, FILLED WITH ACID, electric storage	8	C11		8	295 598	1 L	E0	P801 P801a				
2795	BATTERIES, WET, FILLED WITH ALKALI, electric storage	8	C11		8	295 598	1 L	E0	P801 P801a				
2796	SULPHURIC ACID with not more than 51% acid or BATTERY FLUID, ACID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
2797	BATTERY FLUID, ALKALI	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2 TP28
2798	PHENYLPHOSPHORUS DICHLORIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2799	PHENYLPHOSPHORUS THIODICHLORIDE	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2800	BATTERIES, WET, NON-SPILLABLE, electric storage	8	C11		8	238 295 598	1 L	E0	P003 P801a	PP16			
2801	DYE, LIQUID, CORROSIVE, N.O.S. or DYE INTERMEDIATE, LIQUID, CORROSIVE, N.O.S.	8	C9	I	8	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
2801	DYE, LIQUID, CORROSIVE, N.O.S. or DYE INTERMEDIATE, LIQUID, CORROSIVE, N.O.S.	8	C9	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
2801	DYE, LIQUID, CORROSIVE, N.O.S. or DYE INTERMEDIATE, LIQUID, CORROSIVE, N.O.S.	8	C9	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
2802	COPPER CHLORIDE	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2803	GALLIUM	8	C10	III	8		5 kg	E0	P800	PP41	MP10	T1	TP33
2805	LITHIUM HYDRIDE, FUSED SOLID	4.3	W2	II	4.3		500 g	E2	P410 IBC04	PP40	MP14	T3	TP33
2806	LITHIUM NITRIDE	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2		
2807	Magnetized material	9	M11	NOT SUBJECT TO ADR									
2809	MERCURY	8	CT1	III	8 +6.1	365	5 kg	E0	P800		MP15		
2810	TOXIC LIQUID, ORGANIC, N.O.S.	6.1	T1	I	6.1	274 315 614	0	E5	P001		MP8 MP17	T14	TP2 TP27
2810	TOXIC LIQUID, ORGANIC, N.O.S.	6.1	T1	II	6.1	274 614	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2810	TOXIC LIQUID, ORGANIC, N.O.S.	6.1	T1	III	6.1	274 614	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
2811	TOXIC SOLID, ORGANIC, N.O.S.	6.1	T2	I	6.1	274 614	0	E5	P002 IBC07		MP18	T6	TP33
2811	TOXIC SOLID, ORGANIC, N.O.S.	6.1	T2	II	6.1	274 614	500 g	E4	P002 IBC08	B4	MP10	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	3 (E)	V12				80	2790	ACETIC ACID SOLUTION, more than 10% and less than 50% acid, by mass
			3 (E)	V1	VV4			40	2793	FERROUS METAL BORINGS, SHAVINGS, TURNINGS or CUTTINGS in a form liable to self-heating
			3 (E)		VV14			80	2794	BATTERIES, WET, FILLED WITH ACID, electric storage
			3 (E)		VV14			80	2795	BATTERIES, WET, FILLED WITH ALKALI, electric storage
L4BN		AT	2 (E)					80	2796	SULPHURIC ACID with not more than 51% acid or BATTERY FLUID, ACID
L4BN		AT	2 (E)					80	2797	BATTERY FLUID, ALKALI
L4BN		AT	2 (E)					80	2798	PHENYLPHOSPHORUS DICHLORIDE
L4BN		AT	2 (E)					80	2799	PHENYLPHOSPHORUS THIODICHLORIDE
			3 (E)		VV14			80	2800	BATTERIES, WET, NON-SPILLABLE, electric storage
L10BH		AT	1 (E)				S20	88	2801	DYE, LIQUID, CORROSIVE, N.O.S. or DYE INTERMEDIATE, LIQUID, CORROSIVE, N.O.S.
L4BN		AT	2 (E)					80	2801	DYE, LIQUID, CORROSIVE, N.O.S. or DYE INTERMEDIATE, LIQUID, CORROSIVE, N.O.S.
L4BN		AT	3 (E)	V12				80	2801	DYE, LIQUID, CORROSIVE, N.O.S. or DYE INTERMEDIATE, LIQUID, CORROSIVE, N.O.S.
SGAV		AT	3 (E)		VV9			80	2802	COPPER CHLORIDE
SGAV L4BN		AT	3 (E)		VV9			80	2803	GALLIUM
SGAN		AT	2 (D/E)	V1		CV23		423	2805	LITHIUM HYDRIDE, FUSED SOLID
			1 (E)	V1		CV23	S20		2806	LITHIUM NITRIDE
NOT SUBJECT TO ADR									2807	Magnetized material
L4BN		AT	3 (E)			CV13 CV28		86	2809	MERCURY
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2810	TOXIC LIQUID, ORGANIC, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2810	TOXIC LIQUID, ORGANIC, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2810	TOXIC LIQUID, ORGANIC, N.O.S.
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2811	TOXIC SOLID, ORGANIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2811	TOXIC SOLID, ORGANIC, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2811	TOXIC SOLID, ORGANIC, N.O.S.	6.1	T2	III	6.1	274 614	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2812	Sodium aluminate, solid	8	C6	NOT SUBJECT TO ADR									
2813	WATER-REACTIVE SOLID, N.O.S.	4.3	W2	I	4.3	274	0	E0	P403 IBC99	PP83	MP2	T9	TP7 TP33
2813	WATER-REACTIVE SOLID, N.O.S.	4.3	W2	II	4.3	274	500 g	E2	P410 IBC07	PP83	MP14	T3	TP33
2813	WATER-REACTIVE SOLID, N.O.S.	4.3	W2	III	4.3	274	1 kg	E1	P410 IBC08 R001	PP83 B4	MP14	T1	TP33
2814	INFECTIOUS SUBSTANCE, AFFECTING HUMANS	6.2	I1		6.2	318	0	E0	P620		MP5		
2814	INFECTIOUS SUBSTANCE, AFFECTING HUMANS, in refrigerated liquid nitrogen	6.2	I1		6.2 +2.2	318	0	E0	P620		MP5		
2814	INFECTIOUS SUBSTANCE, AFFECTING HUMANS (animal material only)	6.2	I1		6.2	318	0	E0	P620		MP5	BK1 BK2	
2815	N-AMINOETHYLPIPERAZINE	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2817	AMMONIUM HYDROGENDIFLUORIDE SOLUTION	8	CT1	II	8 +6.1		1 L	E2	P001 IBC02		MP15	T8	TP2
2817	AMMONIUM HYDROGENDIFLUORIDE SOLUTION	8	CT1	III	8 +6.1		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2818	AMMONIUM POLYSULPHIDE SOLUTION	8	CT1	II	8 +6.1		1 L	E2	P001 IBC02		MP15	T7	TP2
2818	AMMONIUM POLYSULPHIDE SOLUTION	8	CT1	III	8 +6.1		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2819	AMYL ACID PHOSPHATE	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2820	BUTYRIC ACID	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2821	PHENOL SOLUTION	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2821	PHENOL SOLUTION	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2822	2-CHLOROPYRIDINE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2823	CROTONIC ACID, SOLID	8	C4	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2826	ETHYL CHLOROTHIOFORMATE	8	CF1	II	8 +3		0	E2	P001		MP15	T7	TP2
2829	CAPROIC ACID	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2830	LITHIUM FERROSILICON	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2811	TOXIC SOLID, ORGANIC, N.O.S.
NOT SUBJECT TO ADR									2812	Sodium aluminate, solid
S10AN L10DH	TU4 TU14 TU22 TE21 TM2	AT	0 (B/E)	V1		CV23	S20	X423	2813	WATER-REACTIVE SOLID, N.O.S.
SGAN		AT	0 (D/E)	V1		CV23		423	2813	WATER-REACTIVE SOLID, N.O.S.
SGAN		AT	0 (E)	V1	VV5	CV23		423	2813	WATER-REACTIVE SOLID, N.O.S.
			0 (E)			CV13 CV25 CV26 CV28	S3 S9 S15		2814	INFECTIOUS SUBSTANCE, AFFECTING HUMANS
			0 (E)			CV13 CV25 CV26 CV28	S3 S9 S15		2814	INFECTIOUS SUBSTANCE, AFFECTING HUMANS, in refrigerated liquid nitrogen
			0 (E)			CV13 CV25 CV26 CV28	S3 S9 S15	606	2814	INFECTIOUS SUBSTANCE, AFFECTING HUMANS (animal material only)
L4BN		AT	3 (E)	V12				80	2815	N-AMINOETHYLPIPERAZINE
L4DH	TU14 TE21	AT	2 (E)			CV13 CV28		86	2817	AMMONIUM HYDROGENDIFLUORIDE SOLUTION
L4DH	TU14 TE21	AT	3 (E)	V12		CV13 CV28		86	2817	AMMONIUM HYDROGENDIFLUORIDE SOLUTION
L4BN		AT	2 (E)			CV13 CV28		86	2818	AMMONIUM POLYSULPHIDE SOLUTION
L4BN		AT	3 (E)	V12		CV13 CV28		86	2818	AMMONIUM POLYSULPHIDE SOLUTION
L4BN		AT	3 (E)	V12				80	2819	AMYL ACID PHOSPHATE
L4BN		AT	3 (E)	V12				80	2820	BUTYRIC ACID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2821	PHENOL SOLUTION
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2821	PHENOL SOLUTION
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2822	2-CHLOROPYRIDINE
SGAV L4BN		AT	3 (E)		VV9			80	2823	CROTONIC ACID, SOLID
L4BN		FL	2 (D/E)				S2	83	2826	ETHYL CHLOROTHIOFORMATE
L4BN		AT	3 (E)	V12				80	2829	CAPROIC ACID
SGAN		AT	2 (D/E)	V1		CV23		423	2830	LITHIUM FERROSILICON

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2831	1,1,1-TRICHLOROETHANE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2834	PHOSPHOROUS ACID	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2835	SODIUM ALUMINIUM HYDRIDE	4.3	W2	II	4.3		500 g	E2	P410 IBC04		MP14	T3	TP33
2837	BISULPHATES, AQUEOUS SOLUTION	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2837	BISULPHATES, AQUEOUS SOLUTION	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2838	VINYL BUTYRATE, STABILIZED	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2839	ALDOL	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2840	BUTYRALDOXIME	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2841	DI-n-AMYLAMINE	3	FT1	III	3 +6.1		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2842	NITROETHANE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2844	CALCIUM MANGANESE SILICON	4.3	W2	III	4.3		1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33
2845	PYROPHORIC LIQUID, ORGANIC, N.O.S.	4.2	S1	I	4.2	274	0	E0	P400		MP2	T22	TP2 TP7
2846	PYROPHORIC SOLID, ORGANIC, N.O.S.	4.2	S2	I	4.2	274	0	E0	P404		MP13		
2849	3-CHLOROPROPANOL-1	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2850	PROPYLENE TETRAMER	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2851	BORON TRIFLUORIDE DIHYDRATE	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2852	DIPICRYL SULPHIDE, WETTED with not less than 10% water, by mass	4.1	D	I	4.1	545	0	E0	P406	PP24	MP2		
2853	MAGNESIUM FLUOROSILICATE	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2854	AMMONIUM FLUOROSILICATE	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2855	ZINC FLUOROSILICATE	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2856	FLUOROSILICATES, N.O.S.	6.1	T5	III	6.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2857	REFRIGERATING MACHINES containing non-flammable, non-toxic gases or ammonia solutions (UN 2672)	2	6A		2.2	119	0	E0	P003	PP32	MP9		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2831	1,1,1-TRICHLOROETHANE
SGAV		AT	3 (E)		VV9			80	2834	PHOSPHOROUS ACID
SGAN		AT	2 (D/E)	V1		CV23		423	2835	SODIUM ALUMINIUM HYDRIDE
L4BN		AT	2 (E)					80	2837	BISULPHATES, AQUEOUS SOLUTION
L4BN		AT	3 (E)	V12				80	2837	BISULPHATES, AQUEOUS SOLUTION
LGBF		FL	2 (D/E)				S2 S20	339	2838	VINYL BUTYRATE, STABILIZED
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2839	ALDOL
LGBF		FL	3 (D/E)	V12			S2	30	2840	BUTYRALDOXIME
L4BH	TU15	FL	3 (D/E)	V12		CV13 CV28	S2	36	2841	DI-n-AMYLAMINE
LGBF		FL	3 (D/E)	V12			S2	30	2842	NITROETHANE
SGAN		AT	3 (E)	V1	VV5 VV7	CV23		423	2844	CALCIUM MANGANESE SILICON
L21DH	TU14 TC1 TE21 TM1	AT	0 (B/E)	V1			S20	333	2845	PYROPHORIC LIQUID, ORGANIC, N.O.S.
			0 (E)	V1			S20		2846	PYROPHORIC SOLID, ORGANIC, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2849	3-CHLOROPROPANOL-1
LGBF		FL	3 (D/E)	V12			S2	30	2850	PROPYLENE TETRAMER
L4BN		AT	2 (E)					80	2851	BORON TRIFLUORIDE DIHYDRATE
			1 (B)				S14		2852	DIPICRYL SULPHIDE, WETTED with not less than 10% water, by mass
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2853	MAGNESIUM FLUROSILICATE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2854	AMMONIUM FLUROSILICATE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2855	ZINC FLUROSILICATE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2856	FLUROSILICATES, N.O.S.
			3 (E)			CV9			2857	REFRIGERATING MACHINES containing non-flammable, non-toxic gases or ammonia solutions (UN 2672)

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2858	ZIRCONIUM, DRY, coiled wire, finished metal sheets, strip (thinner than 254 microns but not thinner than 18 microns)	4.1	F3	III	4.1	546	5 kg	E1	P002 LP02 R001		MP11		
2859	AMMONIUM METAVANADATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2861	AMMONIUM POLYVANADATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2862	VANADIUM PENTOXIDE, non-fused form	6.1	T5	III	6.1	600	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2863	SODIUM AMMONIUM VANADATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2864	POTASSIUM METAVANADATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2865	HYDROXYLAMINE SULPHATE	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2869	TITANIUM TRICHLORIDE MIXTURE	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2869	TITANIUM TRICHLORIDE MIXTURE	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2870	ALUMINIUM BOROHYDRIDE	4.2	SW	I	4.2 +4.3		0	E0	P400		MP2	T21	TP7 TP33
2870	ALUMINIUM BOROHYDRIDE IN DEVICES	4.2	SW	I	4.2 +4.3		0	E0	P002	PP13	MP2		
2871	ANTIMONY POWDER	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2872	DIBROMOCHLORO-PROPANES	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2872	DIBROMOCHLORO-PROPANES	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2873	DIBUTYLAMINOETHANOL	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2874	FURFURYL ALCOHOL	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2875	HEXACHLOROPHENE	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2876	RESORCINOL	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2878	TITANIUM SPONGE GRANULES or TITANIUM SPONGE POWDERS	4.1	F3	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33
2879	SELENIUM OXYCHLORIDE	8	CT1	I	8 +6.1		0	E0	P001		MP8 MP17	T10	TP2
2880	CALCIUM HYPOCHLORITE, HYDRATED, or CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, with not less than 5.5% but not more than 16% water	5.1	O2	II	5.1	314 322	1 kg	E2	P002 IBC08	B4 B13	MP10		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			3 (E)		VV1			40	2858	ZIRCONIUM, DRY, coiled wire, finished metal sheets, strip (thinner than 254 microns but not thinner than 18 microns)
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2859	AMMONIUM METAVANADATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2861	AMMONIUM POLYVANADATE
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2862	VANADIUM PENTOXIDE, non-fused form
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2863	SODIUM AMMONIUM VANADATE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2864	POTASSIUM METAVANADATE
SGAV		AT	3 (E)		VV9			80	2865	HYDROXYLAMINE SULPHATE
SGAN		AT	2 (E)	V11				80	2869	TITANIUM TRICHLORIDE MIXTURE
SGAV		AT	3 (E)		VV9			80	2869	TITANIUM TRICHLORIDE MIXTURE
L21DH	TU14 TC1 TE21 TM1	AT	0 (B/E)	V1			S20	X333	2870	ALUMINIUM BOROHYDRIDE
			0 (E)	V1			S20		2870	ALUMINIUM BOROHYDRIDE IN DEVICES
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2871	ANTIMONY POWDER
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2872	DIBROMOCHLORO-PROPANES
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2872	DIBROMOCHLORO-PROPANES
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2873	DIBUTYLAMINOETHANOL
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2874	FURFURYL ALCOHOL
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2875	HEXACHLOROPHENE
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2876	RESORCINOL
SGAV		AT	3 (E)		VV1			40	2878	TITANIUM SPONGE GRANULES or TITANIUM SPONGE POWDERS
L10BH		AT	1 (C/D)			CV13 CV28	S14	X886	2879	SELENIUM OXYCHLORIDE
SGAN	TU3	AT	2 (E)	V11		CV24 CV35		50	2880	CALCIUM HYPOCHLORITE, HYDRATED, or CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, with not less than 5.5% but not more than 16% water

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
2880	CALCIUM HYPOCHLORITE, HYDRATED, or CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, with not less than 5.5% but not more than 16% water	5.1	O2	III	5.1	314	5 kg	E1	P002 IBC08 R001	B4 B13	MP10			
2881	METAL CATALYST, DRY	4.2	S4	I	4.2	274	0	E0	P404		MP13	T21	TP7 TP33	
2881	METAL CATALYST, DRY	4.2	S4	II	4.2	274	0	E2	P410 IBC06		MP14	T3	TP33	
2881	METAL CATALYST, DRY	4.2	S4	III	4.2	274	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33	
2900	INFECTIOUS SUBSTANCE, AFFECTING ANIMALS only	6.2	I2		6.2	318	0	E0	P620		MP5			
2900	INFECTIOUS SUBSTANCE, AFFECTING ANIMALS only, in refrigerated liquid nitrogen	6.2	I2		6.2 +2.2	318	0	E0	P620		MP5			
2900	INFECTIOUS SUBSTANCE, AFFECTING ANIMALS only (animal material only)	6.2	I2		6.2	318	0	E0	P620		MP5	BK1 BK2		
2901	BROMINE CHLORIDE	2	2TOC		2.3 +5.1 +8		0	E0	P200		MP9	(M)		
2902	PESTICIDE, LIQUID, TOXIC, N.O.S.	6.1	T6	I	6.1	61 274 648	0	E5	P001		MP8 MP17	T14	TP2 TP27	
2902	PESTICIDE, LIQUID, TOXIC, N.O.S.	6.1	T6	II	6.1	61 274 648	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
2902	PESTICIDE, LIQUID, TOXIC, N.O.S.	6.1	T6	III	6.1	61 274 648	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28	
2903	PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S., flash-point not less than 23 °C	6.1	TF2	I	6.1 +3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
2903	PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S., flash-point not less than 23 °C	6.1	TF2	II	6.1 +3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
2903	PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S., flash-point not less than 23 °C	6.1	TF2	III	6.1 +3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2	
2904	CHLOROPHENOLATES, LIQUID or PHENOLATES, LIQUID	8	C9	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19			
2905	CHLOROPHENOLATES, SOLID or PHENOLATES, SOLID	8	C10	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
2907	ISOSORBIDE DINITRATE MIXTURE with not less than 60% lactose, mannose, starch or calcium hydrogen phosphate	4.1	D	II	4.1	127	0	E0	P406 IBC06	PP26 PP80 B12	MP2			
2908	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - EMPTY PACKAGING	7				290	0	E0	See 1.7	See 4.1.9.1.3				

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAV	TU3	AT	3 (E)		VV8	CV24 CV35		50	2880	CALCIUM HYPOCHLORITE, HYDRATED, or CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, with not less than 5.5% but not more than 16% water
		AT	0 (B/E)	V1			S20	43	2881	METAL CATALYST, DRY
SGAN		AT	2 (D/E)	V1				40	2881	METAL CATALYST, DRY
SGAN		AT	3 (E)	V1	VV4			40	2881	METAL CATALYST, DRY
			0 (E)			CV13 CV25 CV26 CV28	S3 S9 S15		2900	INFECTIOUS SUBSTANCE, AFFECTING ANIMALS only
			0 (E)			CV13 CV25 CV26 CV28	S3 S9 S15		2900	INFECTIOUS SUBSTANCE, AFFECTING ANIMALS only, in refrigerated liquid nitrogen
			0 (E)			CV13 CV25 CV26 CV28	S3 S9 S15	606	2900	INFECTIOUS SUBSTANCE, AFFECTING ANIMALS only (animal material only)
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	2901	BROMINE CHLORIDE
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2902	PESTICIDE, LIQUID, TOXIC, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2902	PESTICIDE, LIQUID, TOXIC, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2902	PESTICIDE, LIQUID, TOXIC, N.O.S.
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	2903	PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S., flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2903	PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S., flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	2903	PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S., flash-point not less than 23 °C
L4BN		AT	3 (E)	V12				80	2904	CHLOROPHENOLATES, LIQUID or PHENOLATES, LIQUID
SGAV L4BN		AT	3 (E)		VV9			80	2905	CHLOROPHENOLATES, SOLID or PHENOLATES, SOLID
			2 (B)	V11			S14		2907	ISOSORBIDE DINITRATE MIXTURE with not less than 60% lactose, mannose, starch or calcium hydrogen phosphate
			4 (E)			CV33	S5 S13 S21		2908	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - EMPTY PACKAGING

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2909	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - ARTICLES MANUFACTURED FROM NATURAL URANIUM or DEPLETED URANIUM or NATURAL THORIUM	7				290	0	E0	See 1.7	See 4.1.9.1.3			
2910	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL	7				290 325	0	E0	See 1.7	See 4.1.9.1.3			
2911	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - INSTRUMENTS or ARTICLES	7				290	0	E0	See 1.7	See 4.1.9.1.3			
2912	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I), non fissile or fissile-excepted	7			7X	172 317 325	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3		T5	TP4
2913	RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I or SCO-II), non fissile or fissile-excepted	7			7X	172 317 336	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3			
2915	RADIOACTIVE MATERIAL, TYPE A PACKAGE, non-special form, non fissile or fissile-excepted	7			7X	172 317 325	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3			
2916	RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, non fissile or fissile-excepted	7			7X	172 317 325 337	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3			
2917	RADIOACTIVE MATERIAL, TYPE B(M) PACKAGE, non fissile or fissile-excepted	7			7X	172 317 325 337	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3			
2919	RADIOACTIVE MATERIAL, TRANSPORTED UNDER SPECIAL ARRANGEMENT, non fissile or fissile-excepted	7			7X	172 317 325	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3			
2920	CORROSIVE LIQUID, FLAMMABLE, N.O.S.	8	CF1	I	8 +3	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
2920	CORROSIVE LIQUID, FLAMMABLE, N.O.S.	8	CF1	II	8 +3	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
2921	CORROSIVE SOLID, FLAMMABLE, N.O.S.	8	CF2	I	8 +4.1	274	0	E0	P002 IBC05		MP18	T6	TP33
2921	CORROSIVE SOLID, FLAMMABLE, N.O.S.	8	CF2	II	8 +4.1	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2922	CORROSIVE LIQUID, TOXIC, N.O.S.	8	CT1	I	8 +6.1	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
2922	CORROSIVE LIQUID, TOXIC, N.O.S.	8	CT1	II	8 +6.1	274	1 L	E2	P001 IBC02		MP15	T7	TP2
2922	CORROSIVE LIQUID, TOXIC, N.O.S.	8	CT1	III	8 +6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
2923	CORROSIVE SOLID, TOXIC, N.O.S.	8	CT2	I	8 +6.1	274	0	E0	P002 IBC05		MP18	T6	TP33
2923	CORROSIVE SOLID, TOXIC, N.O.S.	8	CT2	II	8 +6.1	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2923	CORROSIVE SOLID, TOXIC, N.O.S.	8	CT2	III	8 +6.1	274	5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33
2924	FLAMMABLE LIQUID, CORROSIVE, N.O.S.	3	FC	I	3 +8	274	0	E0	P001		MP7 MP17	T14	TP2
2924	FLAMMABLE LIQUID, CORROSIVE, N.O.S.	3	FC	II	3 +8	274	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			4 (E)			CV33	S5 S13 S21		2909	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - ARTICLES MANUFACTURED FROM NATURAL URANIUM or DEPLETED URANIUM or NATURAL THORIUM
			4 (E)			CV33	S5 S13 S21		2910	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL
			4 (E)			CV33	S5 S13 S21		2911	RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - INSTRUMENTS or ARTICLES
S2.65AN(+) L2.65CN(+)	TU36 TT7 TM7	AT	0 (E)		VV16	CV33	S6 S11 S13 S21	70	2912	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I), non fissile or fissile-excepted
			0 (E)		VV17	CV33	S6 S11 S13 S21	70	2913	RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I or SCO-II), non fissile or fissile-excepted
			0 (E)			CV33	S6 S11 S12 S13 S21	70	2915	RADIOACTIVE MATERIAL, TYPE A PACKAGE, non-special form, non fissile or fissile-excepted
			0 (E)			CV33	S6 S11 S13 S21	70	2916	RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, non fissile or fissile-excepted
			0 (E)			CV33	S6 S11 S13 S21	70	2917	RADIOACTIVE MATERIAL, TYPE B(M) PACKAGE, non fissile or fissile-excepted
			0 (-)			CV33	S6 S11 S13 S21	70	2919	RADIOACTIVE MATERIAL, TRANSPORTED UNDER SPECIAL ARRANGEMENT, non fissile or fissile-excepted
L10BH		FL	1 (D/E)				S2 S14	883	2920	CORROSIVE LIQUID, FLAMMABLE, N.O.S.
L4BN		FL	2 (D/E)				S2	83	2920	CORROSIVE LIQUID, FLAMMABLE, N.O.S.
S10AN L10BH		AT	1 (E)	V10			S14	884	2921	CORROSIVE SOLID, FLAMMABLE, N.O.S.
SGAN L4BN		AT	2 (E)	V11				84	2921	CORROSIVE SOLID, FLAMMABLE, N.O.S.
L10BH		AT	1 (C/D)			CV13 CV28	S14	886	2922	CORROSIVE LIQUID, TOXIC, N.O.S.
L4BN		AT	2 (E)			CV13 CV28		86	2922	CORROSIVE LIQUID, TOXIC, N.O.S.
L4BN		AT	3 (E)	V12		CV13 CV28		86	2922	CORROSIVE LIQUID, TOXIC, N.O.S.
S10AN L10BH		AT	1 (E)	V10		CV13 CV28	S14	886	2923	CORROSIVE SOLID, TOXIC, N.O.S.
SGAN L4BN		AT	2 (E)	V11		CV13 CV28		86	2923	CORROSIVE SOLID, TOXIC, N.O.S.
SGAV L4BN		AT	3 (E)		VV9	CV13 CV28		86	2923	CORROSIVE SOLID, TOXIC, N.O.S.
L10CH	TU14 TE21	FL	1 (C/E)				S2 S20	338	2924	FLAMMABLE LIQUID, CORROSIVE, N.O.S.
L4BH		FL	2 (D/E)				S2 S20	338	2924	FLAMMABLE LIQUID, CORROSIVE, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2924	FLAMMABLE LIQUID, CORROSIVE, N.O.S.	3	FC	III	3 +8	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
2925	FLAMMABLE SOLID, CORROSIVE, ORGANIC, N.O.S.	4.1	FC1	II	4.1 +8	274	1 kg	E2	P002 IBC06		MP10	T3	TP33
2925	FLAMMABLE SOLID, CORROSIVE, ORGANIC, N.O.S.	4.1	FC1	III	4.1 +8	274	5 kg	E1	P002 IBC06 R001		MP10	T1	TP33
2926	FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.	4.1	FT1	II	4.1 +6.1	274	1 kg	E2	P002 IBC06		MP10	T3	TP33
2926	FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.	4.1	FT1	III	4.1 +6.1	274	5 kg	E1	P002 IBC06 R001		MP10	T1	TP33
2927	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.	6.1	TC1	I	6.1 +8	274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27
2927	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.	6.1	TC1	II	6.1 +8	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2928	TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.	6.1	TC2	I	6.1 +8	274	0	E5	P002 IBC05		MP18	T6	TP33
2928	TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.	6.1	TC2	II	6.1 +8	274	500 g	E4	P002 IBC06		MP10	T3	TP33
2929	TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.	6.1	TF1	I	6.1 +3	274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27
2929	TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.	6.1	TF1	II	6.1 +3	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2930	TOXIC SOLID, FLAMMABLE, ORGANIC, N.O.S.	6.1	TF3	I	6.1 +4.1	274	0	E5	P002 IBC05		MP18	T6	TP33
2930	TOXIC SOLID, FLAMMABLE, ORGANIC, N.O.S.	6.1	TF3	II	6.1 +4.1	274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2931	VANADYL SULPHATE	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2933	METHYL 2- CHLOROPROPIONATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2934	ISOPROPYL 2- CHLOROPROPIONATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2935	ETHYL 2- CHLOROPROPIONATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2936	THIOLACTIC ACID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2937	alpha-METHYLBENZYL ALCOHOL, LIQUID	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2940	9-PHOSPHABICYCLO- NONANES (CYCLOOCTADIENE PHOSPHINES)	4.2	S2	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33
2941	FLUOROANILINES	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2942	2-TRIFLUOROMETHYL- ANILINE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		FL	3 (D/E)	V12			S2	38	2924	FLAMMABLE LIQUID, CORROSIVE, N.O.S.
SGAN		AT	2 (E)	V11				48	2925	FLAMMABLE SOLID, CORROSIVE, ORGANIC, N.O.S.
SGAN		AT	3 (E)					48	2925	FLAMMABLE SOLID, CORROSIVE, ORGANIC, N.O.S.
SGAN		AT	2 (E)	V11		CV28		46	2926	FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.
SGAN		AT	3 (E)			CV28		46	2926	FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	668	2927	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	2927	TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.
S10AH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	668	2928	TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	68	2928	TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2929	TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2929	TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.
		AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	664	2930	TOXIC SOLID, FLAMMABLE, ORGANIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	64	2930	TOXIC SOLID, FLAMMABLE, ORGANIC, N.O.S.
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2931	VANADYL SULPHATE
LGBF		FL	3 (D/E)	V12			S2	30	2933	METHYL 2-CHLOROPROPIONATE
LGBF		FL	3 (D/E)	V12			S2	30	2934	ISOPROPYL 2-CHLOROPROPIONATE
LGBF		FL	3 (D/E)	V12			S2	30	2935	ETHYL 2-CHLOROPROPIONATE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2936	THIOLACTIC ACID
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2937	alpha-METHYLBENZYL ALCOHOL, LIQUID
SGAN		AT	2 (D/E)	V1				40	2940	9-PHOSPHABICYCLONONANES (CYCLOCTADIENE PHOSPHINES)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2941	FLUOROANILINES
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2942	2-TRIFLUOROMETHYL-ANILINE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
2943	TETRAHYDROFURFURYL-AMINE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2945	N-METHYLBUTYLAMINE	3	FC	II	3 +8		1 L	E2	P001 IBC02		MP19	T7	TP1
2946	2-AMINO-5-DIETHYLAMINOPENTANE	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2947	ISOPROPYL CHLOROACETATE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2948	3-TRIFLUOROMETHYL-ANILINE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2949	SODIUM HYDROSULPHIDE, HYDRATED with not less than 25% water of crystallization	8	C6	II	8	523	1 kg	E2	P002 IBC08	B4	MP10	T7	TP2
2950	MAGNESIUM GRANULES, COATED, particle size not less than 149 microns	4.3	W2	III	4.3		1 kg	E1	P410 IBC08 R001	B4	MP14	T1 BK2	TP33
2956	5-tert-BUTYL-2,4,6-TRINITRO-m-XYLENE (MUSK XYLENE)	4.1	SR1	III	4.1	638	5 kg	E1	P409		MP2		
2965	BORON TRIFLUORIDE DIMETHYL ETHERATE	4.3	WFC	I	4.3 +3 +8		0	E0	P401		MP2	T10	TP2 TP7
2966	THIOGLYCOL	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2967	SULPHAMIC ACID	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2968	MANEB, STABILIZED or MANEB PREPARATION, STABILIZED against self-heating	4.3	W2	III	4.3	547	1 kg	E1	P002 IBC08 R001	B4	MP14	T1	TP33
2969	CASTOR BEANS or CASTOR MEAL or CASTOR POMACE or CASTOR FLAKE	9	M11	II	9	141	5 kg	E2	P002 IBC08	PP34 B4	MP10	T3 BK1 BK2	TP33
2977	RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, FISSIONABLE	7			7X +7E +8	172	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3			
2978	RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, non fissile or fissile-excepted	7			7X +8	172 317	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3			
2983	ETHYLENE OXIDE AND PROPYLENE OXIDE MIXTURE, not more than 30% ethylene oxide	3	FT1	I	3 +6.1		0	E0	P001		MP7 MP17	T14	TP2 TP7
2984	HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 8% but less than 20% hydrogen peroxide (stabilized as necessary)	5.1	O1	III	5.1	65	5 L	E1	P504 IBC02 R001	PP10 B5	MP15	T4	TP1 TP6 TP24
2985	CHLOROSILANES, FLAMMABLE, CORROSIVE, N.O.S.	3	FC	II	3 +8	548	0	E0	P010		MP19	T14	TP2 TP7 TP27
2986	CHLOROSILANES, CORROSIVE, FLAMMABLE, N.O.S.	8	CF1	II	8 +3	548	0	E0	P010		MP15	T14	TP2 TP7 TP27
2987	CHLOROSILANES, CORROSIVE, N.O.S.	8	C3	II	8	548	0	E0	P010		MP15	T14	TP2 TP7 TP27

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	3 (D/E)	V12			S2	30	2943	TETRAHYDROFURFURYL-AMINE
L4BH		FL	2 (D/E)				S2 S20	338	2945	N-METHYLBUTYLAMINE
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2946	2-AMINO-5-DIETHYLAMINOPENTANE
LGBF		FL	3 (D/E)	V12			S2	30	2947	ISOPROPYL CHLOROACETATE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2948	3-TRIFLUOROMETHYL-ANILINE
SGAN L4BN		AT	2 (E)	V11				80	2949	SODIUM HYDROSULPHIDE, HYDRATED with not less than 25% water of crystallization
SGAN		AT	3 (E)	V1	VV5	CV23		423	2950	MAGNESIUM GRANULES, COATED, particle size not less than 149 microns
			3 (D)			CV14	S24		2956	5-tert-BUTYL-2,4,6-TRINITRO-m-XYLENE (MUSK XYLENE)
L10DH	TU4 TU14 TU22 TE21 TM2	FL	0 (B/E)	V1		CV23	S2 S20	382	2965	BORON TRIFLUORIDE DIMETHYL ETHERATE
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2966	THIOGLYCOL
SGAV		AT	3 (E)		VV9			80	2967	SULPHAMIC ACID
SGAN		AT	0 (E)	V1	VV5	CV23		423	2968	MANEB, STABILIZED or MANEB PREPARATION, STABILIZED against self-heating
SGAV		AT	2 (E)	V11	VV3			90	2969	CASTOR BEANS or CASTOR MEAL or CASTOR POMACE or CASTOR FLAKE
			0 (C)			CV33	S6 S11 S13 S21	78	2977	RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, FISSIONABLE
			0 (C)			CV33	S6 S11 S13 S21	78	2978	RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, non fissile or fissile-excepted
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2983	ETHYLENE OXIDE AND PROPYLENE OXIDE MIXTURE, not more than 30% ethylene oxide
LGBV	TU3 TC2 TE8 TE11 TT1	AT	3 (E)			CV24		50	2984	HYDROGEN PEROXIDE, AQUEOUS SOLUTION with not less than 8% but less than 20% hydrogen peroxide (stabilized as necessary)
L4BH		FL	2 (D/E)				S2 S20	X338	2985	CHLOROSILANES, FLAMMABLE, CORROSIVE, N.O.S.
L4BN		FL	2 (D/E)				S2	X83	2986	CHLOROSILANES, CORROSIVE, FLAMMABLE, N.O.S.
L4BN		AT	2 (E)					X80	2987	CHLOROSILANES, CORROSIVE, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
2988	CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S.	4.3	WFC	I	4.3 +3 +8	549	0	E0	P401	RR7	MP2	T14	TP2 TP7
2989	LEAD PHOSPHITE, DIBASIC	4.1	F3	II	4.1		1 kg	E2	P002 IBC08	B4	MP11	T3	TP33
2989	LEAD PHOSPHITE, DIBASIC	4.1	F3	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33
2990	LIFE-SAVING APPLIANCES, SELF-INFLATING	9	M5		9	296 635	0	E0	P905				
2991	CARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	I	6.1 +3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2991	CARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	II	6.1 +3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2991	CARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	III	6.1 +3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
2992	CARBAMATE PESTICIDE, LIQUID, TOXIC	6.1	T6	I	6.1	61 274 648	0	E5	P001		MP8 MP17	T14	TP2 TP27
2992	CARBAMATE PESTICIDE, LIQUID, TOXIC	6.1	T6	II	6.1	61 274 648	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2992	CARBAMATE PESTICIDE, LIQUID, TOXIC	6.1	T6	III	6.1	61 274 648	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
2993	ARSENICAL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	I	6.1 +3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2993	ARSENICAL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	II	6.1 +3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2993	ARSENICAL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	III	6.1 +3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
2994	ARSENICAL PESTICIDE, LIQUID, TOXIC	6.1	T6	I	6.1	61 274 648	0	E5	P001		MP8 MP17	T14	TP2 TP27
2994	ARSENICAL PESTICIDE, LIQUID, TOXIC	6.1	T6	II	6.1	61 274 648	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2994	ARSENICAL PESTICIDE, LIQUID, TOXIC	6.1	T6	III	6.1	61 274 648	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
2995	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	I	6.1 +3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2995	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	II	6.1 +3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10DH	TU14 TU26 TE21 TM2 TM3	FL	0 (B/E)	V1		CV23	S2 S20	X338	2988	CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S.
SGAN		AT	2 (E)	V11				40	2989	LEAD PHOSPHITE, DIBASIC
SGAV		AT	3 (E)		VV1			40	2989	LEAD PHOSPHITE, DIBASIC
			3 (E)						2990	LIFE-SAVING APPLIANCES, SELF-INFLATING
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	2991	CARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2991	CARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	2991	CARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2992	CARBAMATE PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2992	CARBAMATE PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2992	CARBAMATE PESTICIDE, LIQUID, TOXIC
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	2993	ARSENICAL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2993	ARSENICAL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	2993	ARSENICAL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2994	ARSENICAL PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2994	ARSENICAL PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2994	ARSENICAL PESTICIDE, LIQUID, TOXIC
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	2995	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2995	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2995	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	III	6.1 +3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
2996	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC	6.1	T6	I	6.1	61 274 648	0	E5	P001		MP8 MP17	T14	TP2 TP27
2996	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC	6.1	T6	II	6.1	61 274 648	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2996	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC	6.1	T6	III	6.1	61 274 648	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
2997	TRIAZINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	I	6.1 +3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2997	TRIAZINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	II	6.1 +3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2997	TRIAZINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	III	6.1 +3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
2998	TRIAZINE PESTICIDE, LIQUID, TOXIC	6.1	T6	I	6.1	61 274 648	0	E5	P001		MP8 MP17	T14	TP2 TP27
2998	TRIAZINE PESTICIDE, LIQUID, TOXIC	6.1	T6	II	6.1	61 274 648	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2998	TRIAZINE PESTICIDE, LIQUID, TOXIC	6.1	T6	III	6.1	61 274 648	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
3005	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	I	6.1 +3	61 274	0	E5	P001		MP8 MP17	T14	TP2
3005	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	II	6.1 +3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3005	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	III	6.1 +3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
3006	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC	6.1	T6	I	6.1	61 274 648	0	E5	P001		MP8 MP17	T14	TP2
3006	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC	6.1	T6	II	6.1	61 274 648	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3006	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC	6.1	T6	III	6.1	61 274 648	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
3009	COPPER BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	I	6.1 +3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
3009	COPPER BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	II	6.1 +3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	2995	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2996	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2996	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2996	ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	2997	TRIAZINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2997	TRIAZINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	2997	TRIAZINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2998	TRIAZINE PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2998	TRIAZINE PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2998	TRIAZINE PESTICIDE, LIQUID, TOXIC
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3005	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3005	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3005	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3006	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3006	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3006	THIOCARBAMATE PESTICIDE, LIQUID, TOXIC
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3009	COPPER BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3009	COPPER BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	(11)
3009	COPPER BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	III	6.1 +3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
3010	COPPER BASED PESTICIDE, LIQUID, TOXIC	6.1	T6	I	6.1	61 274 648	0	E5	P001		MP8 MP17	T14	TP2 TP27
3010	COPPER BASED PESTICIDE, LIQUID, TOXIC	6.1	T6	II	6.1	61 274 648	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3010	COPPER BASED PESTICIDE, LIQUID, TOXIC	6.1	T6	III	6.1	61 274 648	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
3011	MERCURY BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	I	6.1 +3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
3011	MERCURY BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	II	6.1 +3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3011	MERCURY BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	III	6.1 +3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
3012	MERCURY BASED PESTICIDE, LIQUID, TOXIC	6.1	T6	I	6.1	61 274 648	0	E5	P001		MP8 MP17	T14	TP2 TP27
3012	MERCURY BASED PESTICIDE, LIQUID, TOXIC	6.1	T6	II	6.1	61 274 648	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3012	MERCURY BASED PESTICIDE, LIQUID, TOXIC	6.1	T6	III	6.1	61 274 648	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
3013	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	I	6.1 +3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
3013	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	II	6.1 +3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3013	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	III	6.1 +3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
3014	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC	6.1	T6	I	6.1	61 274 648	0	E5	P001		MP8 MP17	T14	TP2 TP27
3014	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC	6.1	T6	II	6.1	61 274 648	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3014	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC	6.1	T6	III	6.1	61 274 648	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3009	COPPER BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3010	COPPER BASED PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3010	COPPER BASED PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3010	COPPER BASED PESTICIDE, LIQUID, TOXIC
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3011	MERCURY BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3011	MERCURY BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3011	MERCURY BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3012	MERCURY BASED PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3012	MERCURY BASED PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3012	MERCURY BASED PESTICIDE, LIQUID, TOXIC
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3013	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3013	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3013	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3014	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3014	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3014	SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
3015	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	I	6.1 +3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3015	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	II	6.1 +3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3015	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	III	6.1 +3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28	
3016	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC	6.1	T6	I	6.1	61 274 648	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3016	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC	6.1	T6	II	6.1	61 274 648	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3016	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC	6.1	T6	III	6.1	61 274 648	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28	
3017	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	I	6.1 +3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3017	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	II	6.1 +3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3017	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	III	6.1 +3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28	
3018	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC	6.1	T6	I	6.1	61 274 648	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3018	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC	6.1	T6	II	6.1	61 274 648	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3018	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC	6.1	T6	III	6.1	61 274 648	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28	
3019	ORGANOTIN PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	I	6.1 +3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3019	ORGANOTIN PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	II	6.1 +3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3019	ORGANOTIN PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	III	6.1 +3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28	
3020	ORGANOTIN PESTICIDE, LIQUID, TOXIC	6.1	T6	I	6.1	61 274 648	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3020	ORGANOTIN PESTICIDE, LIQUID, TOXIC	6.1	T6	II	6.1	61 274 648	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3020	ORGANOTIN PESTICIDE, LIQUID, TOXIC	6.1	T6	III	6.1	61 274 648	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3015	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3015	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3015	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3016	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3016	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3016	BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3017	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3017	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3017	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3018	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3018	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3018	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3019	ORGANOTIN PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3019	ORGANOTIN PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3019	ORGANOTIN PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3020	ORGANOTIN PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3020	ORGANOTIN PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3020	ORGANOTIN PESTICIDE, LIQUID, TOXIC

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
3021	PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S., flash-point less than 23 °C	3	FT2	I	3 +6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
3021	PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S., flash-point less than 23 °C	3	FT2	II	3 +6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
3022	1,2-BUTYLENE OXIDE, STABILIZED	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
3023	2-METHYL-2-HEPTANETHIOL	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
3024	COUMARIN DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	I	3 +6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
3024	COUMARIN DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	II	3 +6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
3025	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	I	6.1 +3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
3025	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	II	6.1 +3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3025	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	III	6.1 +3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
3026	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC	6.1	T6	I	6.1	61 274 648	0	E5	P001		MP8 MP17	T14	TP2 TP27
3026	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC	6.1	T6	II	6.1	61 274 648	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3026	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC	6.1	T6	III	6.1	61 274 648	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3027	COUMARIN DERIVATIVE PESTICIDE, SOLID, TOXIC	6.1	T7	I	6.1	61 274 648	0	E5	P002 IBC07		MP18	T6	TP33
3027	COUMARIN DERIVATIVE PESTICIDE, SOLID, TOXIC	6.1	T7	II	6.1	61 274 648	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3027	COUMARIN DERIVATIVE PESTICIDE, SOLID, TOXIC	6.1	T7	III	6.1	61 274 648	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3028	BATTERIES, DRY, CONTAINING POTASSIUM HYDROXIDE SOLID, electric storage	8	C11		8	295 304 598	2 kg	E0	P801 P801a				
3048	ALUMINIUM PHOSPHIDE PESTICIDE	6.1	T7	I	6.1	153 648	0	E5	P002 IBC07		MP18	T6	TP33
3054	CYCLOHEXYL MERCAPTAN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	3021	PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S., flash-point less than 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	3021	PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S., flash-point less than 23 °C
LGBF		FL	2 (D/E)				S2 S20	339	3022	1,2-BUTYLENE OXIDE, STABILIZED
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3023	2-METHYL-2-HEPTANETHIOL
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	3024	COUMARIN DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	3024	COUMARIN DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3025	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3025	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3025	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3026	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3026	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3026	COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3027	COUMARIN DERIVATIVE PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3027	COUMARIN DERIVATIVE PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3027	COUMARIN DERIVATIVE PESTICIDE, SOLID, TOXIC
			3 (E)		VV14			80	3028	BATTERIES, DRY, CONTAINING POTASSIUM HYDROXIDE SOLID, electric storage
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	642	3048	ALUMINIUM PHOSPHIDE PESTICIDE
LGBF		FL	3 (D/E)	V12			S2	30	3054	CYCLOHEXYL MERCAPTAN

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
3055	2-(2-AMINOETHOXY) ETHANOL	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3056	n-HEPTALDEHYDE	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
3057	TRIFLUOROACETYL CHLORIDE	2	2TC		2.3 +8		0	E0	P200		MP9	T50	TP21
3064	NITROGLYCERIN, SOLUTION IN ALCOHOL with more than 1% but not more than 5% nitroglycerin	3	D	II	3	359	0	E0	P300		MP2		
3065	ALCOHOLIC BEVERAGES, with more than 70% alcohol by volume	3	F1	II	3		5 L	E2	P001 IBC02 R001	PP2	MP19	T4	TP1
3065	ALCOHOLIC BEVERAGES, with more than 24% but not more than 70% alcohol by volume	3	F1	III	3	144 145 247	5 L	E1	P001 IBC03 R001	PP2	MP19	T2	TP1
3066	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound)	8	C9	II	8	163	1 L	E2	P001 IBC02		MP15	T7	TP2 TP28
3066	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound)	8	C9	III	8	163	5 L	E1	P001 IBC03 R001		MP19	T4	TP1 TP29
3070	ETHYLENE OXIDE AND DICHLORODIFLUOROMETHANE MIXTURE with not more than 12.5% ethylene oxide	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
3071	MERCAPTANS, LIQUID, TOXIC, FLAMMABLE, N.O.S. or MERCAPTAN MIXTURE, LIQUID, TOXIC, FLAMMABLE, N.O.S.	6.1	TF1	II	6.1 +3	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3072	LIFE-SAVING APPLIANCES NOT SELF-INFLATING containing dangerous goods as equipment	9	M5		9	296 635	0	E0	P905				
3073	VINYLPYRIDINES, STABILIZED	6.1	TFC	II	6.1 +3 +8		100 ml	E4	P001 IBC01		MP15	T7	TP2
3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	9	M7	III	9	274 335 601	5 kg	E1	P002 IBC08 LP02 R001	PP12 B3	MP10	T1 BK1 BK2	TP33
3078	CERIUM, turnings or gritty powder	4.3	W2	II	4.3	550	500 g	E2	P410 IBC07		MP14	T3	TP33
3079	METHACRYLONITRILE, STABILIZED	6.1	TF1	I	6.1 +3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
3080	ISOCYANATES, TOXIC, FLAMMABLE, N.O.S. or ISOCYANATE SOLUTION, TOXIC, FLAMMABLE, N.O.S.	6.1	TF1	II	6.1 +3	274 551	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	3 (E)	V12				80	3055	2-(2-AMINOETHOXY) ETHANOL
LGBF		FL	3 (D/E)	V12			S2	30	3056	n-HEPTALDEHYDE
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	3057	TRIFLUOROACETYL CHLORIDE
			2 (B)				S2 S14		3064	NITROGLYCERIN, SOLUTION IN ALCOHOL with more than 1% but not more than 5% nitroglycerin
LGBF		FL	2 (D/E)				S2 S20	33	3065	ALCOHOLIC BEVERAGES, with more than 70% alcohol by volume
LGBF		FL	3 (D/E)	V12			S2	30	3065	ALCOHOLIC BEVERAGES, with more than 24% but not more than 70% alcohol by volume
L4BN		AT	2 (E)					80	3066	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound)
L4BN		AT	3 (E)	V12				80	3066	PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL (including paint thinning and reducing compound)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3070	ETHYLENE OXIDE AND DICHLORODIFLUOROMETHANE MIXTURE with not more than 12.5% ethylene oxide
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3071	MERCAPTANS, LIQUID, TOXIC, FLAMMABLE, N.O.S. or MERCAPTAN MIXTURE, LIQUID, TOXIC, FLAMMABLE, N.O.S.
			3 (E)						3072	LIFE-SAVING APPLIANCES NOT SELF-INFLATING containing dangerous goods as equipment
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	638	3073	VINYLPYRIDINES, STABILIZED
SGAV LGBV		AT	3 (E)	V13	VV1	CV13		90	3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
SGAN		AT	2 (D/E)	V1		CV23		423	3078	CERIUM, turnings or gritty powder
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3079	METHACRYLONITRILE, STABILIZED
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3080	ISOCYANATES, TOXIC, FLAMMABLE, N.O.S. or ISOCYANATE SOLUTION, TOXIC, FLAMMABLE, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	9	M6	III	9	274 335 601	5 L	E1	P001 IBC03 LP01 R001	PP1	MP19	T4	TP1 TP29
3083	PERCHLORYL FLUORIDE	2	2TO		2.3 +5.1		0	E0	P200		MP9	(M)	
3084	CORROSIVE SOLID, OXIDIZING, N.O.S.	8	CO2	I	8 +5.1	274	0	E0	P002		MP18	T6	TP33
3084	CORROSIVE SOLID, OXIDIZING, N.O.S.	8	CO2	II	8 +5.1	274	1 kg	E2	P002 IBC06		MP10	T3	TP33
3085	OXIDIZING SOLID, CORROSIVE, N.O.S.	5.1	OC2	I	5.1 +8	274	0	E0	P503		MP2		
3085	OXIDIZING SOLID, CORROSIVE, N.O.S.	5.1	OC2	II	5.1 +8	274	1 kg	E2	P002 IBC06		MP2	T3	TP33
3085	OXIDIZING SOLID, CORROSIVE, N.O.S.	5.1	OC2	III	5.1 +8	274	5 kg	E1	P002 IBC08 R001	B3	MP2	T1	TP33
3086	TOXIC SOLID, OXIDIZING, N.O.S.	6.1	TO2	I	6.1 +5.1	274	0	E5	P002		MP18	T6	TP33
3086	TOXIC SOLID, OXIDIZING, N.O.S.	6.1	TO2	II	6.1 +5.1	274	500 g	E4	P002 IBC06		MP10	T3	TP33
3087	OXIDIZING SOLID, TOXIC, N.O.S.	5.1	OT2	I	5.1 +6.1	274	0	E0	P503		MP2		
3087	OXIDIZING SOLID, TOXIC, N.O.S.	5.1	OT2	II	5.1 +6.1	274	1 kg	E2	P002 IBC06		MP2	T3	TP33
3087	OXIDIZING SOLID, TOXIC, N.O.S.	5.1	OT2	III	5.1 +6.1	274	5 kg	E1	P002 IBC08 R001	B3	MP2	T1	TP33
3088	SELF-HEATING SOLID, ORGANIC, N.O.S.	4.2	S2	II	4.2	274	0	E2	P410 IBC06		MP14	T3	TP33
3088	SELF-HEATING SOLID, ORGANIC, N.O.S.	4.2	S2	III	4.2	274	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
3089	METAL POWDER, FLAMMABLE, N.O.S.	4.1	F3	II	4.1	552	1 kg	E2	P002 IBC08	B4	MP11	T3	TP33
3089	METAL POWDER, FLAMMABLE, N.O.S.	4.1	F3	III	4.1	552	5 kg	E1	P002 IBC06 R001		MP11	T1	TP33
3090	LITHIUM METAL BATTERIES (including lithium alloy batteries)	9	M4	II	9	188 230 310 636 661	0	E0	P903 P903a P903b				
3091	LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT (including lithium alloy batteries)	9	M4	II	9	188 230 360 636 661	0	E0	P903 P903a P903b				
3092	1-METHOXY-2-PROPANOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
3093	CORROSIVE LIQUID, OXIDIZING, N.O.S.	8	CO1	I	8 +5.1	274	0	E0	P001		MP8 MP17		
3093	CORROSIVE LIQUID, OXIDIZING, N.O.S.	8	CO1	II	8 +5.1	274	1 L	E2	P001 IBC02		MP15		
3094	CORROSIVE LIQUID, WATER-REACTIVE, N.O.S.	8	CW1	I	8 +4.3	274	0	E0	P001		MP8 MP17		
3094	CORROSIVE LIQUID, WATER-REACTIVE, N.O.S.	8	CW1	II	8 +4.3	274	1 L	E2	P001		MP15		
3095	CORROSIVE SOLID, SELF-HEATING, N.O.S.	8	CS2	I	8 +4.2	274	0	E0	P002		MP18	T6	TP33
3095	CORROSIVE SOLID, SELF-HEATING, N.O.S.	8	CS2	II	8 +4.2	274	1 kg	E2	P002 IBC06		MP10	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBV		AT	3 (E)	V12		CV13		90	3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	3083	PERCHLORYL FLUORIDE
S10AN L10BH		AT	1 (E)			CV24	S14	885	3084	CORROSIVE SOLID, OXIDIZING, N.O.S.
SGAN L4BN		AT	2 (E)	V11		CV24		85	3084	CORROSIVE SOLID, OXIDIZING, N.O.S.
			1 (E)			CV24	S20		3085	OXIDIZING SOLID, CORROSIVE, N.O.S.
SGAN	TU3	AT	2 (E)	V11		CV24		58	3085	OXIDIZING SOLID, CORROSIVE, N.O.S.
SGAN	TU3	AT	3 (E)			CV24		58	3085	OXIDIZING SOLID, CORROSIVE, N.O.S.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	665	3086	TOXIC SOLID, OXIDIZING, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	65	3086	TOXIC SOLID, OXIDIZING, N.O.S.
			1 (E)			CV24 CV28	S20		3087	OXIDIZING SOLID, TOXIC, N.O.S.
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	3087	OXIDIZING SOLID, TOXIC, N.O.S.
SGAN	TU3	AT	3 (E)			CV24 CV28		56	3087	OXIDIZING SOLID, TOXIC, N.O.S.
SGAV		AT	2 (D/E)	V1				40	3088	SELF-HEATING SOLID, ORGANIC, N.O.S.
SGAV		AT	3 (E)	V1				40	3088	SELF-HEATING SOLID, ORGANIC, N.O.S.
SGAN		AT	2 (E)	V11				40	3089	METAL POWDER, FLAMMABLE, N.O.S.
SGAV		AT	3 (E)		VV1			40	3089	METAL POWDER, FLAMMABLE, N.O.S.
			2 (E)						3090	LITHIUM METAL BATTERIES (including lithium alloy batteries)
			2 (E)						3091	LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT (including lithium alloy batteries)
LGBF		FL	3 (D/E)	V12			S2	30	3092	1-METHOXY-2-PROPANOL
L10BH		AT	1 (E)			CV24	S14	885	3093	CORROSIVE LIQUID, OXIDIZING, N.O.S.
L4BN		AT	2 (E)			CV24		85	3093	CORROSIVE LIQUID, OXIDIZING, N.O.S.
L10BH		AT	1 (D/E)				S14	823	3094	CORROSIVE LIQUID, WATER-REACTIVE, N.O.S.
L4BN		AT	2 (E)					823	3094	CORROSIVE LIQUID, WATER-REACTIVE, N.O.S.
S10AN		AT	1 (E)				S14	884	3095	CORROSIVE SOLID, SELF-HEATING, N.O.S.
SGAN		AT	2 (E)	V11				84	3095	CORROSIVE SOLID, SELF-HEATING, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
3096	CORROSIVE SOLID, WATER-REACTIVE, N.O.S.	8	CW2	I	8 +4.3	274	0	E0	P002		MP18	T6	TP33	
3096	CORROSIVE SOLID, WATER-REACTIVE, N.O.S.	8	CW2	II	8 +4.3	274	1 kg	E2	P002 IBC06		MP10	T3	TP33	
3097	FLAMMABLE SOLID, OXIDIZING, N.O.S.	4.1	FO	CARRIAGE PROHIBITED										
3098	OXIDIZING LIQUID, CORROSIVE, N.O.S.	5.1	OC1	I	5.1 +8	274	0	E0	P502		MP2			
3098	OXIDIZING LIQUID, CORROSIVE, N.O.S.	5.1	OC1	II	5.1 +8	274	1 L	E2	P504 IBC01		MP2			
3098	OXIDIZING LIQUID, CORROSIVE, N.O.S.	5.1	OC1	III	5.1 +8	274	5 L	E1	P504 IBC02 R001		MP2			
3099	OXIDIZING LIQUID, TOXIC, N.O.S.	5.1	OT1	I	5.1 +6.1	274	0	E0	P502		MP2			
3099	OXIDIZING LIQUID, TOXIC, N.O.S.	5.1	OT1	II	5.1 +6.1	274	1 L	E2	P504 IBC01		MP2			
3099	OXIDIZING LIQUID, TOXIC, N.O.S.	5.1	OT1	III	5.1 +6.1	274	5 L	E1	P504 IBC02 R001		MP2			
3100	OXIDIZING SOLID, SELF-HEATING, N.O.S.	5.1	OS	CARRIAGE PROHIBITED										
3101	ORGANIC PEROXIDE TYPE B, LIQUID	5.2	P1		5.2 +1	122 181 274	25 ml	E0	P520		MP4			
3102	ORGANIC PEROXIDE TYPE B, SOLID	5.2	P1		5.2 +1	122 181 274	100 g	E0	P520		MP4			
3103	ORGANIC PEROXIDE TYPE C, LIQUID	5.2	P1		5.2	122 274	25 ml	E0	P520		MP4			
3104	ORGANIC PEROXIDE TYPE C, SOLID	5.2	P1		5.2	122 274	100 g	E0	P520		MP4			
3105	ORGANIC PEROXIDE TYPE D, LIQUID	5.2	P1		5.2	122 274	125 ml	E0	P520		MP4			
3106	ORGANIC PEROXIDE TYPE D, SOLID	5.2	P1		5.2	122 274	500 g	E0	P520		MP4			
3107	ORGANIC PEROXIDE TYPE E, LIQUID	5.2	P1		5.2	122 274	125 ml	E0	P520		MP4			
3108	ORGANIC PEROXIDE TYPE E, SOLID	5.2	P1		5.2	122 274	500 g	E0	P520		MP4			
3109	ORGANIC PEROXIDE TYPE F, LIQUID	5.2	P1		5.2	122 274	125 ml	E0	P520 IBC520		MP4	T23		
3110	ORGANIC PEROXIDE TYPE F, SOLID	5.2	P1		5.2	122 274	500 g	E0	P520 IBC520		MP4	T23	TP33	
3111	ORGANIC PEROXIDE TYPE B, LIQUID, TEMPERATURE CONTROLLED	5.2	P2		5.2 +1	122 181 274	0	E0	P520		MP4			
3112	ORGANIC PEROXIDE TYPE B, SOLID, TEMPERATURE CONTROLLED	5.2	P2		5.2 +1	122 181 274	0	E0	P520		MP4			
3113	ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED	5.2	P2		5.2	122 274	0	E0	P520		MP4			

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
S10AN L10BH		AT	1 (E)				S14	842	3096	CORROSIVE SOLID, WATER-REACTIVE, N.O.S.
SGAN L4BN		AT	2 (E)	V11				842	3096	CORROSIVE SOLID, WATER-REACTIVE, N.O.S.
CARRIAGE PROHIBITED									3097	FLAMMABLE SOLID, OXIDIZING, N.O.S.
			1 (E)			CV24	S20		3098	OXIDIZING LIQUID, CORROSIVE, N.O.S.
			2 (E)			CV24			3098	OXIDIZING LIQUID, CORROSIVE, N.O.S.
			3 (E)			CV24			3098	OXIDIZING LIQUID, CORROSIVE, N.O.S.
			1 (E)			CV24 CV28	S20		3099	OXIDIZING LIQUID, TOXIC, N.O.S.
			2 (E)			CV24 CV28			3099	OXIDIZING LIQUID, TOXIC, N.O.S.
			3 (E)			CV24 CV28			3099	OXIDIZING LIQUID, TOXIC, N.O.S.
CARRIAGE PROHIBITED									3100	OXIDIZING SOLID, SELF- HEATING, N.O.S.
			1 (B)	V1 V5		CV15 CV20 CV22 CV24	S9 S17		3101	ORGANIC PEROXIDE TYPE B, LIQUID
			1 (B)	V1 V5		CV15 CV20 CV22 CV24	S9 S17		3102	ORGANIC PEROXIDE TYPE B, SOLID
			1 (D)	V1		CV15 CV20 CV22 CV24	S8 S18		3103	ORGANIC PEROXIDE TYPE C, LIQUID
			1 (D)	V1		CV15 CV20 CV22 CV24	S8 S18		3104	ORGANIC PEROXIDE TYPE C, SOLID
			2 (D)	V1		CV15 CV22 CV24	S19		3105	ORGANIC PEROXIDE TYPE D, LIQUID
			2 (D)	V1		CV15 CV22 CV24	S19		3106	ORGANIC PEROXIDE TYPE D, SOLID
			2 (D)	V1		CV15 CV22 CV24			3107	ORGANIC PEROXIDE TYPE E, LIQUID
			2 (D)	V1		CV15 CV22 CV24			3108	ORGANIC PEROXIDE TYPE E, SOLID
L4BN(+)	TU3 TU13 TU30 TE12 TA2 TM4	AT	2 (D)	V1		CV15 CV22 CV24		539	3109	ORGANIC PEROXIDE TYPE F, LIQUID
S4AN(+)	TU3 TU13 TU30 TE12 TA2 TM4	AT	2 (D)	V1		CV15 CV22 CV24		539	3110	ORGANIC PEROXIDE TYPE F, SOLID
			1 (B)	V8		CV15 CV20 CV21 CV22 CV24	S4 S9 S16		3111	ORGANIC PEROXIDE TYPE B, LIQUID, TEMPERATURE CONTROLLED
			1 (B)	V8		CV15 CV20 CV21 CV22 CV24	S4 S9 S16		3112	ORGANIC PEROXIDE TYPE B, SOLID, TEMPERATURE CONTROLLED
			1 (D)	V8		CV15 CV20 CV21 CV22 CV24	S4 S8 S17		3113	ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
3114	ORGANIC PEROXIDE TYPE C, SOLID, TEMPERATURE CONTROLLED	5.2	P2		5.2	122 274	0	E0	P520		MP4		
3115	ORGANIC PEROXIDE TYPE D, LIQUID, TEMPERATURE CONTROLLED	5.2	P2		5.2	122 274	0	E0	P520		MP4		
3116	ORGANIC PEROXIDE TYPE D, SOLID, TEMPERATURE CONTROLLED	5.2	P2		5.2	122 274	0	E0	P520		MP4		
3117	ORGANIC PEROXIDE TYPE E, LIQUID, TEMPERATURE CONTROLLED	5.2	P2		5.2	122 274	0	E0	P520		MP4		
3118	ORGANIC PEROXIDE TYPE E, SOLID, TEMPERATURE CONTROLLED	5.2	P2		5.2	122 274	0	E0	P520		MP4		
3119	ORGANIC PEROXIDE TYPE F, LIQUID, TEMPERATURE CONTROLLED	5.2	P2		5.2	122 274	0	E0	P520 IBC520		MP4	T23	
3120	ORGANIC PEROXIDE TYPE F, SOLID, TEMPERATURE CONTROLLED	5.2	P2		5.2	122 274	0	E0	P520 IBC520		MP4	T23	TP33
3121	OXIDIZING SOLID, WATER- REACTIVE, N.O.S.	5.1	OW	CARRIAGE PROHIBITED									
3122	TOXIC LIQUID, OXIDIZING, N.O.S.	6.1	TO1	I	6.1 +5.1	274 315	0	E5	P001		MP8 MP17		
3122	TOXIC LIQUID, OXIDIZING, N.O.S.	6.1	TO1	II	6.1 +5.1	274	100 ml	E4	P001 IBC02		MP15		
3123	TOXIC LIQUID, WATER- REACTIVE, N.O.S.	6.1	TW1	I	6.1 +4.3	274 315	0	E5	P099		MP8 MP17		
3123	TOXIC LIQUID, WATER- REACTIVE, N.O.S.	6.1	TW1	II	6.1 +4.3	274	100 ml	E4	P001 IBC02		MP15		
3124	TOXIC SOLID, SELF- HEATING, N.O.S.	6.1	TS	I	6.1 +4.2	274	0	E5	P002		MP18	T6	TP33
3124	TOXIC SOLID, SELF- HEATING, N.O.S.	6.1	TS	II	6.1 +4.2	274	0	E4	P002 IBC06		MP10	T3	TP33
3125	TOXIC SOLID, WATER- REACTIVE, N.O.S.	6.1	TW2	I	6.1 +4.3	274	0	E5	P099		MP18	T6	TP33
3125	TOXIC SOLID, WATER- REACTIVE, N.O.S.	6.1	TW2	II	6.1 +4.3	274	500 g	E4	P002 IBC06		MP10	T3	TP33
3126	SELF-HEATING SOLID, CORROSIVE, ORGANIC, N.O.S.	4.2	SC2	II	4.2 +8	274	0	E2	P410 IBC05		MP14	T3	TP33
3126	SELF-HEATING SOLID, CORROSIVE, ORGANIC, N.O.S.	4.2	SC2	III	4.2 +8	274	0	E1	P002 IBC08 R001	B3	MP14	T1	TP33
3127	SELF-HEATING SOLID, OXIDIZING, N.O.S.	4.2	SO	CARRIAGE PROHIBITED									
3128	SELF-HEATING SOLID, TOXIC, ORGANIC, N.O.S.	4.2	ST2	II	4.2 +6.1	274	0	E2	P410 IBC05		MP14	T3	TP33
3128	SELF-HEATING SOLID, TOXIC, ORGANIC, N.O.S.	4.2	ST2	III	4.2 +6.1	274	0	E1	P002 IBC08 R001	B3	MP14	T1	TP33
3129	WATER-REACTIVE LIQUID, CORROSIVE, N.O.S.	4.3	WC1	I	4.3 +8	274	0	E0	P402	RR7 RR8	MP2	T14	TP2 TP7
3129	WATER-REACTIVE LIQUID, CORROSIVE, N.O.S.	4.3	WC1	II	4.3 +8	274	500 ml	E2	P402 IBC01	RR7 RR8	MP15	T11	TP2 TP7

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (D)	V8		CV15 CV20 CV21 CV22 CV24	S4 S8 S17		3114	ORGANIC PEROXIDE TYPE C, SOLID, TEMPERATURE CONTROLLED
			1 (D)	V8		CV15 CV21 CV22 CV24	S4 S18		3115	ORGANIC PEROXIDE TYPE D, LIQUID, TEMPERATURE CONTROLLED
			1 (D)	V8		CV15 CV21 CV22 CV24	S4 S18		3116	ORGANIC PEROXIDE TYPE D, SOLID, TEMPERATURE CONTROLLED
			1 (D)	V8		CV15 CV21 CV22 CV24	S4 S19		3117	ORGANIC PEROXIDE TYPE E, LIQUID, TEMPERATURE CONTROLLED
			1 (D)	V8		CV15 CV21 CV22 CV24	S4 S19		3118	ORGANIC PEROXIDE TYPE E, SOLID, TEMPERATURE CONTROLLED
L4BN(+)	TU3 TU13 TU30 TE12 TA2 TM4	AT	1 (D)	V8		CV15 CV21 CV22 CV24	S4	539	3119	ORGANIC PEROXIDE TYPE F, LIQUID, TEMPERATURE CONTROLLED
S4AN(+)	TU3 TU13 TU30 TE12 TA2 TM4	AT	1 (D)	V8		CV15 CV21 CV22 CV24	S4	539	3120	ORGANIC PEROXIDE TYPE F, SOLID, TEMPERATURE CONTROLLED
CARRIAGE PROHIBITED									3121	OXIDIZING SOLID, WATER-REACTIVE, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	665	3122	TOXIC LIQUID, OXIDIZING, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	65	3122	TOXIC LIQUID, OXIDIZING, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	623	3123	TOXIC LIQUID, WATER-REACTIVE, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	623	3123	TOXIC LIQUID, WATER-REACTIVE, N.O.S.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	664	3124	TOXIC SOLID, SELF-HEATING, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	64	3124	TOXIC SOLID, SELF-HEATING, N.O.S.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	642	3125	TOXIC SOLID, WATER-REACTIVE, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	642	3125	TOXIC SOLID, WATER-REACTIVE, N.O.S.
SGAN		AT	2 (D/E)	V1				48	3126	SELF-HEATING SOLID, CORROSIVE, ORGANIC, N.O.S.
SGAN		AT	3 (E)	V1				48	3126	SELF-HEATING SOLID, CORROSIVE, ORGANIC, N.O.S.
CARRIAGE PROHIBITED									3127	SELF-HEATING SOLID, OXIDIZING, N.O.S.
SGAN		AT	2 (D/E)	V1		CV28		46	3128	SELF-HEATING SOLID, TOXIC, ORGANIC, N.O.S.
SGAN		AT	3 (E)	V1		CV28		46	3128	SELF-HEATING SOLID, TOXIC, ORGANIC, N.O.S.
L10DH	TU14 TE21 TM2	AT	0 (B/E)	V1		CV23	S20	X382	3129	WATER-REACTIVE LIQUID, CORROSIVE, N.O.S.
L4DH	TU14 TE21 TM2	AT	0 (D/E)	V1		CV23		382	3129	WATER-REACTIVE LIQUID, CORROSIVE, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
3129	WATER-REACTIVE LIQUID, CORROSIVE, N.O.S.	4.3	WC1	III	4.3 +8	274	1 L	E1	P001 IBC02 R001		MP15	T7	TP2 TP7
3130	WATER-REACTIVE LIQUID, TOXIC, N.O.S.	4.3	WT1	I	4.3 +6.1	274	0	E0	P402	RR4 RR8	MP2		
3130	WATER-REACTIVE LIQUID, TOXIC, N.O.S.	4.3	WT1	II	4.3 +6.1	274	500 ml	E2	P402 IBC01	RR4 RR8 BB1	MP15		
3130	WATER-REACTIVE LIQUID, TOXIC, N.O.S.	4.3	WT1	III	4.3 +6.1	274	1 L	E1	P001 IBC02 R001		MP15		
3131	WATER-REACTIVE SOLID, CORROSIVE, N.O.S.	4.3	WC2	I	4.3 +8	274	0	E0	P403		MP2	T9	TP7 TP33
3131	WATER-REACTIVE SOLID, CORROSIVE, N.O.S.	4.3	WC2	II	4.3 +8	274	500 g	E2	P410 IBC06		MP14	T3	TP33
3131	WATER-REACTIVE SOLID, CORROSIVE, N.O.S.	4.3	WC2	III	4.3 +8	274	1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33
3132	WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.	4.3	WF2	I	4.3 +4.1	274	0	E0	P403 IBC99		MP2		
3132	WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.	4.3	WF2	II	4.3 +4.1	274	500 g	E2	P410 IBC04		MP14	T3	TP33
3132	WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.	4.3	WF2	III	4.3 +4.1	274	1 kg	E1	P410 IBC06		MP14	T1	TP33
3133	WATER-REACTIVE SOLID, OXIDIZING, N.O.S.	4.3	WO	CARRIAGE PROHIBITED									
3134	WATER-REACTIVE SOLID, TOXIC, N.O.S.	4.3	WT2	I	4.3 +6.1	274	0	E0	P403		MP2		
3134	WATER-REACTIVE SOLID, TOXIC, N.O.S.	4.3	WT2	II	4.3 +6.1	274	500 g	E2	P410 IBC05		MP14	T3	TP33
3134	WATER-REACTIVE SOLID, TOXIC, N.O.S.	4.3	WT2	III	4.3 +6.1	274	1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33
3135	WATER-REACTIVE SOLID, SELF-HEATING, N.O.S.	4.3	WS	I	4.3 +4.2	274	0	E0	P403		MP2		
3135	WATER-REACTIVE SOLID, SELF-HEATING, N.O.S.	4.3	WS	II	4.3 +4.2	274	0	E2	P410 IBC05		MP14	T3	TP33
3135	WATER-REACTIVE SOLID, SELF-HEATING, N.O.S.	4.3	WS	III	4.3 +4.2	274	0	E1	P410 IBC08	B4	MP14	T1	TP33
3136	TRIFLUOROMETHANE, REFRIGERATED LIQUID	2	3A		2.2	593	120 ml	E1	P203		MP9	T75	TP5
3137	OXIDIZING SOLID, FLAMMABLE, N.O.S.	5.1	OF	CARRIAGE PROHIBITED									
3138	ETHYLENE, ACETYLENE AND PROPYLENE MIXTURE, REFRIGERATED LIQUID containing at least 71.5% ethylene with not more than 22.5% acetylene and not more than 6% propylene	2	3F		2.1		0	E0	P203		MP9	T75	TP5
3139	OXIDIZING LIQUID, N.O.S.	5.1	O1	I	5.1	274	0	E0	P502		MP2		
3139	OXIDIZING LIQUID, N.O.S.	5.1	O1	II	5.1	274	1 L	E2	P504 IBC02		MP2		
3139	OXIDIZING LIQUID, N.O.S.	5.1	O1	III	5.1	274	5 L	E1	P504 IBC02 R001		MP2		
3140	ALKALOIDS, LIQUID, N.O.S. or ALKALOID SALTS, LIQUID, N.O.S.	6.1	T1	I	6.1	43 274	0	E5	P001		MP8 MP17		
3140	ALKALOIDS, LIQUID, N.O.S. or ALKALOID SALTS, LIQUID, N.O.S.	6.1	T1	II	6.1	43 274	100 ml	E4	P001 IBC02		MP15		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4DH	TU14 TE21 TM2	AT	0 (E)	V1		CV23		382	3129	WATER-REACTIVE LIQUID, CORROSIVE, N.O.S.
L10DH	TU14 TE21 TM2	AT	0 (B/E)	V1		CV23 CV28	S20	X362	3130	WATER-REACTIVE LIQUID, TOXIC, N.O.S.
L4DH	TU14 TE21 TM2	AT	0 (D/E)	V1		CV23 CV28		362	3130	WATER-REACTIVE LIQUID, TOXIC, N.O.S.
L4DH	TU14 TE21 TM2	AT	0 (E)	V1		CV23 CV28		362	3130	WATER-REACTIVE LIQUID, TOXIC, N.O.S.
S10AN L10DH	TU4 TU14 TU22 TE21 TM2	AT	0 (B/E)	V1		CV23	S20	X482	3131	WATER-REACTIVE SOLID, CORROSIVE, N.O.S.
SGAN		AT	0 (D/E)	V1		CV23		482	3131	WATER-REACTIVE SOLID, CORROSIVE, N.O.S.
SGAN		AT	0 (E)	V1		CV23		482	3131	WATER-REACTIVE SOLID, CORROSIVE, N.O.S.
			0 (B/E)	V1		CV23	S20		3132	WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.
SGAN L4DH	TU14 TE21 TM2	AT	0 (D/E)	V1		CV23		423	3132	WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.
SGAN L4DH	TU14 TE21 TM2	AT	0 (E)	V1		CV23		423	3132	WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.
CARRIAGE PROHIBITED									3133	WATER-REACTIVE SOLID, OXIDIZING, N.O.S.
			0 (E)	V1		CV23 CV28	S20		3134	WATER-REACTIVE SOLID, TOXIC, N.O.S.
SGAN		AT	0 (D/E)	V1		CV23 CV28		462	3134	WATER-REACTIVE SOLID, TOXIC, N.O.S.
SGAN		AT	0 (E)	V1		CV23 CV28		462	3134	WATER-REACTIVE SOLID, TOXIC, N.O.S.
			1 (B/E)	V1		CV23	S20		3135	WATER-REACTIVE SOLID, SELF-HEATING, N.O.S.
SGAN L4DH	TU14 TE21 TM2	AT	2 (D/E)	V1		CV23		423	3135	WATER-REACTIVE SOLID, SELF-HEATING, N.O.S.
SGAN L4DH	TU14 TE21 TM2	AT	3 (E)	V1		CV23		423	3135	WATER-REACTIVE SOLID, SELF-HEATING, N.O.S.
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	3136	TRIFLUOROMETHANE, REFRIGERATED LIQUID
CARRIAGE PROHIBITED									3137	OXIDIZING SOLID, FLAMMABLE, N.O.S.
RxBN	TU18 TA4 TT9	FL	2 (B/D)	V5		CV9 CV11 CV36	S2 S17	223	3138	ETHYLENE, ACETYLENE AND PROPYLENE MIXTURE, REFRIGERATED LIQUID containing at least 71.5% ethylene with not more than 22.5% acetylene and not more than 6% propylene
			1 (E)			CV24	S20		3139	OXIDIZING LIQUID, N.O.S.
			2 (E)			CV24			3139	OXIDIZING LIQUID, N.O.S.
			3 (E)			CV24			3139	OXIDIZING LIQUID, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3140	ALKALOIDS, LIQUID, N.O.S. or ALKALOID SALTS, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3140	ALKALOIDS, LIQUID, N.O.S. or ALKALOID SALTS, LIQUID, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
3140	ALKALOIDS, LIQUID, N.O.S. or ALKALOID SALTS, LIQUID, N.O.S.	6.1	T1	III	6.1	43 274	5 L	E1	P001 IBC03 LP01 R001		MP19		
3141	ANTIMONY COMPOUND, INORGANIC, LIQUID, N.O.S.	6.1	T4	III	6.1	45 274 512	5 L	E1	P001 IBC03 LP01 R001		MP19		
3142	DISINFECTANT, LIQUID, TOXIC, N.O.S.	6.1	T1	I	6.1	274	0	E5	P001		MP8 MP17		
3142	DISINFECTANT, LIQUID, TOXIC, N.O.S.	6.1	T1	II	6.1	274	100 ml	E4	P001 IBC02		MP15		
3142	DISINFECTANT, LIQUID, TOXIC, N.O.S.	6.1	T1	III	6.1	274	5 L	E1	P001 IBC03 LP01 R001		MP19		
3143	DYE, SOLID, TOXIC, N.O.S. or DYE INTERMEDIATE, SOLID, TOXIC, N.O.S.	6.1	T2	I	6.1	274	0	E5	P002 IBC07		MP18	T6	TP33
3143	DYE, SOLID, TOXIC, N.O.S. or DYE INTERMEDIATE, SOLID, TOXIC, N.O.S.	6.1	T2	II	6.1	274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3143	DYE, SOLID, TOXIC, N.O.S. or DYE INTERMEDIATE, SOLID, TOXIC, N.O.S.	6.1	T2	III	6.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3144	NICOTINE COMPOUND, LIQUID, N.O.S. or NICOTINE PREPARATION, LIQUID, N.O.S.	6.1	T1	I	6.1	43 274	0	E5	P001		MP8 MP17		
3144	NICOTINE COMPOUND, LIQUID, N.O.S. or NICOTINE PREPARATION, LIQUID, N.O.S.	6.1	T1	II	6.1	43 274	100 ml	E4	P001 IBC02		MP15		
3144	NICOTINE COMPOUND, LIQUID, N.O.S. or NICOTINE PREPARATION, LIQUID, N.O.S.	6.1	T1	III	6.1	43 274	5 L	E1	P001 IBC03 LP01 R001		MP19		
3145	ALKYLPHENOLS, LIQUID, N.O.S. (including C ₂ -C ₁₂ homologues)	8	C3	I	8		0	E0	P001		MP8 MP17	T14	TP2
3145	ALKYLPHENOLS, LIQUID, N.O.S. (including C ₂ -C ₁₂ homologues)	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
3145	ALKYLPHENOLS, LIQUID, N.O.S. (including C ₂ -C ₁₂ homologues)	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3146	ORGANOTIN COMPOUND, SOLID, N.O.S.	6.1	T3	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33
3146	ORGANOTIN COMPOUND, SOLID, N.O.S.	6.1	T3	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3146	ORGANOTIN COMPOUND, SOLID, N.O.S.	6.1	T3	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3147	DYE, SOLID, CORROSIVE, N.O.S. or DYE INTERMEDIATE, SOLID, CORROSIVE, N.O.S.	8	C10	I	8	274	0	E0	P002 IBC07		MP18	T6	TP33
3147	DYE, SOLID, CORROSIVE, N.O.S. or DYE INTERMEDIATE, SOLID, CORROSIVE, N.O.S.	8	C10	II	8	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3140	ALKALOIDS, LIQUID, N.O.S. or ALKALOID SALTS, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3141	ANTIMONY COMPOUND, INORGANIC, LIQUID, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3142	DISINFECTANT, LIQUID, TOXIC, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3142	DISINFECTANT, LIQUID, TOXIC, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3142	DISINFECTANT, LIQUID, TOXIC, N.O.S.
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3143	DYE, SOLID, TOXIC, N.O.S. or DYE INTERMEDIATE, SOLID, TOXIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3143	DYE, SOLID, TOXIC, N.O.S. or DYE INTERMEDIATE, SOLID, TOXIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3143	DYE, SOLID, TOXIC, N.O.S. or DYE INTERMEDIATE, SOLID, TOXIC, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3144	NICOTINE COMPOUND, LIQUID, N.O.S. or NICOTINE PREPARATION, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3144	NICOTINE COMPOUND, LIQUID, N.O.S. or NICOTINE PREPARATION, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3144	NICOTINE COMPOUND, LIQUID, N.O.S. or NICOTINE PREPARATION, LIQUID, N.O.S.
L10BH		AT	1 (E)				S20	88	3145	ALKYLPHENOLS, LIQUID, N.O.S. (including C ₂ -C ₁₂ homologues)
L4BN		AT	2 (E)					80	3145	ALKYLPHENOLS, LIQUID, N.O.S. (including C ₂ -C ₁₂ homologues)
L4BN		AT	3 (E)	V12				80	3145	ALKYLPHENOLS, LIQUID, N.O.S. (including C ₂ -C ₁₂ homologues)
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3146	ORGANOTIN COMPOUND, SOLID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3146	ORGANOTIN COMPOUND, SOLID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3146	ORGANOTIN COMPOUND, SOLID, N.O.S.
S10AN L10BH		AT	1 (E)	V10			S20	88	3147	DYE, SOLID, CORROSIVE, N.O.S. or DYE INTERMEDIATE, SOLID, CORROSIVE, N.O.S.
SGAN L4BN		AT	2 (E)	V11				80	3147	DYE, SOLID, CORROSIVE, N.O.S. or DYE INTERMEDIATE, SOLID, CORROSIVE, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
3147	DYE, SOLID, CORROSIVE, N.O.S. or DYE INTERMEDIATE, SOLID, CORROSIVE, N.O.S.	8	C10	III	8	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3148	WATER-REACTIVE LIQUID, N.O.S.	4.3	W1	I	4.3	274	0	E0	P402	RR8	MP2	T13	TP2 TP7 TP38
3148	WATER-REACTIVE LIQUID, N.O.S.	4.3	W1	II	4.3	274	500 ml	E2	P402 IBC01	RR8	MP15	T7	TP2 TP7
3148	WATER-REACTIVE LIQUID, N.O.S.	4.3	W1	III	4.3	274	1 L	E1	P001 IBC02 R001		MP15	T7	TP2 TP7
3149	HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURE with acid(s), water and not more than 5% peroxyacetic acid, STABILIZED	5.1	OC1	II	5.1 +8	196 553	1 L	E2	P504 IBC02	PP10 B5	MP15	T7	TP2 TP6 TP24
3150	DEVICES, SMALL, HYDROCARBON GAS POWERED or HYDROCARBON GAS REFILLS FOR SMALL DEVICES with release device	2	6F		2.1		0	E0	P208		MP9		
3151	POLYHALOGENATED BIPHENYLS, LIQUID or POLYHALOGENATED TERPHENYLS, LIQUID	9	M2	II	9	203 305	1 L	E2	P906 IBC02		MP15		
3152	POLYHALOGENATED BIPHENYLS, SOLID or POLYHALOGENATED TERPHENYLS, SOLID	9	M2	II	9	203 305	1 kg	E2	P906 IBC08	B4	MP10	T3	TP33
3153	PERFLUORO(METHYL VINYL ETHER)	2	2F		2.1		0	E0	P200		MP9	(M) T50	
3154	PERFLUORO(ETHYL VINYL ETHER)	2	2F		2.1		0	E0	P200		MP9	(M)	
3155	PENTACHLOROPHENOL	6.1	T2	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3156	COMPRESSED GAS, OXIDIZING, N.O.S.	2	1O		2.2 +5.1	274 655	0	E0	P200		MP9	(M)	
3157	LIQUEFIED GAS, OXIDIZING, N.O.S.	2	2O		2.2 +5.1	274	0	E0	P200		MP9	(M)	
3158	GAS, REFRIGERATED LIQUID, N.O.S.	2	3A		2.2	274 593	120 ml	E1	P203		MP9	T75	TP5
3159	1,1,1,2-TETRAFLUOROETHANE (REFRIGERANT GAS R 134a)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
3160	LIQUEFIED GAS, TOXIC, FLAMMABLE, N.O.S.	2	2TF		2.3 +2.1	274	0	E0	P200		MP9	(M)	
3161	LIQUEFIED GAS, FLAMMABLE, N.O.S.	2	2F		2.1	274	0	E0	P200		MP9	(M) T50	
3162	LIQUEFIED GAS, TOXIC, N.O.S.	2	2T		2.3	274	0	E0	P200		MP9	(M)	
3163	LIQUEFIED GAS, N.O.S.	2	2A		2.2	274	120 ml	E1	P200		MP9	(M) T50	
3164	ARTICLES, PRESSURIZED, PNEUMATIC or HYDRAULIC (containing non-flammable gas)	2	6A		2.2	283 594	120 ml	E0	P003		MP9		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAV L4BN		AT	3 (E)		VV9			80	3147	DYE, SOLID, CORROSIVE, N.O.S. or DYE INTERMEDIATE, SOLID, CORROSIVE, N.O.S.
L10DH	TU14 TE21 TM2	AT	0 (B/E)	V1		CV23	S20	X323	3148	WATER-REACTIVE LIQUID, N.O.S.
L4DH	TU14 TE21 TM2	AT	0 (D/E)	V1		CV23		323	3148	WATER-REACTIVE LIQUID, N.O.S.
L4DH	TU14 TE21 TM2	AT	0 (E)	V1		CV23		323	3148	WATER-REACTIVE LIQUID, N.O.S.
L4BV(+)	TU3 TC2 TE8 TE11 TT1	AT	2 (E)			CV24		58	3149	HYDROGEN PEROXIDE AND PEROXYACETIC ACID MIXTURE with acid(s), water and not more than 5% peroxyacetic acid, STABILIZED
			2 (D)			CV9	S2		3150	DEVICES, SMALL, HYDROCARBON GAS POWERED or HYDROCARBON GAS REFILLS FOR SMALL DEVICES with release device
L4BH	TU15	AT	0 (D/E)		VV15	CV1 CV13 CV28	S19	90	3151	POLYHALOGENATED BIPHENYLS, LIQUID or POLYHALOGENATED TERPHENYLS, LIQUID
S4AH L4BH	TU15	AT	0 (D/E)	V11	VV15	CV1 CV13 CV28	S19	90	3152	POLYHALOGENATED BIPHENYLS, SOLID or POLYHALOGENATED TERPHENYLS, SOLID
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	3153	PERFLUORO(METHYL VINYL ETHER)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	3154	PERFLUORO(ETHYL VINYL ETHER)
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3155	PENTACHLOROPHENOL
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		25	3156	COMPRESSED GAS, OXIDIZING, N.O.S.
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		25	3157	LIQUEFIED GAS, OXIDIZING, N.O.S.
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	3158	GAS, REFRIGERATED LIQUID, N.O.S.
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3159	1,1,1,2-TETRAFLUOROETHANE (REFRIGERANT GAS R 134a)
PxBH(M)	TU6 TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	3160	LIQUEFIED GAS, TOXIC, FLAMMABLE, N.O.S.
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	3161	LIQUEFIED GAS, FLAMMABLE, N.O.S.
PxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	3162	LIQUEFIED GAS, TOXIC, N.O.S.
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3163	LIQUEFIED GAS, N.O.S.
			3 (E)			CV9			3164	ARTICLES, PRESSURIZED, PNEUMATIC or HYDRAULIC (containing non-flammable gas)

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
3165	AIRCRAFT HYDRAULIC POWER UNIT FUEL TANK (containing a mixture of anhydrous hydrazine and methylhydrazine) (M86 fuel)	3	FTC	I	3 +6.1 +8		0	E0	P301		MP7			
3166	Engine, internal combustion or vehicle, flammable gas powered or vehicle, flammable liquid powered or engine, fuel cell, flammable gas powered or engine, fuel cell, flammable liquid powered or vehicle, fuel cell, flammable gas powered or vehicle, fuel cell, flammable liquid powered	9	M11	NOT SUBJECT TO ADR										
3167	GAS SAMPLE, NON-PRESSURIZED, FLAMMABLE, N.O.S., not refrigerated liquid	2	7F		2.1		0	E0	P201		MP9			
3168	GAS SAMPLE, NON-PRESSURIZED, TOXIC, FLAMMABLE, N.O.S., not refrigerated liquid	2	7TF		2.3 +2.1		0	E0	P201		MP9			
3169	GAS SAMPLE, NON-PRESSURIZED, TOXIC, N.O.S., not refrigerated liquid	2	7T		2.3		0	E0	P201		MP9			
3170	ALUMINIUM SMELTING BY-PRODUCTS or ALUMINIUM REMELTING BY-PRODUCTS	4.3	W2	II	4.3	244	500 g	E2	P410 IBC07		MP14	T3 BK1 BK2	TP33	
3170	ALUMINIUM SMELTING BY-PRODUCTS or ALUMINIUM REMELTING BY-PRODUCTS	4.3	W2	III	4.3	244	1 kg	E1	P002 IBC08 R001	B4	MP14	T1 BK1 BK2	TP33	
3171	Battery-powered vehicle or Battery-powered equipment	9	M11	NOT SUBJECT TO ADR, see also special provision 240 in Chapter 3.3.										
3172	TOXINS, EXTRACTED FROM LIVING SOURCES, LIQUID, N.O.S.	6.1	T1	I	6.1	210 274	0	E5	P001		MP8 MP17			
3172	TOXINS, EXTRACTED FROM LIVING SOURCES, LIQUID, N.O.S.	6.1	T1	II	6.1	210 274	100 ml	E4	P001 IBC02		MP15			
3172	TOXINS, EXTRACTED FROM LIVING SOURCES, LIQUID, N.O.S.	6.1	T1	III	6.1	210 274	5 L	E1	P001 IBC03 LP01 R001		MP19			
3174	TITANIUM DISULPHIDE	4.2	S4	III	4.2		0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33	
3175	SOLIDS or mixtures of solids (such as preparations and wastes) CONTAINING FLAMMABLE LIQUID, N.O.S. having a flash-point up to 60 °C	4.1	F1	II	4.1	216 274 601	1 kg	E2	P002 IBC06 R001	PP9	MP11	T3 BK1 BK2	TP33	
3176	FLAMMABLE SOLID, ORGANIC, MOLTEN, N.O.S.	4.1	F2	II	4.1	274	0	E0				T3	TP3 TP26	
3176	FLAMMABLE SOLID, ORGANIC, MOLTEN, N.O.S.	4.1	F2	III	4.1	274	0	E0				T1	TP3 TP26	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (E)			CV13 CV28	S2 S19		3165	AIRCRAFT HYDRAULIC POWER UNIT FUEL TANK (containing a mixture of anhydrous hydrazine and methylhydrazine) (M86 fuel)
NOT SUBJECT TO ADR									3166	Engine, internal combustion or vehicle, flammable gas powered or vehicle, flammable liquid powered or engine, fuel cell, flammable gas powered or engine, fuel cell, flammable liquid powered or vehicle, fuel cell, flammable gas powered or vehicle, fuel cell, flammable liquid powered
			2 (D)			CV9	S2		3167	GAS SAMPLE, NON-PRESSURIZED, FLAMMABLE, N.O.S., not refrigerated liquid
			1 (D)			CV9	S2		3168	GAS SAMPLE, NON-PRESSURIZED, TOXIC, FLAMMABLE, N.O.S., not refrigerated liquid
			1 (D)			CV9			3169	GAS SAMPLE, NON-PRESSURIZED, TOXIC, N.O.S., not refrigerated liquid
SGAN		AT	2 (D/E)	V1	VV3	CV23		423	3170	ALUMINIUM SMELTING BY-PRODUCTS or ALUMINIUM REMELTING BY-PRODUCTS
SGAN		AT	3 (E)	V1	VV1 VV5	CV23		423	3170	ALUMINIUM SMELTING BY-PRODUCTS or ALUMINIUM REMELTING BY-PRODUCTS
NOT SUBJECT TO ADR, see also special provision 240 in Chapter 3.3.									3171	Battery-powered vehicle or Battery-powered equipment
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3172	TOXINS, EXTRACTED FROM LIVING SOURCES, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3172	TOXINS, EXTRACTED FROM LIVING SOURCES, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3172	TOXINS, EXTRACTED FROM LIVING SOURCES, LIQUID, N.O.S.
SGAN		AT	3 (E)	V1				40	3174	TITANIUM DISULPHIDE
		AT	2 (E)	V11	VV3			40	3175	SOLIDS or mixtures of solids (such as preparations and wastes) CONTAINING FLAMMABLE LIQUID, N.O.S. having a flash-point up to 60 °C
LGBV	TU27 TE4 TE6	AT	2 (E)					44	3176	FLAMMABLE SOLID, ORGANIC, MOLTEN, N.O.S.
LGBV	TU27 TE4 TE6	AT	3 (E)					44	3176	FLAMMABLE SOLID, ORGANIC, MOLTEN, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	(11)
3178	FLAMMABLE SOLID, INORGANIC, N.O.S.	4.1	F3	II	4.1	274	1 kg	E2	P002 IBC08	B4	MP11	T3	TP33
3178	FLAMMABLE SOLID, INORGANIC, N.O.S.	4.1	F3	III	4.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33
3179	FLAMMABLE SOLID, TOXIC, INORGANIC, N.O.S.	4.1	FT2	II	4.1 +6.1	274	1 kg	E2	P002 IBC06		MP10	T3	TP33
3179	FLAMMABLE SOLID, TOXIC, INORGANIC, N.O.S.	4.1	FT2	III	4.1 +6.1	274	5 kg	E1	P002 IBC06 R001		MP10	T1	TP33
3180	FLAMMABLE SOLID, CORROSIVE, INORGANIC, N.O.S.	4.1	FC2	II	4.1 +8	274	1 kg	E2	P002 IBC06		MP10	T3	TP33
3180	FLAMMABLE SOLID, CORROSIVE, INORGANIC, N.O.S.	4.1	FC2	III	4.1 +8	274	5 kg	E1	P002 IBC06 R001		MP10	T1	TP33
3181	METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S.	4.1	F3	II	4.1	274	1 kg	E2	P002 IBC08	B4	MP11	T3	TP33
3181	METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S.	4.1	F3	III	4.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33
3182	METAL HYDRIDES, FLAMMABLE, N.O.S.	4.1	F3	II	4.1	274 554	1 kg	E2	P410 IBC04	PP40	MP11	T3	TP33
3182	METAL HYDRIDES, FLAMMABLE, N.O.S.	4.1	F3	III	4.1	274 554	5 kg	E1	P002 IBC04 R001		MP11	T1	TP33
3183	SELF-HEATING LIQUID, ORGANIC, N.O.S.	4.2	S1	II	4.2	274	0	E2	P001 IBC02		MP15		
3183	SELF-HEATING LIQUID, ORGANIC, N.O.S.	4.2	S1	III	4.2	274	0	E1	P001 IBC02 R001		MP15		
3184	SELF-HEATING LIQUID, TOXIC, ORGANIC, N.O.S.	4.2	ST1	II	4.2 +6.1	274	0	E2	P402 IBC02		MP15		
3184	SELF-HEATING LIQUID, TOXIC, ORGANIC, N.O.S.	4.2	ST1	III	4.2 +6.1	274	0	E1	P001 IBC02 R001		MP15		
3185	SELF-HEATING LIQUID, CORROSIVE, ORGANIC, N.O.S.	4.2	SC1	II	4.2 +8	274	0	E2	P402 IBC02		MP15		
3185	SELF-HEATING LIQUID, CORROSIVE, ORGANIC, N.O.S.	4.2	SC1	III	4.2 +8	274	0	E1	P001 IBC02 R001		MP15		
3186	SELF-HEATING LIQUID, INORGANIC, N.O.S.	4.2	S3	II	4.2	274	0	E2	P001 IBC02		MP15		
3186	SELF-HEATING LIQUID, INORGANIC, N.O.S.	4.2	S3	III	4.2	274	0	E1	P001 IBC02 R001		MP15		
3187	SELF-HEATING LIQUID, TOXIC, INORGANIC, N.O.S.	4.2	ST3	II	4.2 +6.1	274	0	E2	P402 IBC02		MP15		
3187	SELF-HEATING LIQUID, TOXIC, INORGANIC, N.O.S.	4.2	ST3	III	4.2 +6.1	274	0	E1	P001 IBC02 R001		MP15		
3188	SELF-HEATING LIQUID, CORROSIVE, INORGANIC, N.O.S.	4.2	SC3	II	4.2 +8	274	0	E2	P402 IBC02		MP15		
3188	SELF-HEATING LIQUID, CORROSIVE, INORGANIC, N.O.S.	4.2	SC3	III	4.2 +8	274	0	E1	P001 IBC02 R001		MP15		
3189	METAL POWDER, SELF-HEATING, N.O.S.	4.2	S4	II	4.2	274 555	0	E2	P410 IBC06		MP14	T3	TP33
3189	METAL POWDER, SELF-HEATING, N.O.S.	4.2	S4	III	4.2	274 555	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
3190	SELF-HEATING SOLID, INORGANIC, N.O.S.	4.2	S4	II	4.2	274	0	E2	P410 IBC06		MP14	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN		AT	2 (E)	V11				40	3178	FLAMMABLE SOLID, INORGANIC, N.O.S.
SGAV		AT	3 (E)		VV1			40	3178	FLAMMABLE SOLID, INORGANIC, N.O.S.
SGAN		AT	2 (E)	V11		CV28		46	3179	FLAMMABLE SOLID, TOXIC, INORGANIC, N.O.S.
SGAN		AT	3 (E)			CV28		46	3179	FLAMMABLE SOLID, TOXIC, INORGANIC, N.O.S.
SGAN		AT	2 (E)	V11				48	3180	FLAMMABLE SOLID, CORROSIVE, INORGANIC, N.O.S.
SGAN		AT	3 (E)					48	3180	FLAMMABLE SOLID, CORROSIVE, INORGANIC, N.O.S.
SGAN		AT	2 (E)	V11				40	3181	METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S.
SGAV		AT	3 (E)		VV1			40	3181	METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S.
SGAN		AT	2 (E)					40	3182	METAL HYDRIDES, FLAMMABLE, N.O.S.
SGAV		AT	3 (E)		VV1			40	3182	METAL HYDRIDES, FLAMMABLE, N.O.S.
L4DH	TU14 TE21	AT	2 (D/E)	V1				30	3183	SELF-HEATING LIQUID, ORGANIC, N.O.S.
L4DH	TU14 TE21	AT	3 (E)	V1				30	3183	SELF-HEATING LIQUID, ORGANIC, N.O.S.
L4DH	TU14 TE21	AT	2 (D/E)	V1		CV28		36	3184	SELF-HEATING LIQUID, TOXIC, ORGANIC, N.O.S.
L4DH	TU14 TE21	AT	3 (E)	V1		CV28		36	3184	SELF-HEATING LIQUID, TOXIC, ORGANIC, N.O.S.
L4DH	TU14 TE21	AT	2 (D/E)	V1				38	3185	SELF-HEATING LIQUID, CORROSIVE, ORGANIC, N.O.S.
L4DH	TU14 TE21	AT	3 (E)	V1				38	3185	SELF-HEATING LIQUID, CORROSIVE, ORGANIC, N.O.S.
L4DH	TU14 TE21	AT	2 (D/E)	V1				30	3186	SELF-HEATING LIQUID, INORGANIC, N.O.S.
L4DH	TU14 TE21	AT	3 (E)	V1				30	3186	SELF-HEATING LIQUID, INORGANIC, N.O.S.
L4DH	TU14 TE21	AT	2 (D/E)	V1		CV28		36	3187	SELF-HEATING LIQUID, TOXIC, INORGANIC, N.O.S.
L4DH	TU14 TE21	AT	3 (E)	V1		CV28		36	3187	SELF-HEATING LIQUID, TOXIC, INORGANIC, N.O.S.
L4DH	TU14 TE21	AT	2 (D/E)	V1				38	3188	SELF-HEATING LIQUID, CORROSIVE, INORGANIC, N.O.S.
L4DH	TU14 TE21	AT	3 (E)	V1				38	3188	SELF-HEATING LIQUID, CORROSIVE, INORGANIC, N.O.S.
SGAN		AT	2 (D/E)	V1				40	3189	METAL POWDER, SELF-HEATING, N.O.S.
SGAN		AT	3 (E)	V1	VV4			40	3189	METAL POWDER, SELF-HEATING, N.O.S.
SGAN		AT	2 (D/E)	V1				40	3190	SELF-HEATING SOLID, INORGANIC, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
3190	SELF-HEATING SOLID, INORGANIC, N.O.S.	4.2	S4	III	4.2	274	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
3191	SELF-HEATING SOLID, TOXIC, INORGANIC, N.O.S.	4.2	ST4	II	4.2 +6.1	274	0	E2	P410 IBC05		MP14	T3	TP33
3191	SELF-HEATING SOLID, TOXIC, INORGANIC, N.O.S.	4.2	ST4	III	4.2 +6.1	274	0	E1	P002 IBC08 R001	B3	MP14	T1	TP33
3192	SELF-HEATING SOLID, CORROSIVE, INORGANIC, N.O.S.	4.2	SC4	II	4.2 +8	274	0	E2	P410 IBC05		MP14	T3	TP33
3192	SELF-HEATING SOLID, CORROSIVE, INORGANIC, N.O.S.	4.2	SC4	III	4.2 +8	274	0	E1	P002 IBC08 R001	B3	MP14	T1	TP33
3194	PYROPHORIC LIQUID, INORGANIC, N.O.S.	4.2	S3	I	4.2	274	0	E0	P400		MP2		
3200	PYROPHORIC SOLID, INORGANIC, N.O.S.	4.2	S4	I	4.2	274	0	E0	P404		MP13	T21	TP7 TP33
3205	ALKALINE EARTH METAL ALCOHOLATES, N.O.S.	4.2	S4	II	4.2	183 274	0	E2	P410 IBC06		MP14	T3	TP33
3205	ALKALINE EARTH METAL ALCOHOLATES, N.O.S.	4.2	S4	III	4.2	183 274	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
3206	ALKALI METAL ALCOHOLATES, SELF-HEATING, CORROSIVE, N.O.S.	4.2	SC4	II	4.2 +8	182 274	0	E2	P410 IBC05		MP14	T3	TP33
3206	ALKALI METAL ALCOHOLATES, SELF-HEATING, CORROSIVE, N.O.S.	4.2	SC4	III	4.2 +8	182 274	0	E1	P002 IBC08 R001	B3	MP14	T1	TP33
3208	METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S.	4.3	W2	I	4.3	274 557	0	E0	P403 IBC99		MP2		
3208	METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S.	4.3	W2	II	4.3	274 557	500 g	E2	P410 IBC07		MP14	T3	TP33
3208	METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S.	4.3	W2	III	4.3	274 557	1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33
3209	METALLIC SUBSTANCE, WATER-REACTIVE, SELF-HEATING, N.O.S.	4.3	WS	I	4.3 +4.2	274 558	0	E0	P403		MP2		
3209	METALLIC SUBSTANCE, WATER-REACTIVE, SELF-HEATING, N.O.S.	4.3	WS	II	4.3 +4.2	274 558	0	E2	P410 IBC05		MP14	T3	TP33
3209	METALLIC SUBSTANCE, WATER-REACTIVE, SELF-HEATING, N.O.S.	4.3	WS	III	4.3 +4.2	274 558	0	E1	P410 IBC08 R001	B4	MP14	T1	TP33
3210	CHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	O1	II	5.1	274 351	1 L	E2	P504 IBC02		MP2	T4	TP1
3210	CHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	O1	III	5.1	274 351	5 L	E1	P504 IBC02 R001		MP2	T4	TP1
3211	PERCHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	O1	II	5.1		1 L	E2	P504 IBC02		MP2	T4	TP1
3211	PERCHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	O1	III	5.1		5 L	E1	P504 IBC02 R001		MP2	T4	TP1
3212	HYPOCHLORITES, INORGANIC, N.O.S.	5.1	O2	II	5.1	274 349	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3213	BROMATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	O1	II	5.1	274 350	1 L	E2	P504 IBC02		MP2	T4	TP1
3213	BROMATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	O1	III	5.1	274 350	5 L	E1	P504 IBC02 R001		MP15	T4	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN		AT	3 (E)	V1	VV4			40	3190	SELF-HEATING SOLID, INORGANIC, N.O.S.
SGAN		AT	2 (D/E)	V1		CV28		46	3191	SELF-HEATING SOLID, TOXIC, INORGANIC, N.O.S.
SGAN		AT	3 (E)	V1		CV28		46	3191	SELF-HEATING SOLID, TOXIC, INORGANIC, N.O.S.
SGAN		AT	2 (D/E)	V1				48	3192	SELF-HEATING SOLID, CORROSIVE, INORGANIC, N.O.S.
SGAN		AT	3 (E)	V1				48	3192	SELF-HEATING SOLID, CORROSIVE, INORGANIC, N.O.S.
L21DH	TU14 TC1 TE21 TM1	AT	0 (B/E)	V1			S20	333	3194	PYROPHORIC LIQUID, INORGANIC, N.O.S.
		AT	0 (B/E)	V1			S20	43	3200	PYROPHORIC SOLID, INORGANIC, N.O.S.
SGAN		AT	2 (D/E)	V1				40	3205	ALKALINE EARTH METAL ALCOHOLATES, N.O.S.
SGAN		AT	3 (E)	V1				40	3205	ALKALINE EARTH METAL ALCOHOLATES, N.O.S.
SGAN		AT	2 (D/E)	V1				48	3206	ALKALI METAL ALCOHOLATES, SELF-HEATING, CORROSIVE, N.O.S.
SGAN		AT	3 (E)	V1				48	3206	ALKALI METAL ALCOHOLATES, SELF-HEATING, CORROSIVE, N.O.S.
			1 (E)	V1		CV23	S20		3208	METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S.
SGAN		AT	2 (D/E)	V1		CV23		423	3208	METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S.
SGAN		AT	3 (E)	V1	VV5	CV23		423	3208	METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S.
			1 (E)	V1		CV23	S20		3209	METALLIC SUBSTANCE, WATER-REACTIVE, SELF-HEATING, N.O.S.
SGAN		AT	2 (D/E)	V1		CV23		423	3209	METALLIC SUBSTANCE, WATER-REACTIVE, SELF-HEATING, N.O.S.
SGAN		AT	3 (E)	V1	VV5	CV23		423	3209	METALLIC SUBSTANCE, WATER-REACTIVE, SELF-HEATING, N.O.S.
L4BN	TU3	AT	2 (E)			CV24		50	3210	CHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
LGBV	TU3	AT	3 (E)			CV24		50	3210	CHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
L4BN	TU3	AT	2 (E)			CV24		50	3211	PERCHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
LGBV	TU3	AT	3 (E)			CV24		50	3211	PERCHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
SGAN	TU3	AT	2 (E)	V11		CV24		50	3212	HYPOCHLORITES, INORGANIC, N.O.S.
L4BN	TU3	AT	2 (E)			CV24		50	3213	BROMATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
LGBV	TU3	AT	3 (E)			CV24		50	3213	BROMATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
3214	PERMANGANATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	O1	II	5.1	274 353	1 L	E2	P504 IBC02		MP2	T4	TP1
3215	PERSULPHATES, INORGANIC, N.O.S.	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3216	PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	O1	III	5.1		5 L	E1	P504 IBC02 R001		MP15	T4	TP1 TP29
3218	NITRATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	O1	II	5.1	270 511	1 L	E2	P504 IBC02		MP15	T4	TP1
3218	NITRATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	O1	III	5.1	270 511	5 L	E1	P504 IBC02 R001		MP15	T4	TP1
3219	NITRITES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	O1	II	5.1	103 274	1 L	E2	P504 IBC01		MP15	T4	TP1
3219	NITRITES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	5.1	O1	III	5.1	103 274	5 L	E1	P504 IBC02 R001		MP15	T4	TP1
3220	PENTAFLUOROETHANE (REFRIGERANT GAS R 125)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
3221	SELF-REACTIVE LIQUID TYPE B	4.1	SR1		4.1 +1	181 194 274	25 ml	E0	P520	PP21	MP2		
3222	SELF-REACTIVE SOLID TYPE B	4.1	SR1		4.1 +1	181 194 274	100 g	E0	P520	PP21	MP2		
3223	SELF-REACTIVE LIQUID TYPE C	4.1	SR1		4.1	194 274	25 ml	E0	P520	PP21	MP2		
3224	SELF-REACTIVE SOLID TYPE C	4.1	SR1		4.1	194 274	100 g	E0	P520	PP21	MP2		
3225	SELF-REACTIVE LIQUID TYPE D	4.1	SR1		4.1	194 274	125 ml	E0	P520		MP2		
3226	SELF-REACTIVE SOLID TYPE D	4.1	SR1		4.1	194 274	500 g	E0	P520		MP2		
3227	SELF-REACTIVE LIQUID TYPE E	4.1	SR1		4.1	194 274	125 ml	E0	P520		MP2		
3228	SELF-REACTIVE SOLID TYPE E	4.1	SR1		4.1	194 274	500 g	E0	P520		MP2		
3229	SELF-REACTIVE LIQUID TYPE F	4.1	SR1		4.1	194 274	125 ml	E0	P520 IBC99		MP2	T23	
3230	SELF-REACTIVE SOLID TYPE F	4.1	SR1		4.1	194 274	500 g	E0	P520 IBC99		MP2	T23	
3231	SELF-REACTIVE LIQUID TYPE B, TEMPERATURE CONTROLLED	4.1	SR2		4.1 +1	181 194 274	0	E0	P520	PP21	MP2		
3232	SELF-REACTIVE SOLID TYPE B, TEMPERATURE CONTROLLED	4.1	SR2		4.1 +1	181 194 274	0	E0	P520	PP21	MP2		
3233	SELF-REACTIVE LIQUID TYPE C, TEMPERATURE CONTROLLED	4.1	SR2		4.1	194 274	0	E0	P520	PP21	MP2		
3234	SELF-REACTIVE SOLID TYPE C, TEMPERATURE CONTROLLED	4.1	SR2		4.1	194 274	0	E0	P520	PP21	MP2		
3235	SELF-REACTIVE LIQUID TYPE D, TEMPERATURE CONTROLLED	4.1	SR2		4.1	194 274	0	E0	P520		MP2		
3236	SELF-REACTIVE SOLID TYPE D, TEMPERATURE CONTROLLED	4.1	SR2		4.1	194 274	0	E0	P520		MP2		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN	TU3	AT	2 (E)			CV24		50	3214	PERMANGANATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
SGAV	TU3	AT	3 (E)		VV8	CV24		50	3215	PERSULPHATES, INORGANIC, N.O.S.
LGBV	TU3	AT	3 (E)			CV24		50	3216	PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
L4BN	TU3	AT	2 (E)			CV24		50	3218	NITRATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
LGBV	TU3	AT	3 (E)			CV24		50	3218	NITRATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
L4BN	TU3	AT	2 (E)			CV24		50	3219	NITRITES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
LGBV	TU3	AT	3 (E)			CV24		50	3219	NITRITES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3220	PENTAFLUROETHANE (REFRIGERANT GAS R 125)
			1 (B)	V1		CV15 CV20 CV22	S9 S17		3221	SELF-REACTIVE LIQUID TYPE B
			1 (B)	V1		CV15 CV20 CV22	S9 S17		3222	SELF-REACTIVE SOLID TYPE B
			1 (D)	V1		CV15 CV20 CV22	S8 S18		3223	SELF-REACTIVE LIQUID TYPE C
			1 (D)	V1		CV15 CV20 CV22	S8 S18		3224	SELF-REACTIVE SOLID TYPE C
			2 (D)	V1		CV15 CV22	S19		3225	SELF-REACTIVE LIQUID TYPE D
			2 (D)	V1		CV15 CV22	S19		3226	SELF-REACTIVE SOLID TYPE D
			2 (D)	V1		CV15 CV22			3227	SELF-REACTIVE LIQUID TYPE E
			2 (D)	V1		CV15 CV22			3228	SELF-REACTIVE SOLID TYPE E
		AT	2 (D)	V1		CV15 CV22		40	3229	SELF-REACTIVE LIQUID TYPE F
		AT	2 (D)	V1		CV15 CV22		40	3230	SELF-REACTIVE SOLID TYPE F
			1 (B)	V8		CV15 CV20 CV21 CV22	S4 S9 S16		3231	SELF-REACTIVE LIQUID TYPE B, TEMPERATURE CONTROLLED
			1 (B)	V8		CV15 CV20 CV21 CV22	S4 S9 S16		3232	SELF-REACTIVE SOLID TYPE B, TEMPERATURE CONTROLLED
			1 (D)	V8		CV15 CV20 CV21 CV22	S4 S8 S17		3233	SELF-REACTIVE LIQUID TYPE C, TEMPERATURE CONTROLLED
			1 (D)	V8		CV15 CV20 CV21 CV22	S4 S8 S17		3234	SELF-REACTIVE SOLID TYPE C, TEMPERATURE CONTROLLED
			1 (D)	V8		CV15 CV21 CV22	S4 S18		3235	SELF-REACTIVE LIQUID TYPE D, TEMPERATURE CONTROLLED
			1 (D)	V8		CV15 CV21 CV22	S4 S18		3236	SELF-REACTIVE SOLID TYPE D, TEMPERATURE CONTROLLED

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
3237	SELF-REACTIVE LIQUID TYPE E, TEMPERATURE CONTROLLED	4.1	SR2		4.1	194 274	0	E0	P520		MP2		
3238	SELF-REACTIVE SOLID TYPE E, TEMPERATURE CONTROLLED	4.1	SR2		4.1	194 274	0	E0	P520		MP2		
3239	SELF-REACTIVE LIQUID TYPE F, TEMPERATURE CONTROLLED	4.1	SR2		4.1	194 274	0	E0	P520		MP2	T23	
3240	SELF-REACTIVE SOLID TYPE F, TEMPERATURE CONTROLLED	4.1	SR2		4.1	194 274	0	E0	P520		MP2	T23	
3241	2-BROMO-2-NITROPROPANE-1,3-DIOL	4.1	SR1	III	4.1	638	5 kg	E1	P520 IBC08	PP22 B3	MP2		
3242	AZODICARBONAMIDE	4.1	SR1	II	4.1	215 638	1 kg	E2	P409		MP2	T3	TP33
3243	SOLIDS CONTAINING TOXIC LIQUID, N.O.S.	6.1	T9	II	6.1	217 274 601	500 g	E4	P002 IBC02	PP9	MP10	T3 BK1 BK2	TP33
3244	SOLIDS CONTAINING CORROSIVE LIQUID, N.O.S.	8	C10	II	8	218 274	1 kg	E2	P002 IBC05	PP9	MP10	T3 BK1 BK2	TP33
3245	GENETICALLY MODIFIED MICROORGANISMS or GENETICALLY MODIFIED ORGANISMS	9	M8		9	219 637	0	E0	P904 IBC08		MP6		
3245	GENETICALLY MODIFIED MICROORGANISMS or GENETICALLY MODIFIED ORGANISMS, in refrigerated liquid nitrogen	9	M8		9 +2.2	219 637	0	E0	P904 IBC08		MP6		
3246	METHANESULPHONYL CHLORIDE	6.1	TC1	I	6.1 +8	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
3247	SODIUM PEROXOBORATE, ANHYDROUS	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
3248	MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S.	3	FT1	II	3 +6.1	220 221 601	1 L	E2	P001		MP19		
3248	MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S.	3	FT1	III	3 +6.1	220 221 601	5 L	E1	P001 R001		MP19		
3249	MEDICINE, SOLID, TOXIC, N.O.S.	6.1	T2	II	6.1	221 601	500 g	E4	P002		MP10	T3	TP33
3249	MEDICINE, SOLID, TOXIC, N.O.S.	6.1	T2	III	6.1	221 601	5 kg	E1	P002 LP02 R001		MP10	T1	TP33
3250	CHLOROACETIC ACID, MOLTEN	6.1	TC1	II	6.1 +8		0	E0				T7	TP3 TP28
3251	ISOSORBIDE-5-MONONITRATE	4.1	SR1	III	4.1	226 638	5 kg	E1	P409		MP2		
3252	DIFLUOROMETHANE (REFRIGERANT GAS R 32)	2	2F		2.1		0	E0	P200		MP9	(M) T50	
3253	DISODIUM TRIOXOSILICATE	8	C6	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3254	TRIBUTYLPHOSPHANE	4.2	S1	I	4.2		0	E0	P400		MP2	T21	TP2 TP7
3255	tert-BUTYL HYPOCHLORITE	4.2	SC1	CARRIAGE PROHIBITED									
3256	ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S. with flashpoint above 60 °C, at or above its flashpoint and below 100 °C	3	F2	III	3	274 560	0	E0	P099 IBC99		MP2	T3	TP3 TP29

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (D)	V8		CV15 CV21 CV22	S4 S19		3237	SELF-REACTIVE LIQUID TYPE E, TEMPERATURE CONTROLLED
			1 (D)	V8		CV15 CV21 CV22	S4 S19		3238	SELF-REACTIVE SOLID TYPE E, TEMPERATURE CONTROLLED
		AT	1 (D)	V8		CV15 CV21 CV22	S4	40	3239	SELF-REACTIVE LIQUID TYPE F, TEMPERATURE CONTROLLED
		AT	1 (D)	V8		CV15 CV21 CV22	S4	40	3240	SELF-REACTIVE SOLID TYPE F, TEMPERATURE CONTROLLED
			3 (D)			CV14	S24		3241	2-BROMO-2-NITROPROPANE-1,3-DIOL
		AT	2 (D)			CV14	S24	40	3242	AZODICARBONAMIDE
SGAH	TU15 TE19	AT	2 (D/E)		VV10	CV13 CV28	S9 S19	60	3243	SOLIDS CONTAINING TOXIC LIQUID, N.O.S.
SGAV		AT	2 (E)		VV10			80	3244	SOLIDS CONTAINING CORROSIVE LIQUID, N.O.S.
			2 (E)			CV1 CV13 CV26 CV27 CV28	S17		3245	GENETICALLY MODIFIED MICROORGANISMS or GENETICALLY MODIFIED ORGANISMS
			2 (E)			CV1 CV13 CV26 CV27 CV28	S17		3245	GENETICALLY MODIFIED MICROORGANISMS or GENETICALLY MODIFIED ORGANISMS, in refrigerated liquid nitrogen
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	668	3246	METHANESULPHONYL CHLORIDE
SGAN	TU3	AT	2 (E)	V11		CV24		50	3247	SODIUM PEROXOBORATE, ANHYDROUS
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	3248	MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S.
L4BH	TU15	FL	3 (D/E)			CV13 CV28	S2	36	3248	MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3249	MEDICINE, SOLID, TOXIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3249	MEDICINE, SOLID, TOXIC, N.O.S.
L4BH	TU15 TC4 TE19	AT	0 (D/E)			CV13	S9 S19	68	3250	CHLOROACETIC ACID, MOLTEN
			3 (D)			CV14	S24		3251	ISOSORBIDE-5-MONONITRATE
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	3252	DIFLUOROMETHANE (REFRIGERANT GAS R 32)
SGAV		AT	3 (E)		VV9			80	3253	DISODIUM TRIOXOSILICATE
		AT	0 (B/E)	V1			S20	333	3254	TRIBUTYLPHOSPHANE
CARRIAGE PROHIBITED									3255	tert-BUTYL HYPOCHLORITE
LGAV	TU35 TE24	FL	3 (D/E)				S2	30	3256	ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S. with flashpoint above 60 °C, at or above its flashpoint and below 100 °C

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
3256	ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S. with flashpoint above 60 °C, at or above its flashpoint and at or above 100 °C	3	F2	III	3	274 560 580	0	E0	P099 IBC99		MP2	T3	TP3 TP29
3257	ELEVATED TEMPERATURE LIQUID, N.O.S., at or above 100 °C and below its flashpoint (including molten metals, molten salts, etc.), filled at a temperature higher than 190 °C	9	M9	III	9	274 580 643	0	E0	P099 IBC99			T3	TP3 TP29
3257	ELEVATED TEMPERATURE LIQUID, N.O.S., at or above 100 °C and below its flashpoint (including molten metals, molten salts, etc.), filled at or below 190 °C	9	M9	III	9	274 580 643	0	E0	P099 IBC99			T3	TP3 TP29
3258	ELEVATED TEMPERATURE SOLID, N.O.S., at or above 240 °C	9	M10	III	9	274 580 643	0	E0	P099 IBC99				
3259	AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S.	8	C8	I	8	274	0	E0	P002 IBC07		MP18	T6	TP33
3259	AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S.	8	C8	II	8	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3259	AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S.	8	C8	III	8	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3260	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.	8	C2	I	8	274	0	E0	P002 IBC07		MP18	T6	TP33
3260	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.	8	C2	II	8	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3260	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.	8	C2	III	8	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3261	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.	8	C4	I	8	274	0	E0	P002 IBC07		MP18	T6	TP33
3261	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.	8	C4	II	8	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3261	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.	8	C4	III	8	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3262	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.	8	C6	I	8	274	0	E0	P002 IBC07		MP18	T6	TP33
3262	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.	8	C6	II	8	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3262	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.	8	C6	III	8	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3263	CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.	8	C8	I	8	274	0	E0	P002 IBC07		MP18	T6	TP33
3263	CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.	8	C8	II	8	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3263	CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.	8	C8	III	8	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGAV	TU35 TE24	FL	3 (D/E)				S2	30	3256	ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S. with flashpoint above 60 °C, at or above its flashpoint and at or above 100 °C
LGAV	TU35 TC7 TE6 TE14 TE18 TE24	AT	3 (D)		VV12			99	3257	ELEVATED TEMPERATURE LIQUID, N.O.S., at or above 100 °C and below its flashpoint (including molten metals, molten salts, etc.), filled at a temperature higher than 190 °C
LGAV	TU35 TC7 TE6 TE14 TE24	AT	3 (D)		VV12			99	3257	ELEVATED TEMPERATURE LIQUID, N.O.S., at or above 100 °C and below its flashpoint (including molten metals, molten salts, etc.), filled at or below 190 °C
			3 (D)		VV13			99	3258	ELEVATED TEMPERATURE SOLID, N.O.S., at or above 240 °C
S10AN L10BH		AT	1 (E)	V10			S20	88	3259	AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S.
SGAN L4BN		AT	2 (E)	V11				80	3259	AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S.
SGAV L4BN		AT	3 (E)		VV9			80	3259	AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S.
S10AN		AT	1 (E)	V10			S20	88	3260	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
SGAN		AT	2 (E)	V11				80	3260	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
SGAV		AT	3 (E)		VV9			80	3260	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
S10AN L10BH		AT	1 (E)	V10			S20	88	3261	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
SGAN L4BN		AT	2 (E)	V11				80	3261	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
SGAV L4BN		AT	3 (E)		VV9			80	3261	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.
S10AN L10BH		AT	1 (E)	V10			S20	88	3262	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
SGAN L4BN		AT	2 (E)	V11				80	3262	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
SGAV L4BN		AT	3 (E)		VV9			80	3262	CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.
S10AN L10BH		AT	1 (E)	V10			S20	88	3263	CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.
SGAN L4BN		AT	2 (E)	V11				80	3263	CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.
SGAV L4BN		AT	3 (E)		VV9			80	3263	CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
3264	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.	8	C1	I	8	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
3264	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.	8	C1	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
3264	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.	8	C1	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3265	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.	8	C3	I	8	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
3265	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.	8	C3	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
3265	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.	8	C3	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3266	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.	8	C5	I	8	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
3266	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.	8	C5	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
3266	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.	8	C5	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3267	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.	8	C7	I	8	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
3267	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.	8	C7	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
3267	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.	8	C7	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3268	AIR BAG INFLATORS or AIR BAG MODULES or SEAT-BELT PRETENSIONERS	9	M5	III	9	280 289	0	E0	P902 LP902				
3269	POLYESTER RESIN KIT	3	F3	II	3	236 340	5 L	E0	P302 R001				
3269	POLYESTER RESIN KIT	3	F3	III	3	236 340	5 L	E0	P302 R001				
3270	NITROCELLULOSE MEMBRANE FILTERS, with not more than 12.6% nitrogen, by dry mass	4.1	F1	II	4.1	237 286	1 kg	E2	P411		MP11		
3271	ETHERS, N.O.S.	3	F1	II	3	274	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28
3271	ETHERS, N.O.S.	3	F1	III	3	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
3272	ESTERS, N.O.S.	3	F1	II	3	274 601	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28
3272	ESTERS, N.O.S.	3	F1	III	3	274 601	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
3273	NITRILES, FLAMMABLE, TOXIC, N.O.S.	3	FT1	I	3 +6.1	274	0	E0	P001		MP7 MP17	T14	TP2 TP27
3273	NITRILES, FLAMMABLE, TOXIC, N.O.S.	3	FT1	II	3 +6.1	274	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27
3274	ALCOHOLATES SOLUTION, N.O.S., in alcohol	3	FC	II	3 +8	274	1 L	E2	P001 IBC02		MP19		
3275	NITRILES, TOXIC, FLAMMABLE, N.O.S.	6.1	TF1	I	6.1 +3	274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10BH		AT	1 (E)				S20	88	3264	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
L4BN		AT	2 (E)					80	3264	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
L4BN		AT	3 (E)	V12				80	3264	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
L10BH		AT	1 (E)				S20	88	3265	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
L4BN		AT	2 (E)					80	3265	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
L4BN		AT	3 (E)	V12				80	3265	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
L10BH		AT	1 (E)				S20	88	3266	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
L4BN		AT	2 (E)					80	3266	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
L4BN		AT	3 (E)	V12				80	3266	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.
L10BH		AT	1 (E)				S20	88	3267	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
L4BN		AT	2 (E)					80	3267	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
L4BN		AT	3 (E)	V12				80	3267	CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.
			4 (E)						3268	AIR BAG INFLATORS or AIR BAG MODULES or SEAT-BELT PRETENSIONERS
			2 (E)				S2 S20		3269	POLYESTER RESIN KIT
			3 (E)				S2		3269	POLYESTER RESIN KIT
			2 (E)						3270	NITROCELLULOSE MEMBRANE FILTERS, with not more than 12.6% nitrogen, by dry mass
LGBF		FL	2 (D/E)				S2 S20	33	3271	ETHERS, N.O.S.
LGBF		FL	3 (D/E)	V12			S2	30	3271	ETHERS, N.O.S.
LGBF		FL	2 (D/E)				S2 S20	33	3272	ESTERS, N.O.S.
LGBF		FL	3 (D/E)	V12			S2	30	3272	ESTERS, N.O.S.
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	3273	NITRILES, FLAMMABLE, TOXIC, N.O.S.
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	3273	NITRILES, FLAMMABLE, TOXIC, N.O.S.
L4BH		FL	2 (D/E)				S2 S20	338	3274	ALCOHOLATES SOLUTION, N.O.S., in alcohol
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3275	NITRILES, TOXIC, FLAMMABLE, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	(11)
3275	NITRILES, TOXIC, FLAMMABLE, N.O.S.	6.1	TF1	II	6.1 +3	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3276	NITRILES, LIQUID, TOXIC, N.O.S.	6.1	T1	I	6.1	274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27
3276	NITRILES, LIQUID, TOXIC, N.O.S.	6.1	T1	II	6.1	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3276	NITRILES, LIQUID, TOXIC, N.O.S.	6.1	T1	III	6.1	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3277	CHLOROFORMATES, TOXIC, CORROSIVE, N.O.S.	6.1	TC1	II	6.1 +8	274 561	100 ml	E4	P001 IBC02		MP15	T8	TP2 TP28
3278	ORGANOPHOSPHORUS COMPOUND, LIQUID, TOXIC, N.O.S.	6.1	T1	I	6.1	43 274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27
3278	ORGANOPHOSPHORUS COMPOUND, LIQUID, TOXIC, N.O.S.	6.1	T1	II	6.1	43 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3278	ORGANOPHOSPHORUS COMPOUND, LIQUID, TOXIC, N.O.S.	6.1	T1	III	6.1	43 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3279	ORGANOPHOSPHORUS COMPOUND, TOXIC, FLAMMABLE, N.O.S.	6.1	TF1	I	6.1 +3	43 274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27
3279	ORGANOPHOSPHORUS COMPOUND, TOXIC, FLAMMABLE, N.O.S.	6.1	TF1	II	6.1 +3	43 274	100 ml	E4	P001		MP15	T11	TP2 TP27
3280	ORGANOARSENIC COMPOUND, LIQUID, N.O.S.	6.1	T3	I	6.1	274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27
3280	ORGANOARSENIC COMPOUND, LIQUID, N.O.S.	6.1	T3	II	6.1	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3280	ORGANOARSENIC COMPOUND, LIQUID, N.O.S.	6.1	T3	III	6.1	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3281	METAL CARBONYLS, LIQUID, N.O.S.	6.1	T3	I	6.1	274 315 562	0	E5	P601		MP8 MP17	T14	TP2 TP27
3281	METAL CARBONYLS, LIQUID, N.O.S.	6.1	T3	II	6.1	274 562	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3281	METAL CARBONYLS, LIQUID, N.O.S.	6.1	T3	III	6.1	274 562	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3282	ORGANOMETALLIC COMPOUND, LIQUID, TOXIC, N.O.S.	6.1	T3	I	6.1	274 562	0	E5	P001		MP8 MP17	T14	TP2 TP27
3282	ORGANOMETALLIC COMPOUND, LIQUID, TOXIC, N.O.S.	6.1	T3	II	6.1	274 562	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3282	ORGANOMETALLIC COMPOUND, LIQUID, TOXIC, N.O.S.	6.1	T3	III	6.1	274 562	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3283	SELENIUM COMPOUND, SOLID, N.O.S.	6.1	T5	I	6.1	274 563	0	E5	P002 IBC07		MP18	T6	TP33
3283	SELENIUM COMPOUND, SOLID, N.O.S.	6.1	T5	II	6.1	274 563	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3283	SELENIUM COMPOUND, SOLID, N.O.S.	6.1	T5	III	6.1	274 563	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3284	TELLURIUM COMPOUND, N.O.S.	6.1	T5	I	6.1	274	0	E5	P002 IBC07		MP18	T6	TP33
3284	TELLURIUM COMPOUND, N.O.S.	6.1	T5	II	6.1	274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3275	NITRILES, TOXIC, FLAMMABLE, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3276	NITRILES, LIQUID, TOXIC, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3276	NITRILES, TOXIC, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3276	NITRILES, TOXIC, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	3277	CHLOROFORMATES, TOXIC, CORROSIVE, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3278	ORGANOPHOSPHORUS COMPOUND, LIQUID, TOXIC, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3278	ORGANOPHOSPHORUS COMPOUND, LIQUID, TOXIC, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3278	ORGANOPHOSPHORUS COMPOUND, LIQUID, TOXIC, N.O.S.
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3279	ORGANOPHOSPHORUS COMPOUND, TOXIC, FLAMMABLE, N.O.S.
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3279	ORGANOPHOSPHORUS COMPOUND, TOXIC, FLAMMABLE, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3280	ORGANOARSENIC COMPOUND, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3280	ORGANOARSENIC COMPOUND, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3280	ORGANOARSENIC COMPOUND, LIQUID, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3281	METAL CARBONYLS, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3281	METAL CARBONYLS, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3281	METAL CARBONYLS, LIQUID, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3282	ORGANOMETALLIC COMPOUND, LIQUID, TOXIC, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3282	ORGANOMETALLIC COMPOUND, LIQUID, TOXIC, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3282	ORGANOMETALLIC COMPOUND, LIQUID, TOXIC, N.O.S.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3283	SELENIUM COMPOUND, SOLID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3283	SELENIUM COMPOUND, SOLID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3283	SELENIUM COMPOUND, SOLID, N.O.S.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3284	TELLURIUM COMPOUND, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3284	TELLURIUM COMPOUND, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
3284	TELLURIUM COMPOUND, N.O.S.	6.1	T5	III	6.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3285	VANADIUM COMPOUND, N.O.S.	6.1	T5	I	6.1	274 564	0	E5	P002 IBC07		MP18	T6	TP33
3285	VANADIUM COMPOUND, N.O.S.	6.1	T5	II	6.1	274 564	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3285	VANADIUM COMPOUND, N.O.S.	6.1	T5	III	6.1	274 564	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3286	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.	3	FTC	I	3 +6.1 +8	274	0	E0	P001		MP7 MP17	T14	TP2 TP27
3286	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.	3	FTC	II	3 +6.1 +8	274	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27
3287	TOXIC LIQUID, INORGANIC, N.O.S.	6.1	T4	I	6.1	274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27
3287	TOXIC LIQUID, INORGANIC, N.O.S.	6.1	T4	II	6.1	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3287	TOXIC LIQUID, INORGANIC, N.O.S.	6.1	T4	III	6.1	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3288	TOXIC SOLID, INORGANIC, N.O.S.	6.1	T5	I	6.1	274	0	E5	P002 IBC07		MP18	T6	TP33
3288	TOXIC SOLID, INORGANIC, N.O.S.	6.1	T5	II	6.1	274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3288	TOXIC SOLID, INORGANIC, N.O.S.	6.1	T5	III	6.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3289	TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S.	6.1	TC3	I	6.1 +8	274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27
3289	TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S.	6.1	TC3	II	6.1 +8	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3290	TOXIC SOLID, CORROSIVE, INORGANIC, N.O.S.	6.1	TC4	I	6.1 +8	274	0	E5	P002 IBC05		MP18	T6	TP33
3290	TOXIC SOLID, CORROSIVE, INORGANIC, N.O.S.	6.1	TC4	II	6.1 +8	274	500 g	E4	P002 IBC06		MP10	T3	TP33
3291	CLINICAL WASTE, UNSPECIFIED, N.O.S. or (BIO) MEDICAL WASTE, N.O.S. or REGULATED MEDICAL WASTE, N.O.S.	6.2	I3	II	6.2	565	0	E0	P621 IBC620 LP621		MP6	BK2	
3291	CLINICAL WASTE, UNSPECIFIED, N.O.S. or (BIO) MEDICAL WASTE, N.O.S. or REGULATED MEDICAL WASTE, N.O.S., in refrigerated liquid nitrogen	6.2	I3	II	6.2 +2.2	565	0	E0	P621 IBC620 LP621		MP6		
3292	BATTERIES, CONTAINING SODIUM, or CELLS, CONTAINING SODIUM	4.3	W3	II	4.3	239 295	0	E0	P408				
3293	HYDRAZINE, AQUEOUS SOLUTION with not more than 37% hydrazine, by mass	6.1	T4	III	6.1	566	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3294	HYDROGEN CYANIDE, SOLUTION IN ALCOHOL with not more than 45% hydrogen cyanide	6.1	TF1	I	6.1 +3	610	0	E5	P601		MP8 MP17	T14	TP2

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3284	TELLURIUM COMPOUND, N.O.S.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3285	VANADIUM COMPOUND, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3285	VANADIUM COMPOUND, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3285	VANADIUM COMPOUND, N.O.S.
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	368	3286	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	368	3286	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3287	TOXIC LIQUID, INORGANIC, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3287	TOXIC LIQUID, INORGANIC, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3287	TOXIC LIQUID, INORGANIC, N.O.S.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3288	TOXIC SOLID, INORGANIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3288	TOXIC SOLID, INORGANIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3288	TOXIC SOLID, INORGANIC, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	668	3289	TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	3289	TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S.
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	668	3290	TOXIC SOLID, CORROSIVE, INORGANIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	68	3290	TOXIC SOLID, CORROSIVE, INORGANIC, N.O.S.
S4AH L4BH	TU15 TE19	AT	2 (-)	V1	VV11	CV13 CV25 CV28	S3	606	3291	CLINICAL WASTE, UNSPECIFIED, N.O.S. or (BIO) MEDICAL WASTE, N.O.S. or REGULATED MEDICAL WASTE, N.O.S.
			2 (-)	V1		CV13 CV25 CV28	S3		3291	CLINICAL WASTE, UNSPECIFIED, N.O.S. or (BIO) MEDICAL WASTE, N.O.S. or REGULATED MEDICAL WASTE, N.O.S., in refrigerated liquid nitrogen
			2 (E)	V1		CV23			3292	BATTERIES, CONTAINING SODIUM, or CELLS, CONTAINING SODIUM
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3293	HYDRAZINE, AQUEOUS SOLUTION with not more than 37% hydrazine, by mass
L15DH(+)	TU14 TU15 TE19 TE21	FL	0 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3294	HYDROGEN CYANIDE, SOLUTION IN ALCOHOL with not more than 45% hydrogen cyanide

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
3295	HYDROCARBONS, LIQUID, N.O.S.	3	F1	I	3		500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP28
3295	HYDROCARBONS, LIQUID, N.O.S. (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28
3295	HYDROCARBONS, LIQUID, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28
3295	HYDROCARBONS, LIQUID, N.O.S.	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
3296	HEPTAFLUOROPROPANE (REFRIGERANT GAS R 227)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
3297	ETHYLENE OXIDE AND CHLOROTETRAFLUOROETHANE MIXTURE with not more than 8.8% ethylene oxide	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
3298	ETHYLENE OXIDE AND PENTAFLUROETHANE MIXTURE with not more than 7.9% ethylene oxide	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
3299	ETHYLENE OXIDE AND TETRAFLUROETHANE MIXTURE with not more than 5.6% ethylene oxide	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
3300	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with more than 87% ethylene oxide	2	2TF		2.3 +2.1		0	E0	P200		MP9	(M)	
3301	CORROSIVE LIQUID, SELF-HEATING, N.O.S.	8	CS1	I	8 +4.2	274	0	E0	P001		MP8 MP17		
3301	CORROSIVE LIQUID, SELF-HEATING, N.O.S.	8	CS1	II	8 +4.2	274	0	E2	P001		MP15		
3302	2-DIMETHYLAMINOETHYL ACRYLATE	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
3303	COMPRESSED GAS, TOXIC, OXIDIZING, N.O.S.	2	1TO		2.3 +5.1	274	0	E0	P200		MP9	(M)	
3304	COMPRESSED GAS, TOXIC, CORROSIVE, N.O.S.	2	1TC		2.3 +8	274	0	E0	P200		MP9	(M)	
3305	COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	2	1TFC		2.3 +2.1 +8	274	0	E0	P200		MP9	(M)	
3306	COMPRESSED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	2	1TOC		2.3 +5.1 +8	274	0	E0	P200		MP9	(M)	
3307	LIQUEFIED GAS, TOXIC, OXIDIZING, N.O.S.	2	2TO		2.3 +5.1	274	0	E0	P200		MP9	(M)	
3308	LIQUEFIED GAS, TOXIC, CORROSIVE, N.O.S.	2	2TC		2.3 +8	274	0	E0	P200		MP9	(M)	
3309	LIQUEFIED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	2	2TFC		2.3 +2.1 +8	274	0	E0	P200		MP9	(M)	
3310	LIQUEFIED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	2	2TOC		2.3 +5.1 +8	274	0	E0	P200		MP9	(M)	
3311	GAS, REFRIGERATED LIQUID, OXIDIZING, N.O.S.	2	3O		2.2 +5.1	274	0	E0	P203		MP9	T75	TP5 TP22
3312	GAS, REFRIGERATED LIQUID, FLAMMABLE, N.O.S.	2	3F		2.1	274	0	E0	P203		MP9	T75	TP5

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		FL	1 (D/E)				S2 S20	33	3295	HYDROCARBONS, LIQUID, N.O.S.
L1.5BN		FL	2 (D/E)				S2 S20	33	3295	HYDROCARBONS, LIQUID, N.O.S. (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	3295	HYDROCARBONS, LIQUID, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	3295	HYDROCARBONS, LIQUID, N.O.S.
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3296	HEPTAFLUOROPROPANE (REFRIGERANT GAS R 227)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3297	ETHYLENE OXIDE AND CHLOROTETRAFLUOROETHANE MIXTURE with not more than 8.8% ethylene oxide
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3298	ETHYLENE OXIDE AND PENTAFLUROETHANE MIXTURE with not more than 7.9% ethylene oxide
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3299	ETHYLENE OXIDE AND TETRAFLUROETHANE MIXTURE with not more than 5.6% ethylene oxide
PxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	3300	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with more than 87% ethylene oxide
L10BH		AT	1 (E)				S14	884	3301	CORROSIVE LIQUID, SELF-HEATING, N.O.S.
L4BN		AT	2 (E)					84	3301	CORROSIVE LIQUID, SELF-HEATING, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3302	2-DIMETHYLAMINOETHYL ACRYLATE
CxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	3303	COMPRESSED GAS, TOXIC, OXIDIZING, N.O.S.
CxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	3304	COMPRESSED GAS, TOXIC, CORROSIVE, N.O.S.
CxBH(M)	TU6 TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	3305	COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.
CxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	3306	COMPRESSED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.
PxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	3307	LIQUEFIED GAS, TOXIC, OXIDIZING, N.O.S.
PxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	3308	LIQUEFIED GAS, TOXIC, CORROSIVE, N.O.S.
PxBH(M)	TU6 TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	3309	LIQUEFIED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.
PxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	3310	LIQUEFIED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.
RxBN	TU7 TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	225	3311	GAS, REFRIGERATED LIQUID, OXIDIZING, N.O.S.
RxBN	TU18 TA4 TT9	FL	2 (B/D)	V5		CV9 CV11 CV36	S2 S17	223	3312	GAS, REFRIGERATED LIQUID, FLAMMABLE, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
3313	ORGANIC PIGMENTS, SELF-HEATING	4.2	S2	II	4.2		0	E2	P002 IBC08	B4	MP14	T3	TP33
3313	ORGANIC PIGMENTS, SELF-HEATING	4.2	S2	III	4.2		0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
3314	PLASTICS MOULDING COMPOUND in dough, sheet or extruded rope form evolving flammable vapour	9	M3	III	None	207 633	5 kg	E1	P002 IBC08 R001	PP14 B3 B6	MP10		
3315	CHEMICAL SAMPLE, TOXIC	6.1	T8	I	6.1	250	0	E5	P099		MP8 MP17		
3316	CHEMICAL KIT or FIRST AID KIT	9	M11	II	9	251 340	0	E0	P901				
3316	CHEMICAL KIT or FIRST AID KIT	9	M11	III	9	251 340	0	E0	P901				
3317	2-AMINO-4,6-DINITROPHENOL, WETTED with not less than 20% water, by mass	4.1	D	I	4.1		0	E0	P406	PP26	MP2		
3318	AMMONIA SOLUTION, relative density less than 0.880 at 15 °C in water, with more than 50% ammonia	2	4TC		2.3 +8	23	0	E0	P200		MP9	(M) T50	
3319	NITROGLYCERIN MIXTURE, DESENSITIZED, SOLID, N.O.S. with more than 2% but not more than 10% nitroglycerin, by mass	4.1	D	II	4.1	272 274	0	E0	P099 IBC99		MP2		
3320	SODIUM BOROHYDRIDE AND SODIUM HYDROXIDE SOLUTION, with not more than 12% sodium borohydride and not more than 40% sodium hydroxide by mass	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
3320	SODIUM BOROHYDRIDE AND SODIUM HYDROXIDE SOLUTION, with not more than 12% sodium borohydride and not more than 40% sodium hydroxide by mass	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2
3321	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II), non fissile or fissile-excepted	7			7X	172 317 325 336	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3		T5	TP4
3322	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-III), non fissile or fissile-excepted	7			7X	172 317 325 336	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3		T5	TP4
3323	RADIOACTIVE MATERIAL, TYPE C PACKAGE, non fissile or fissile-excepted	7			7X	172 317 325	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3			
3324	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II), FISSILE	7			7X +7E	172 326 336	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3			
3325	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, (LSA-III), FISSILE	7			7X +7E	172 326 336	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3			
3326	RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I or SCO-II), FISSILE	7			7X +7E	172 336	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3			

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAV		AT	2 (D/E)	V1				40	3313	ORGANIC PIGMENTS, SELF-HEATING
SGAV		AT	3 (E)	V1				40	3313	ORGANIC PIGMENTS, SELF-HEATING
			3 (D/E)		VV3			90	3314	PLASTICS MOULDING COMPOUND in dough, sheet or extruded rope form evolving flammable vapour
			1 (C/E)			CV1 CV13 CV28	S9 S14		3315	CHEMICAL SAMPLE, TOXIC
			2 (E)						3316	CHEMICAL KIT or FIRST AID KIT
			3 (E)						3316	CHEMICAL KIT or FIRST AID KIT
			1 (B)				S14		3317	2-AMINO-4,6-DINITROPHENOL, WETTED with not less than 20% water, by mass
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10	S14	268	3318	AMMONIA SOLUTION, relative density less than 0.880 at 15 °C in water, with more than 50% ammonia
			2 (B)				S14		3319	NITROGLYCERIN MIXTURE, DESENSITIZED, SOLID, N.O.S. with more than 2% but not more than 10% nitroglycerin, by mass
L4BN		AT	2 (E)					80	3320	SODIUM BOROHYDRIDE AND SODIUM HYDROXIDE SOLUTION, with not more than 12% sodium borohydride and not more than 40% sodium hydroxide by mass
L4BN		AT	3 (E)	V12				80	3320	SODIUM BOROHYDRIDE AND SODIUM HYDROXIDE SOLUTION, with not more than 12% sodium borohydride and not more than 40% sodium hydroxide by mass
S2.65AN(+) L2.65CN(+)	TU36 TT7 TM7	AT	0 (E)			CV33	S6 S11 S13 S21	70	3321	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II), non fissile or fissile-excepted
S2.65AN(+) L2.65CN(+)	TU36 TT7 TM7	AT	0 (E)			CV33	S6 S11 S13 S21	70	3322	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-III), non fissile or fissile-excepted
			0 (E)			CV33	S6 S11 S13 S21	70	3323	RADIOACTIVE MATERIAL, TYPE C PACKAGE, non fissile or fissile-excepted
			0 (E)			CV33	S6 S11 S13 S21	70	3324	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II), FISSILE
			0 (E)			CV33	S6 S11 S13 S21	70	3325	RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, (LSA-III), FISSILE
			0 (E)			CV33	S6 S11 S13 S21	70	3326	RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I or SCO-II), FISSILE

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
3327	RADIOACTIVE MATERIAL, TYPE A PACKAGE, FISSILE, non-special form	7			7X +7E	172 326	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3				
3328	RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, FISSILE	7			7X +7E	172 326 337	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3				
3329	RADIOACTIVE MATERIAL, TYPE B(M) PACKAGE, FISSILE	7			7X +7E	172 326 337	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3				
3330	RADIOACTIVE MATERIAL, TYPE C PACKAGE, FISSILE	7			7X +7E	172 326	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3				
3331	RADIOACTIVE MATERIAL, TRANSPORTED UNDER SPECIAL ARRANGEMENT, FISSILE	7			7X +7E	172 326	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3				
3332	RADIOACTIVE MATERIAL, TYPE A PACKAGE, SPECIAL FORM, non fissile or fissile-excepted	7			7X +7E	172 317	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3				
3333	RADIOACTIVE MATERIAL, TYPE A PACKAGE, SPECIAL FORM, FISSILE	7			7X +7E	172	0	E0	See 2.2.7 and 4.1.9	See 4.1.9.1.3				
3334	Aviation regulated liquid, n.o.s.	9	M11	NOT SUBJECT TO ADR										
3335	Aviation regulated solid, n.o.s.	9	M11	NOT SUBJECT TO ADR										
3336	MERCAPTANS, LIQUID, FLAMMABLE, N.O.S. or MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S.	3	F1	I	3	274	0	E3	P001		MP7 MP17	T11	TP2	
3336	MERCAPTANS, LIQUID, FLAMMABLE, N.O.S. or MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S. (vapour pressure at 50 °C more than 110 kPa)	3	F1	II	3	274 640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28	
3336	MERCAPTANS, LIQUID, FLAMMABLE, N.O.S. or MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)	3	F1	II	3	274 640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28	
3336	MERCAPTANS, LIQUID, FLAMMABLE, N.O.S. or MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S.	3	F1	III	3	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29	
3337	REFRIGERANT GAS R 404A (Pentafluoroethane, 1,1,1-trifluoroethane, and 1,1,1,2-tetrafluoroethane zeotropic mixture with approximately 44% pentafluoroethane and 52% 1,1,1-trifluoroethane)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50		
3338	REFRIGERANT GAS R 407A (Difluoromethane, pentafluoroethane, and 1,1,1,2-tetrafluoroethane zeotropic mixture with approximately 20% difluoromethane and 40% pentafluoroethane)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			0 (E)			CV33	S6 S11 S13 S21	70	3327	RADIOACTIVE MATERIAL, TYPE A PACKAGE, FISSILE, non-special form
			0 (E)			CV33	S6 S11 S13 S21	70	3328	RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, FISSILE
			0 (E)			CV33	S6 S11 S13 S21	70	3329	RADIOACTIVE MATERIAL, TYPE B(M) PACKAGE, FISSILE
			0 (E)			CV33	S6 S11 S13 S21	70	3330	RADIOACTIVE MATERIAL, TYPE C PACKAGE, FISSILE
			0 (-)			CV33	S6 S11 S13 S21	70	3331	RADIOACTIVE MATERIAL, TRANSPORTED UNDER SPECIAL ARRANGEMENT, FISSILE
			0 (E)			CV33	S6 S11 S12 S13 S21	70	3332	RADIOACTIVE MATERIAL, TYPE A PACKAGE, SPECIAL FORM, non fissile or fissile-excepted
			0 (E)			CV33	S6 S11 S13 S21	70	3333	RADIOACTIVE MATERIAL, TYPE A PACKAGE, SPECIAL FORM, FISSILE
NOT SUBJECT TO ADR									3334	Aviation regulated liquid, n.o.s.
NOT SUBJECT TO ADR									3335	Aviation regulated solid, n.o.s.
L4BN		FL	1 (D/E)				S2 S20	33	3336	MERCAPTANS, LIQUID, FLAMMABLE, N.O.S. or MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S.
L1.5BN		FL	2 (D/E)				S2 S20	33	3336	MERCAPTANS, LIQUID, FLAMMABLE, N.O.S. or MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S. (vapour pressure at 50 °C more than 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	3336	MERCAPTANS, LIQUID, FLAMMABLE, N.O.S. or MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S. (vapour pressure at 50 °C not more than 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	3336	MERCAPTANS, LIQUID, FLAMMABLE, N.O.S. or MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S.
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3337	REFRIGERANT GAS R 404A (Pentafluoroethane, 1,1,1-trifluoroethane, and 1,1,1,2-tetrafluoroethane zeotropic mixture with approximately 44% pentafluoroethane and 52% 1,1,1-trifluoroethane)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3338	REFRIGERANT GAS R 407A (Difluoromethane, pentafluoroethane, and 1,1,1,2-tetrafluoroethane zeotropic mixture with approximately 20% difluoromethane and 40% pentafluoroethane)

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
3339	REFRIGERANT GAS R 407B (Difluoromethane, pentafluoroethane, and 1,1,1,2-tetrafluoroethane zeotropic mixture with approximately 10% difluoromethane and 70% pentafluoroethane)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
3340	REFRIGERANT GAS R 407C (Difluoromethane, pentafluoroethane, and 1,1,1,2-tetrafluoroethane zeotropic mixture with approximately 23% difluoromethane and 25% pentafluoroethane)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
3341	THIOUREA DIOXIDE	4.2	S2	II	4.2		0	E2	P002 IBC06		MP14	T3	TP33
3341	THIOUREA DIOXIDE	4.2	S2	III	4.2		0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
3342	XANTHATES	4.2	S2	II	4.2		0	E2	P002 IBC06		MP14	T3	TP33
3342	XANTHATES	4.2	S2	III	4.2		0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
3343	NITROGLYCERIN MIXTURE, DESENSITIZED, LIQUID, FLAMMABLE, N.O.S. with not more than 30% nitroglycerin, by mass	3	D		3	274 278	0	E0	P099		MP2		
3344	PENTAERYTHRITATE TETRANITRATE (PENTAERYTHRITOL TETRANITRATE; PETN) MIXTURE, DESENSITIZED, SOLID, N.O.S. with more than 10% but not more than 20% PETN, by mass	4.1	D	II	4.1	272 274	0	E0	P099		MP2		
3345	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, SOLID, TOXIC	6.1	T7	I	6.1	61 274 648	0	E5	P002 IBC07		MP18	T6	TP33
3345	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, SOLID, TOXIC	6.1	T7	II	6.1	61 274 648	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3345	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, SOLID, TOXIC	6.1	T7	III	6.1	61 274 648	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3346	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	I	3 +6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
3346	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	II	3 +6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
3347	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	I	6.1 +3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3339	REFRIGERANT GAS R 407B (Difluoromethane, pentafluoroethane, and 1,1,1,2-tetrafluoroethane zeotropic mixture with approximately 10% difluoromethane and 70% pentafluoroethane)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3340	REFRIGERANT GAS R 407C (Difluoromethane, pentafluoroethane, and 1,1,1,2-tetrafluoroethane zeotropic mixture with approximately 23% difluoromethane and 25% pentafluoroethane)
SGAV		AT	2 (D/E)	V1				40	3341	THIOUREA DIOXIDE
SGAV		AT	3 (E)	V1				40	3341	THIOUREA DIOXIDE
SGAV		AT	2 (D/E)	V1				40	3342	XANTHATES
SGAV		AT	3 (E)	V1				40	3342	XANTHATES
			0 (B)				S2 S14		3343	NITROGLYCERIN MIXTURE, DESENSITIZED, LIQUID, FLAMMABLE, N.O.S. with not more than 30% nitroglycerin, by mass
			2 (B)				S14		3344	PENTAERYTHRITOL TETRANITRATE (PENTAERYTHRITOL TETRANITRATE; PETN) MIXTURE, DESENSITIZED, SOLID, N.O.S. with more than 10% but not more than 20% PETN, by mass
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3345	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3345	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3345	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, SOLID, TOXIC
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	3346	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	3346	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3347	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
3347	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	II	6.1 +3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3347	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	III	6.1 +3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
3348	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC	6.1	T6	I	6.1	61 274 648	0	E5	P001		MP8 MP17	T14	TP2 TP27
3348	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC	6.1	T6	II	6.1	61 274 648	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3348	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC	6.1	T6	III	6.1	61 274 648	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
3349	PYRETHROID PESTICIDE, SOLID, TOXIC	6.1	T7	I	6.1	61 274 648	0	E5	P002 IBC07		MP18	T6	TP33
3349	PYRETHROID PESTICIDE, SOLID, TOXIC	6.1	T7	II	6.1	61 274 648	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3349	PYRETHROID PESTICIDE, SOLID, TOXIC	6.1	T7	III	6.1	61 274 648	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3350	PYRETHROID PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	I	3 +6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
3350	PYRETHROID PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3	FT2	II	3 +6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
3351	PYRETHROID PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	I	6.1 +3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
3351	PYRETHROID PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	II	6.1 +3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3351	PYRETHROID PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	6.1	TF2	III	6.1 +3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
3352	PYRETHROID PESTICIDE, LIQUID, TOXIC	6.1	T6	I	6.1	61 274 648	0	E5	P001		MP8 MP17	T14	TP2 TP27
3352	PYRETHROID PESTICIDE, LIQUID, TOXIC	6.1	T6	II	6.1	61 274 648	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3352	PYRETHROID PESTICIDE, LIQUID, TOXIC	6.1	T6	III	6.1	61 274 648	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
3354	INSECTICIDE GAS, FLAMMABLE, N.O.S.	2	2F		2.1	274	0	E0	P200		MP9	(M)	
3355	INSECTICIDE GAS, TOXIC, FLAMMABLE, N.O.S.	2	2TF		2.3 +2.1	274	0	E0	P200		MP9	(M)	
3356	OXYGEN GENERATOR, CHEMICAL	5.1	O3	II	5.1	284	0	E0	P500		MP2		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3347	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3347	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3348	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3348	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3348	PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3349	PYRETHROID PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3349	PYRETHROID PESTICIDE, SOLID, TOXIC
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3349	PYRETHROID PESTICIDE, SOLID, TOXIC
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	3350	PYRETHROID PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	3350	PYRETHROID PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3351	PYRETHROID PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3351	PYRETHROID PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3351	PYRETHROID PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3352	PYRETHROID PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3352	PYRETHROID PESTICIDE, LIQUID, TOXIC
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3352	PYRETHROID PESTICIDE, LIQUID, TOXIC
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	3354	INSECTICIDE GAS, FLAMMABLE, N.O.S.
PxBH(M)	TU6 TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	3355	INSECTICIDE GAS, TOXIC, FLAMMABLE, N.O.S.
			2 (E)			CV24			3356	OXYGEN GENERATOR, CHEMICAL

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
3357	NITROGLYCERIN MIXTURE, DESENSITIZED, LIQUID, N.O.S. with not more than 30% nitroglycerin, by mass	3	D	II	3	274 288	0	E0	P099		MP2			
3358	REFRIGERATING MACHINES containing flammable, non-toxic, liquefied gas	2	6F		2.1	291	0	E0	P003	PP32	MP9			
3359	FUMIGATED CARGO TRANSPORT UNIT	9	M11			302								
3360	Fibres, vegetable, dry	4.1	F1	NOT SUBJECT TO ADR										
3361	CHLOROSILANES, TOXIC, CORROSIVE, N.O.S.	6.1	TC1	II	6.1 +8	274	0	E0	P010		MP15	T14	TP2 TP7 TP27	
3362	CHLOROSILANES, TOXIC, CORROSIVE, FLAMMABLE, N.O.S.	6.1	TFC	II	6.1 +3 +8	274	0	E0	P010		MP15	T14	TP2 TP7 TP27	
3363	Dangerous goods in machinery or dangerous goods in apparatus	9	M11	NOT SUBJECT TO ADR [see also 1.1.3.1 (b)]										
3364	TRINITROPHENOL (PICRIC ACID), WETTED with not less than 10% water, by mass	4.1	D	I	4.1		0	E0	P406	PP24	MP2			
3365	TRINITROCHLOROBENZENE (PICRYL CHLORIDE), WETTED with not less than 10% water, by mass	4.1	D	I	4.1		0	E0	P406	PP24	MP2			
3366	TRINITROTOLUENE (TNT), WETTED with not less than 10% water, by mass	4.1	D	I	4.1		0	E0	P406	PP24	MP2			
3367	TRINITROBENZENE, WETTED with not less than 10% water, by mass	4.1	D	I	4.1		0	E0	P406	PP24	MP2			
3368	TRINITROBENZOIC ACID, WETTED with not less than 10% water, by mass	4.1	D	I	4.1		0	E0	P406	PP24	MP2			
3369	SODIUM DINITRO- <i>o</i> -CRESOLATE, WETTED with not less than 10% water, by mass	4.1	DT	I	4.1 +6.1		0	E0	P406	PP24	MP2			
3370	UREA NITRATE, WETTED with not less than 10% water, by mass	4.1	D	I	4.1		0	E0	P406	PP78	MP2			
3371	2-METHYLBUTANAL	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	
3373	BIOLOGICAL SUBSTANCE, CATEGORY B	6.2	I4		6.2	319	0	E0	P650			T1	TP1	
3373	BIOLOGICAL SUBSTANCE, CATEGORY B (animal material only)	6.2	I4		6.2	319	0	E0	P650			T1 BK1 BK2	TP1	
3374	ACETYLENE, SOLVENT FREE	2	2F		2.1		0	E0	P200		MP9			
3375	AMMONIUM NITRATE EMULSION or SUSPENSION or GEL, intermediate for blasting explosives, liquid	5.1	O1	II	5.1	309	0	E2	P099 IBC99		MP2	T1	TP1 TP9 TP17 TP32	
3375	AMMONIUM NITRATE EMULSION or SUSPENSION or GEL, intermediate for blasting explosives, solid	5.1	O2	II	5.1	309	0	E2	P099 IBC99		MP2	T1	TP1 TP9 TP17 TP32	
3376	4-NITROPHENYL-HYDRAZINE, with not less than 30% water, by mass	4.1	D	I	4.1		0	E0	P406	PP26	MP2			

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			2 (B)				S2 S14		3357	NITROGLYCERIN MIXTURE, DESENSITIZED, LIQUID, N.O.S. with not more than 30% nitroglycerin, by mass
			2 (D)			CV9	S2		3358	REFRIGERATING MACHINES containing flammable, non-toxic, liquefied gas
			(-)						3359	FUMIGATED CARGO TRANSPORT UNIT
NOT SUBJECT TO ADR									3360	Fibres, vegetable, dry
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	3361	CHLOROSILANES, TOXIC, CORROSIVE, N.O.S.
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	638	3362	CHLOROSILANES, TOXIC, CORROSIVE, FLAMMABLE, N.O.S.
NOT SUBJECT TO ADR [see also 1.1.3.1 (b)]									3363	Dangerous goods in machinery or dangerous goods in apparatus
			1 (B)				S14		3364	TRINITROPHENOL (PICRIC ACID), WETTED with not less than 10% water, by mass
			1 (B)				S14		3365	TRINITROCHLOROBENZENE (PICRYL CHLORIDE), WETTED with not less than 10% water, by mass
			1 (B)				S14		3366	TRINITROTOLUENE (TNT), WETTED with not less than 10% water, by mass
			1 (B)				S14		3367	TRINITROBENZENE, WETTED with not less than 10% water, by mass
			1 (B)				S14		3368	TRINITROBENZOIC ACID, WETTED with not less than 10% water, by mass
			1 (B)			CV13 CV28	S14		3369	SODIUM DINITRO-o-CRESOLATE, WETTED with not less than 10% water, by mass
			1 (B)				S14		3370	UREA NITRATE, WETTED with not less than 10% water, by mass
LGBF		FL	2 (D/E)				S2 S20	33	3371	2-METHYLBUTANAL
L4BH	TU15 TU37 TE19	AT	(-)				S3	606	3373	BIOLOGICAL SUBSTANCE, CATEGORY B
L4BH	TU15 TU37 TE19	AT	(-)				S3	606	3373	BIOLOGICAL SUBSTANCE, CATEGORY B (animal material only)
			2 (D)			CV9 CV10 CV36	S2 S20		3374	ACETYLENE, SOLVENT FREE
LGAV(+)	TU3 TU12 TU39 TE10 TE23 TA1 TA3	AT	2 (E)			CV24	S9 S23	50	3375	AMMONIUM NITRATE EMULSION or SUSPENSION or GEL, intermediate for blasting explosives, liquid
SGAV(+)	TU3 TU12 TU39 TE10 TE23 TA1 TA3	AT	2 (E)			CV24	S9 S23	50	3375	AMMONIUM NITRATE EMULSION or SUSPENSION or GEL, intermediate for blasting explosives, solid
			1 (B)	V1			S14		3376	4-NITROPHENYL-HYDRAZINE, with not less than 30% water, by mass

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
3377	SODIUM PERBORATE MONOHYDRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
3378	SODIUM CARBONATE PEROXYHYDRATE	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3 BK1 BK2	TP33
3378	SODIUM CARBONATE PEROXYHYDRATE	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
3379	DESENSITIZED EXPLOSIVE, LIQUID, N.O.S.	3	D	I	3	274 311	0	E0	P099		MP2		
3380	DESENSITIZED EXPLOSIVE, SOLID, N.O.S.	4.1	D	I	4.1	274 311	0	E0	P099		MP2		
3381	TOXIC BY INHALATION LIQUID, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	T1 or T4	I	6.1	274	0	E0	P601		MP8 MP17	T22	TP2
3382	TOXIC BY INHALATION LIQUID, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	T1 or T4	I	6.1	274	0	E0	P602		MP8 MP17	T20	TP2
3383	TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	TF1	I	6.1 +3	274	0	E0	P601		MP8 MP17	T22	TP2
3384	TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	TF1	I	6.1 +3	274	0	E0	P602		MP8 MP17	T20	TP2
3385	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	TW1	I	6.1 +4.3	274	0	E0	P601		MP8 MP17	T22	TP2
3386	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	TW1	I	6.1 +4.3	274	0	E0	P602		MP8 MP17	T20	TP2

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAV	TU3	AT	3 (E)		VV8	CV24		50	3377	SODIUM PERBORATE MONOHYDRATE
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	3378	SODIUM CARBONATE PEROXYHYDRATE
SGAV	TU3	AT	3 (E)		VV8	CV24		50	3378	SODIUM CARBONATE PEROXYHYDRATE
			1 (B)				S2 S14		3379	DESENSITIZED EXPLOSIVE, LIQUID, N.O.S.
			1 (B)				S14		3380	DESENSITIZED EXPLOSIVE, SOLID, N.O.S.
L15CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	3381	TOXIC BY INHALATION LIQUID, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	3382	TOXIC BY INHALATION LIQUID, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3383	TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3384	TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀
L15CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	623	3385	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	623	3386	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
3387	TOXIC BY INHALATION LIQUID, OXIDIZING, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	TO1	I	6.1 +5.1	274	0	E0	P601		MP8 MP17	T22	TP2
3388	TOXIC BY INHALATION LIQUID, OXIDIZING, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	TO1	I	6.1 +5.1	274	0	E0	P602		MP8 MP17	T20	TP2
3389	TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	TC1 or TC3	I	6.1 +8	274	0	E0	P601		MP8 MP17	T22	TP2
3390	TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	TC1 or TC3	I	6.1 +8	274	0	E0	P602		MP8 MP17	T20	TP2
3391	ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC	4.2	S5	I	4.2	274	0	E0	P404	PP86	MP2	T21	TP7 TP33 TP36
3392	ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC	4.2	S5	I	4.2	274	0	E0	P400	PP86	MP2	T21	TP2 TP7 TP36
3393	ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC, WATER-REACTIVE	4.2	SW	I	4.2 +4.3	274	0	E0	P404	PP86	MP2	T21	TP7 TP33 TP36
3394	ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE	4.2	SW	I	4.2 +4.3	274	0	E0	P400	PP86	MP2	T21	TP2 TP7 TP36
3395	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE	4.3	W2	I	4.3	274	0	E0	P403		MP2	T9	TP7 TP33 TP36
3395	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE	4.3	W2	II	4.3	274	500 g	E2	P410 IBC04		MP14	T3	TP33 TP36
3395	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE	4.3	W2	III	4.3	274	1 kg	E1	P410 IBC06		MP14	T1	TP33 TP36
3396	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, FLAMMABLE	4.3	WF2	I	4.3 +4.1	274	0	E0	P403		MP2	T9	TP7 TP33 TP36
3396	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, FLAMMABLE	4.3	WF2	II	4.3 +4.1	274	500 g	E2	P410 IBC04		MP14	T3	TP33 TP36
3396	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, FLAMMABLE	4.3	WF2	III	4.3 +4.1	274	1 kg	E1	P410 IBC06		MP14	T1	TP33 TP36
3397	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, SELF-HEATING	4.3	WS	I	4.3 +4.2	274	0	E0	P403		MP2	T9	TP7 TP33 TP36

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L15CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	665	3387	TOXIC BY INHALATION LIQUID, OXIDIZING, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	665	3388	TOXIC BY INHALATION LIQUID, OXIDIZING, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀
L15CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	668	3389	TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	668	3390	TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀
L21DH	TU4 TU14 TU22 TC1 TE21 TM1	AT	0 (B/E)	V1			S20	43	3391	ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC
L21DH	TU4 TU14 TU22 TC1 TE21 TM1	AT	0 (B/E)	V1			S20	333	3392	ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC
L21DH	TU4 TU14 TU22 TC1 TE21 TM1	AT	0 (B/E)	V1			S20	X432	3393	ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC, WATER-REACTIVE
L21DH	TU4 TU14 TU22 TC1 TE21 TM1	AT	0 (B/E)	V1			S20	X333	3394	ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE
S10AN L10DH	TU4 TU14 TU22 TE21 TM2	AT	1 (B/E)	V1		CV23	S20	X423	3395	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE
SGAN L4DH	TU14 TE21 TM2	AT	2 (D/E)	V1		CV23		423	3395	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE
SGAN L4DH	TU14 TE21 TM2	AT	3 (E)	V1		CV23		423	3395	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE
S10AN L10DH	TU4 TU14 TU22 TE21 TM2	AT	0 (B/E)	V1		CV23	S20	X423	3396	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, FLAMMABLE
SGAN L4DH	TU14 TE21 TM2	AT	0 (D/E)	V1		CV23		423	3396	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, FLAMMABLE
SGAN L4DH	TU14 TE21 TM2	AT	0 (E)	V1		CV23		423	3396	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, FLAMMABLE
S10AN L10DH	TU14 TE21 TM2	AT	1 (B/E)	V1		CV23	S20	X423	3397	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, SELF-HEATING

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
3397	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, SELF-HEATING	4.3	WS	II	4.3 +4.2	274	500 g	E2	P410 IBC04		MP14	T3	TP33 TP36
3397	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, SELF-HEATING	4.3	WS	III	4.3 +4.2	274	1 kg	E1	P410 IBC06		MP14	T1	TP33 TP36
3398	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE	4.3	W1	I	4.3	274	0	E0	P402		MP2	T13	TP2 TP7 TP36
3398	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE	4.3	W1	II	4.3	274	500 ml	E2	P001 IBC01		MP15	T7	TP2 TP7 TP36
3398	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE	4.3	W1	III	4.3	274	1 L	E1	P001 IBC02		MP15	T7	TP2 TP7 TP36
3399	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE	4.3	WF1	I	4.3 +3	274	0	E0	P402		MP2	T13	TP2 TP7 TP36
3399	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE	4.3	WF1	II	4.3 +3	274	500 ml	E2	P001 IBC01		MP15	T7	TP2 TP7 TP36
3399	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE	4.3	WF1	III	4.3 +3	274	1 L	E1	P001 IBC02 R001		MP15	T7	TP2 TP7 TP36
3400	ORGANOMETALLIC SUBSTANCE, SOLID, SELF-HEATING	4.2	S5	II	4.2	274	500 g	E2	P410 IBC06		MP14	T3	TP33 TP36
3400	ORGANOMETALLIC SUBSTANCE, SOLID, SELF-HEATING	4.2	S5	III	4.2	274	1 kg	E1	P002 IBC08		MP14	T1	TP33 TP36
3401	ALKALI METAL AMALGAM, SOLID	4.3	W2	I	4.3	182	0	E0	P403		MP2	T9	TP7 TP33
3402	ALKALINE EARTH METAL AMALGAM, SOLID	4.3	W2	I	4.3	183 506	0	E0	P403		MP2	T9	TP7 TP33
3403	POTASSIUM METAL ALLOYS, SOLID	4.3	W2	I	4.3		0	E0	P403		MP2	T9	TP7 TP33
3404	POTASSIUM SODIUM ALLOYS, SOLID	4.3	W2	I	4.3		0	E0	P403		MP2	T9	TP7 TP33
3405	BARIUM CHLORATE SOLUTION	5.1	OT1	II	5.1 +6.1		1 L	E2	P504 IBC02		MP2	T4	TP1
3405	BARIUM CHLORATE SOLUTION	5.1	OT1	III	5.1 +6.1		5 L	E1	P001 IBC02		MP2	T4	TP1
3406	BARIUM PERCHLORATE SOLUTION	5.1	OT1	II	5.1 +6.1		1 L	E2	P504 IBC02		MP2	T4	TP1
3406	BARIUM PERCHLORATE SOLUTION	5.1	OT1	III	5.1 +6.1		5 L	E1	P001 IBC02		MP2	T4	TP1
3407	CHLORATE AND MAGNESIUM CHLORIDE MIXTURE SOLUTION	5.1	O1	II	5.1		1 L	E2	P504 IBC02		MP2	T4	TP1
3407	CHLORATE AND MAGNESIUM CHLORIDE MIXTURE SOLUTION	5.1	O1	III	5.1		5 L	E1	P504 IBC02		MP2	T4	TP1
3408	LEAD PERCHLORATE SOLUTION	5.1	OT1	II	5.1 +6.1		1 L	E2	P504 IBC02		MP2	T4	TP1
3408	LEAD PERCHLORATE SOLUTION	5.1	OT1	III	5.1 +6.1		5 L	E1	P001 IBC02		MP2	T4	TP1
3409	CHLORONITROBENZENES, LIQUID	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2
3410	4-CHLORO-o-TOLUIDINE HYDROCHLORIDE SOLUTION	6.1	T1	III	6.1		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
3411	beta-NAPHTHYLAMINE SOLUTION	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
3411	beta-NAPHTHYLAMINE SOLUTION	6.1	T1	III	6.1		5 L	E1	P001 IBC02		MP19	T7	TP2

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN L4DH		AT	2 (D/E)	V1		CV23		423	3397	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, SELF-HEATING
SGAN L4DH		AT	3 (E)	V1		CV23		423	3397	ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, SELF-HEATING
L10DH	TU4 TU14 TU22 TE21 TM2	AT	0 (B/E)	V1		CV23	S20	X323	3398	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE
L4DH	TU14 TE21 TM2	AT	0 (D/E)	V1		CV23		323	3398	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE
L4DH	TU14 TE21 TM2	AT	0 (E)	V1		CV23		323	3398	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE
L10DH	TU4 TU14 TU22 TE21 TM2	FL	0 (B/E)	V1		CV23	S2 S20	X323	3399	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
L4DH	TU4 TU14 TU22 TE21 TM2	FL	0 (D/E)	V1		CV23	S2	323	3399	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
L4DH	TU14 TE21 TM2	FL	0 (E)	V1		CV23	S2	323	3399	ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE
SGAN L4BN		AT	2 (D/E)	V1				40	3400	ORGANOMETALLIC SUBSTANCE, SOLID, SELF-HEATING
SGAN L4BN		AT	3 (E)	V1				40	3400	ORGANOMETALLIC SUBSTANCE, SOLID, SELF-HEATING
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	3401	ALKALI METAL AMALGAM, SOLID
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	3402	ALKALINE EARTH METAL AMALGAM, SOLID
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	3403	POTASSIUM METAL ALLOYS, SOLID
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	3404	POTASSIUM SODIUM ALLOYS, SOLID
L4BN	TU3	AT	2 (E)			CV24 CV28		56	3405	BARIUM CHLORATE SOLUTION
LGBV	TU3	AT	3 (E)			CV24 CV28		56	3405	BARIUM CHLORATE SOLUTION
L4BN	TU3	AT	2 (E)			CV24 CV28		56	3406	BARIUM PERCHLORATE SOLUTION
LGBV	TU3	AT	3 (E)			CV24 CV28		56	3406	BARIUM PERCHLORATE SOLUTION
L4BN	TU3	AT	2 (E)			CV24		50	3407	CHLORATE AND MAGNESIUM CHLORIDE MIXTURE SOLUTION
LGBV	TU3	AT	3 (E)			CV24		50	3407	CHLORATE AND MAGNESIUM CHLORIDE MIXTURE SOLUTION
L4BN	TU3	AT	2 (E)			CV24 CV28		56	3408	LEAD PERCHLORATE SOLUTION
LGBV	TU3	AT	3 (E)			CV24 CV28		56	3408	LEAD PERCHLORATE SOLUTION
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3409	CHLORONITROBENZENES, LIQUID
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3410	4-CHLORO-o-TOLUIDINE HYDROCHLORIDE SOLUTION
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3411	beta-NAPHTHYLAMINE SOLUTION
L4BH	TU15 TE19	AT	2 (E)			CV13 CV28	S9	60	3411	beta-NAPHTHYLAMINE SOLUTION

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
3412	FORMIC ACID with not less than 10% but not more than 85% acid by mass	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
3412	FORMIC ACID with not less than 5% but less than 10% acid by mass	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3413	POTASSIUM CYANIDE SOLUTION	6.1	T4	I	6.1		0	E5	P001		MP8 MP17	T14	TP2
3413	POTASSIUM CYANIDE SOLUTION	6.1	T4	II	6.1		100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3413	POTASSIUM CYANIDE SOLUTION	6.1	T4	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
3414	SODIUM CYANIDE SOLUTION	6.1	T4	I	6.1		0	E5	P001		MP8 MP17	T14	TP2
3414	SODIUM CYANIDE SOLUTION	6.1	T4	II	6.1		100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3414	SODIUM CYANIDE SOLUTION	6.1	T4	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
3415	SODIUM FLUORIDE SOLUTION	6.1	T4	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3416	CHLOROACETO-PHENONE, LIQUID	6.1	T1	II	6.1		0	E4	P001 IBC02		MP15	T7	TP2
3417	XYLYL BROMIDE, SOLID	6.1	T2	II	6.1		0	E4	P002 IBC08	B4	MP10	T3	TP33
3418	2,4-TOLUYLENEDIAMINE SOLUTION	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3419	BORON TRIFLUORIDE ACETIC ACID COMPLEX, SOLID	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3420	BORON TRIFLUORIDE PROPIONIC ACID COMPLEX, SOLID	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3421	POTASSIUM HYDROGENDIFLUORIDE SOLUTION	8	CT1	II	8 +6.1		1 L	E2	P001 IBC02		MP15	T7	TP2
3421	POTASSIUM HYDROGENDIFLUORIDE SOLUTION	8	CT1	III	8 +6.1		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
3422	POTASSIUM FLUORIDE SOLUTION	6.1	T4	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3423	TETRAMETHYL-AMMONIUM HYDROXIDE, SOLID	8	C8	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3424	AMMONIUM DINITRO- <i>o</i> -CRESOLATE SOLUTION	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
3424	AMMONIUM DINITRO- <i>o</i> -CRESOLATE SOLUTION	6.1	T1	III	6.1		5 L	E1	P001 IBC02		MP19	T7	TP2
3425	BROMOACETIC ACID, SOLID	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3426	ACRYLAMIDE SOLUTION	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3427	CHLOROBENZYL CHLORIDES, SOLID	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3428	3-CHLORO-4-METHYLPHENYL ISOCYANATE, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	2 (E)					80	3412	FORMIC ACID with not less than 10% but not more than 85% acid by mass
L4BN		AT	3 (E)	V12				80	3412	FORMIC ACID with not less than 5% but less than 10% acid by mass
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3413	POTASSIUM CYANIDE SOLUTION
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3413	POTASSIUM CYANIDE SOLUTION
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3413	POTASSIUM CYANIDE SOLUTION
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3414	SODIUM CYANIDE SOLUTION
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3414	SODIUM CYANIDE SOLUTION
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3414	SODIUM CYANIDE SOLUTION
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3415	SODIUM FLUORIDE SOLUTION
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3416	CHLOROACETO-PHENONE, LIQUID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3417	XYLYL BROMIDE, SOLID
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3418	2,4-TOLUYLENEDIAMINE SOLUTION
SGAN L4BN		AT	2 (E)	V11				80	3419	BORON TRIFLUORIDE ACETIC ACID COMPLEX, SOLID
SGAN L4BN		AT	2 (E)	V11				80	3420	BORON TRIFLUORIDE PROPIONIC ACID COMPLEX, SOLID
L4DH	TU14 TE21	AT	2 (E)			CV13 CV28		86	3421	POTASSIUM HYDROGENDIFLUORIDE SOLUTION
L4DH	TU14 TE21	AT	3 (E)	V12		CV13 CV28		86	3421	POTASSIUM HYDROGENDIFLUORIDE SOLUTION
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3422	POTASSIUM FLUORIDE SOLUTION
SGAN L4BN		AT	2 (E)	V11				80	3423	TETRAMETHYL-AMMONIUM HYDROXIDE, SOLID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3424	AMMONIUM DINITRO- <i>o</i> -CRESOLATE SOLUTION
L4BH	TU15 TE19	AT	2 (E)			CV13 CV28	S9	60	3424	AMMONIUM DINITRO- <i>o</i> -CRESOLATE SOLUTION
SGAN L4BN		AT	2 (E)	V11				80	3425	BROMOACETIC ACID, SOLID
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3426	ACRYLAMIDE SOLUTION
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3427	CHLOROBENZYL CHLORIDES, SOLID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3428	3-CHLORO-4-METHYLPHENYL ISOCYANATE, SOLID

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
3429	CHLOROTOLUIDINES, LIQUID	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3430	XYLENOLS, LIQUID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
3431	NITROBENZO-TRIFLUORIDES, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3432	POLYCHLORINATED BIPHENYLS, SOLID	9	M2	II	9	305	1 kg	E2	P906 IBC08	B4	MP10	T3	TP33
3434	NITROCRESOLS, LIQUID	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3436	HEXAFLUOROACETONE HYDRATE, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3437	CHLOROCRESOLS, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3438	alpha-METHYLBENZYL ALCOHOL, SOLID	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3439	NITRILES, SOLID, TOXIC, N.O.S.	6.1	T2	I	6.1	274	0	E5	P002 IBC07		MP18	T6	TP33
3439	NITRILES, SOLID, TOXIC, N.O.S.	6.1	T2	II	6.1	274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3439	NITRILES, SOLID, TOXIC, N.O.S.	6.1	T2	III	6.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3440	SELENIUM COMPOUND, LIQUID, N.O.S.	6.1	T4	I	6.1	274 563	0	E5	P001		MP8 MP17	T14	TP2 TP27
3440	SELENIUM COMPOUND, LIQUID, N.O.S.	6.1	T4	II	6.1	274 563	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3440	SELENIUM COMPOUND, LIQUID, N.O.S.	6.1	T4	III	6.1	274 563	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
3441	CHLORODINITRO-BENZENES, SOLID	6.1	T2	II	6.1	279	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3442	DICHLOROANILINES, SOLID	6.1	T2	II	6.1	279	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3443	DINITROBENZENES, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3444	NICOTINE HYDROCHLORIDE, SOLID	6.1	T2	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3445	NICOTINE SULPHATE, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3446	NITROTOLUENES, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3447	NITROXYLENES, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3448	TEAR GAS SUBSTANCE, SOLID, N.O.S.	6.1	T2	I	6.1	274	0	E5	P002		MP18	T6	TP33
3448	TEAR GAS SUBSTANCE, SOLID, N.O.S.	6.1	T2	II	6.1	274	0	E4	P002 IBC08	B4	MP10	T3	TP33
3449	BROMOBENZYL CYANIDES, SOLID	6.1	T2	I	6.1	138	0	E5	P002		MP18	T6	TP33
3450	DIPHENYLCHLORO-ARSINE, SOLID	6.1	T3	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
3451	TOLUIDINES, SOLID	6.1	T2	II	6.1	279	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3452	XYLIDINES, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3453	PHOSPHORIC ACID, SOLID	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3429	CHLOROTOLUIDINES, LIQUID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3430	XYLENOLS, LIQUID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3431	NITROBENZO-TRIFLUORIDES, SOLID
S4AH L4BH	TU15	AT	0 (D/E)	V11	VV15	CV1 CV13 CV28	S19	90	3432	POLYCHLORINATED BIPHENYLS, SOLID
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3434	NITROCRESOLS, LIQUID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3436	HEXAFLUOROACETONE HYDRATE, SOLID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3437	CHLOROCRESOLS, SOLID
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3438	alpha-METHYLBENZYL ALCOHOL, SOLID
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3439	NITRILES, SOLID, TOXIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3439	NITRILES, SOLID, TOXIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3439	NITRILES, SOLID, TOXIC, N.O.S.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3440	SELENIUM COMPOUND, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3440	SELENIUM COMPOUND, LIQUID, N.O.S.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3440	SELENIUM COMPOUND, LIQUID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3441	CHLORODINITRO-BENZENES, SOLID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3442	DICHLOROANILINES, SOLID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3443	DINITROBENZENES, SOLID
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3444	NICOTINE HYDROCHLORIDE, SOLID
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3445	NICOTINE SULPHATE, SOLID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3446	NITROTOLUENES, SOLID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3447	NITROXYLENES, SOLID
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3448	TEAR GAS SUBSTANCE, SOLID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3448	TEAR GAS SUBSTANCE, SOLID, N.O.S.
S10AH L10CH	TU15 TE19	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3449	BROMOBENZYL CYANIDES, SOLID
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3450	DIPHENYLCHLORO-ARSINE, SOLID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3451	TOLUIDINES, SOLID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3452	XYLIDINES, SOLID
SGAV L4BN		AT	3 (E)		VV9			80	3453	PHOSPHORIC ACID, SOLID

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
3454	DINITROTOLUENES, SOLID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3455	CRESOLS, SOLID	6.1	TC2	II	6.1 +8		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3456	NITROSYLSULPHURIC ACID, SOLID	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3457	CHLORONITROTOLUENES, SOLID	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3458	NITROANISOLE, SOLID	6.1	T2	III	6.1	279	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3459	NITROBROMOBENZENES, SOLID	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3460	N-ETHYLBENZYL-TOLUIDINES, SOLID	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3462	TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S.	6.1	T2	I	6.1	210 274	0	E5	P002 IBC07		MP18	T6	TP33
3462	TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S.	6.1	T2	II	6.1	210 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3462	TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S.	6.1	T2	III	6.1	210 274	5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33
3463	PROPIONIC ACID with not less than 90% acid by mass	8	CF1	II	8 +3		1 L	E2	P001 IBC02		MP15	T7	TP2
3464	ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S.	6.1	T2	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33
3464	ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S.	6.1	T2	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3464	ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S.	6.1	T2	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3465	ORGANOARSENIC COMPOUND, SOLID, N.O.S.	6.1	T3	I	6.1	274	0	E5	P002 IBC07		MP18	T6	TP33
3465	ORGANOARSENIC COMPOUND, SOLID, N.O.S.	6.1	T3	II	6.1	274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3465	ORGANOARSENIC COMPOUND, SOLID, N.O.S.	6.1	T3	III	6.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3466	METAL CARBONYLS, SOLID, N.O.S.	6.1	T3	I	6.1	274 562	0	E5	P002 IBC07		MP18	T6	TP33
3466	METAL CARBONYLS, SOLID, N.O.S.	6.1	T3	II	6.1	274 562	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3466	METAL CARBONYLS, SOLID, N.O.S.	6.1	T3	III	6.1	274 562	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3467	ORGANOMETALLIC COMPOUND, SOLID, TOXIC, N.O.S.	6.1	T3	I	6.1	274 562	0	E5	P002 IBC07		MP18	T6	TP33
3467	ORGANOMETALLIC COMPOUND, SOLID, TOXIC, N.O.S.	6.1	T3	II	6.1	274 562	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3467	ORGANOMETALLIC COMPOUND, SOLID, TOXIC, N.O.S.	6.1	T3	III	6.1	274 562	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3454	DINITROTOLUENES, SOLID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	68	3455	CRESOLS, SOLID
SGAN L4BN		AT	2 (E)	V11				X80	3456	NITROSYLSULPHURIC ACID, SOLID
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3457	CHLORONITROTOLUENES, SOLID
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3458	NITROANISOLES, SOLID
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3459	NITROBROMOBENZENES, SOLID
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3460	N-ETHYLBENZYL-TOLUIDINES, SOLID
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3462	TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3462	TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3462	TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S.
L4BN		FL	2 (D/E)				S2	83	3463	PROPIONIC ACID with not less than 90% acid by mass
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3464	ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3464	ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3464	ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3465	ORGANOARSENIC COMPOUND, SOLID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3465	ORGANOARSENIC COMPOUND, SOLID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3465	ORGANOARSENIC COMPOUND, SOLID, N.O.S.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3466	METAL CARBONYLS, SOLID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3466	METAL CARBONYLS, SOLID, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3466	METAL CARBONYLS, SOLID, N.O.S.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3467	ORGANOMETALLIC COMPOUND, SOLID, TOXIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3467	ORGANOMETALLIC COMPOUND, SOLID, TOXIC, N.O.S.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3467	ORGANOMETALLIC COMPOUND, SOLID, TOXIC, N.O.S.

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2 (10)	4.2.5.3 (11)
3468	HYDROGEN IN A METAL HYDRIDE STORAGE SYSTEM or HYDROGEN IN A METAL HYDRIDE STORAGE SYSTEM CONTAINED IN EQUIPMENT or HYDROGEN IN A METAL HYDRIDE STORAGE SYSTEM PACKED WITH EQUIPMENT	2	1F		2.1	321 356	0	E0	P205		MP9		
3469	PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning and reducing compound)	3	FC	I	3 +8	163	0	E0	P001		MP7 MP17	T11	TP2 TP27
3469	PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning and reducing compound)	3	FC	II	3 +8	163	1 L	E2	P001 IBC02		MP19	T7	TP2 TP8 TP28
3469	PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning and reducing compound)	3	FC	III	3 +8	163	5 L	E1	P001 IBC03 R001		MP19	T4	TP1 TP29
3470	PAINT, CORROSIVE, FLAMMABLE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, CORROSIVE, FLAMMABLE (including paint thinning and reducing compound)	8	CF1	II	8 +3	163	1 L	E2	P001 IBC02		MP15	T7	TP2 TP8 TP28
3471	HYDROGENDIFLUORIDES SOLUTION, N.O.S.	8	CT1	II	8 +6.1		1 L	E2	P001 IBC02		MP15	T7	TP2
3471	HYDROGENDIFLUORIDES SOLUTION, N.O.S.	8	CT1	III	8 +6.1		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
3472	CROTONIC ACID, LIQUID	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			2 (D)			CV9 CV10 CV36	S2 S20		3468	HYDROGEN IN A METAL HYDRIDE STORAGE SYSTEM or HYDROGEN IN A METAL HYDRIDE STORAGE SYSTEM CONTAINED IN EQUIPMENT or HYDROGEN IN A METAL HYDRIDE STORAGE SYSTEM PACKED WITH EQUIPMENT
L10CH	TU14 TE21	FL	1 (C/E)				S2 S20	338	3469	PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning and reducing compound)
L4BH		FL	2 (D/E)				S2 S20	338	3469	PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning and reducing compound)
L4BN		FL	3 (D/E)	V12			S2	38	3469	PAINT, FLAMMABLE, CORROSIVE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, FLAMMABLE, CORROSIVE (including paint thinning and reducing compound)
L4BN		FL	2 (D/E)				S2	83	3470	PAINT, CORROSIVE, FLAMMABLE (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base) or PAINT RELATED MATERIAL, CORROSIVE, FLAMMABLE (including paint thinning and reducing compound)
L4DH	TU14 TE21	AT	2 (E)			CV13 CV28		86	3471	HYDROGENDIFLUORIDES SOLUTION, N.O.S.
L4DH	TU14 TE21	AT	3 (E)	V12		CV13 CV28		86	3471	HYDROGENDIFLUORIDES SOLUTION, N.O.S.
L4BN		AT	3 (E)	V12				80	3472	CROTONIC ACID, LIQUID

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
3473	FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT containing flammable liquids	3	F3		3	328	1 L	E0	P004				
3474	1-HYDROXYBENZO-TRIAZOLE MONOHYDRATE	4.1	D	I	4.1		0	E0	P406	PP48	MP2		
3475	ETHANOL AND GASOLINE MIXTURE or ETHANOL AND MOTOR SPIRIT MIXTURE or ETHANOL AND PETROL MIXTURE, with more than 10% ethanol	3	F1	II	3	333 363	1 L	E2	P001 IBC02		MP19	T4	TP1
3476	FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing water-reactive substances	4.3	W3		4.3	328 334	500 ml or 500 g	E0	P004				
3477	FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing corrosive substances	8	C11		8	328 334	1 L or 1 kg	E0	P004				
3478	FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing liquefied flammable gas	2	6F		2.1	328 338	120 ml	E0	P004				
3479	FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing hydrogen in metal hydride	2	6F		2.1	328 339	120 ml	E0	P004				
3480	LITHIUM ION BATTERIES (including lithium ion polymer batteries)	9	M4	II	9	188 230 310 348 636 661	0	E0	P903 P903a P903b				
3481	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or LITHIUM ION BATTERIES PACKED WITH EQUIPMENT (including lithium ion polymer batteries)	9	M4	II	9	188 230 348 360 636 661	0	E0	P903 P903a P903b				

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			3 (E)				S2		3473	FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT containing flammable liquids
			1 (B)				S17		3474	1-HYDROXYBENZO-TRIAZOLE MONOHYDRATE
LGBF		FL	2 (D/E)				S2 S20	33	3475	ETHANOL AND GASOLINE MIXTURE or ETHANOL AND MOTOR SPIRIT MIXTURE or ETHANOL AND PETROL MIXTURE, with more than 10% ethanol
			3 (E)	V1		CV23			3476	FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing water-reactive substances
			3 (E)						3477	FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing corrosive substances
			2 (B/D)			CV9 CV12	S2		3478	FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing liquefied flammable gas
			2 (B/D)			CV9 CV12	S2		3479	FUEL CELL CARTRIDGES or FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT or FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT, containing hydrogen in metal hydride
			2 (E)						3480	LITHIUM ION BATTERIES (including lithium ion polymer batteries)
			2 (E)						3481	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or LITHIUM ION BATTERIES PACKED WITH EQUIPMENT (including lithium ion polymer batteries)

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and		
							3.4	3.5.1.2	Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2 7.3.2	(10)	(11)
3482	ALKALI METAL DISPERSION, FLAMMABLE or ALKALINE EARTH METAL DISPERSION, FLAMMABLE	4.3	WF1	I	4.3 +3	182 183 506	0	E0	P402	RR8	MP2			
3483	MOTOR FUEL ANTI-KNOCK MIXTURE, FLAMMABLE	6.1	TF1	I	6.1 +3		0	E5	P602		MP8 MP17	T14	TP2	
3484	HYDRAZINE AQUEOUS SOLUTION, FLAMMABLE with more than 37% hydrazine, by mass	8	CFT	I	8 +3 +6.1	530	0	E0	P001		MP8 MP17	T10	TP2	
3485	CALCIUM HYPOCHLORITE, DRY, CORROSIVE or CALCIUM HYPOCHLORITE MIXTURE, DRY, CORROSIVE with more than 39% available chlorine (8.8% available oxygen)	5.1	OC2	II	5.1 +8	314	1 kg	E2	P002 IBC08	B4 B13	MP2			
3486	CALCIUM HYPOCHLORITE MIXTURE, DRY, CORROSIVE with more than 10% but not more than 39% available chlorine	5.1	OC2	III	5.1 +8	314	5 kg	E1	P002 IBC08 LP02 R001	B3 B13 L3	MP2			
3487	CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE or CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, CORROSIVE with not less than 5.5% but not more than 16% water	5.1	OC2	II	5.1 +8	314 322	1 kg	E2	P002 IBC08	B4 B13	MP2			
3487	CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE or CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, CORROSIVE with not less than 5.5% but not more than 16% water	5.1	OC2	III	5.1 +8	314	5 kg	E1	P002 IBC08 R001	B4 B13	MP2			
3488	TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	TFC	I	6.1 +3 +8	274	0	E0	P601		MP8 MP17	T22	TP2	
3489	TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	TFC	I	6.1 +3 +8	274	0	E0	P602		MP8 MP17	T20	TP2	
3490	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	6.1	TFW	I	6.1 +3 +4.3	274	0	E0	P601		MP8 MP17	T22	TP2	

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10BN (+)	TU1 TE5 TT3 TM2	FL	1 (B/E)	V1		CV23	S2 S20	X323	3482	ALKALI METAL DISPERSION, FLAMMABLE or ALKALINE EARTH METAL DISPERSION, FLAMMABLE
L10CH	TU14 TU15 TE19 TE21 TT6	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3483	MOTOR FUEL ANTI-KNOCK MIXTURE, FLAMMABLE
L10BH		FL	1 (C/D)			CV13 CV28	S2 S14	886	3484	HYDRAZINE AQUEOUS SOLUTION, FLAMMABLE with more than 37% hydrazine, by mass
SGAN	TU3	AT	2 (E)	V11		CV24 CV35		58	3485	CALCIUM HYPOCHLORITE, DRY, CORROSIVE or CALCIUM HYPOCHLORITE MIXTURE, DRY, CORROSIVE with more than 39% available chlorine (8.8% available oxygen)
SGAN	TU3	AT	3 (E)			CV24 CV35		58	3486	CALCIUM HYPOCHLORITE MIXTURE, DRY, CORROSIVE with more than 10% but not more than 39% available chlorine
SGAN	TU3	AT	2 (E)	V11		CV24 CV35		58	3487	CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE or CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, CORROSIVE with not less than 5.5% but not more than 16% water
SGAN	TU3	AT	3 (E)			CV24 CV35		58	3487	CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE or CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, CORROSIVE with not less than 5.5% but not more than 16% water
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3488	TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3489	TOXIC BY INHALATION LIQUID, FLAMMABLE, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	623	3490	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀

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UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited and quantities		Packaging			Portable tanks and	
									Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
3491	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	6.1	TFW	I	6.1 +3 +4.3	274	0	E0	P602		MP8 MP17	T20	TP2
3494	PETROLEUM SOUR CRUDE OIL, FLAMMABLE, TOXIC	3	FT1	I	3 +6.1	343	0	E0	P001		MP7 MP17	T14	TP2
3494	PETROLEUM SOUR CRUDE OIL, FLAMMABLE, TOXIC	3	FT1	II	3 +6.1	343	1 L	E2	P001 IBC02		MP19	T7	TP2
3494	PETROLEUM SOUR CRUDE OIL, FLAMMABLE, TOXIC	3	FT1	III	3 +6.1	343	5 L	E1	P001 IBC03 R001		MP19	T4	TP1
3495	IODINE	8	CT2	III	8 +6.1	279	5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33
3496	Batteries, nickel-metal hydride	9	M11	NOT SUBJECT TO ADR									
3497	KRILL MEAL	4.2	S2	II	4.2	300	0	E2	P410 IBC06		MP14	T3	TP33
3497	KRILL MEAL	4.2	S2	III	4.2	300	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
3498	IODINE MONOCHLORIDE, LIQUID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
3499	CAPACITOR, electric double layer (with an energy storage capacity greater than 0.3 Wh)	9	M11		9	361	0	E0	P003				
3500	CHEMICAL UNDER PRESSURE, N.O.S.	2	8A		2.2	274 659	0	E0	P206		MP9	T50	TP4 TP40
3501	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.	2	8F		2.1	274 659	0	E0	P206	PP89	MP9	T50	TP4 TP40
3502	CHEMICAL UNDER PRESSURE, TOXIC, N.O.S.	2	8T		2.2 +6.1	274 659	0	E0	P206	PP89	MP9	T50	TP4 TP40
3503	CHEMICAL UNDER PRESSURE, CORROSIVE, N.O.S.	2	8C		2.2 +8	274 659	0	E0	P206	PP89	MP9	T50	TP4 TP40
3504	CHEMICAL UNDER PRESSURE, FLAMMABLE, TOXIC, N.O.S.	2	8TF		2.1 +6.1	274 659	0	E0	P206	PP89	MP9	T50	TP4 TP40
3505	CHEMICAL UNDER PRESSURE, FLAMMABLE, CORROSIVE, N.O.S.	2	8FC		2.1 +8	274 659	0	E0	P206	PP89	MP9	T50	TP4 TP40
3506	MERCURY CONTAINED IN MANUFACTURED ARTICLES	8	CT3	III	8 +6.1	366	5 kg	E0	P003	PP90	MP15		

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ADR tank		Vehicle for tank carriage	Transport category (Tunnel restriction code)	Special provisions for carriage				Hazard identification No.	UN No.	Name and description
Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	623	3491	TOXIC BY INHALATION LIQUID, WATER-REACTIVE, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	3494	PETROLEUM SOUR CRUDE OIL, FLAMMABLE, TOXIC
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	3494	PETROLEUM SOUR CRUDE OIL, FLAMMABLE, TOXIC
L4BH	TU15	FL	3 (D/E)	V12		CV13 CV28	S2	36	3494	PETROLEUM SOUR CRUDE OIL, FLAMMABLE, TOXIC
SGAV L4BN		AT	3 (E)		VV9	CV13 CV28		86	3495	IODINE
NOT SUBJECT TO ADR									3496	Batteries, nickel-metal hydride
SGAN		AT	2 (D/E)	V1				40	3497	KRILL MEAL
SGAV		AT	3 (E)	V1	VV4			40	3497	KRILL MEAL
L4BN		AT	2 (E)					80	3498	IODINE MONOCHLORIDE, LIQUID
			4 (E)						3499	CAPACITOR, electric double layer (with an energy storage capacity greater than 0.3 Wh)
		AT	3 (C/E)			CV9 CV10 CV12 CV36		20	3500	CHEMICAL UNDER PRESSURE, N.O.S.
		FL	2 (B/D)			CV9 CV10 CV12 CV36	S2	23	3501	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.
		AT	1 (C/D)			CV9 CV10 CV12 CV28 CV36		26	3502	CHEMICAL UNDER PRESSURE, TOXIC, N.O.S.
		AT	1 (C/D)			CV9 CV10 CV12 CV36		28	3503	CHEMICAL UNDER PRESSURE, CORROSIVE, N.O.S.
		FL	1 (B/D)			CV9 CV10 CV12 CV28 CV36	S2	263	3504	CHEMICAL UNDER PRESSURE, FLAMMABLE, TOXIC, N.O.S.
		FL	1 (B/D)			CV9 CV10 CV12 CV36	S2	238	3505	CHEMICAL UNDER PRESSURE, FLAMMABLE, CORROSIVE, N.O.S.
			3 (E)			CV13 CV28			3506	MERCURY CONTAINED IN MANUFACTURED ARTICLES

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3.2.2 **Table B: Alphabetic index of substances and articles of ADR**

This index is an alphabetical list of the substances and articles which are listed in the UN numerical order in Table A of 3.2.1. It does not form an integral part of ADR. It has been submitted neither to the Working Party on the Transport of Dangerous Goods of the Inland Transport Committee for checking and approval nor to the Contracting Parties to ADR for formal acceptance. It has been prepared, with all necessary care by the Secretariat of the United Nations Economic Commission for Europe, in order to facilitate the consultation of Annexes A and B, but it cannot be relied upon as a substitute for the careful study and observance of the actual provisions of those annexes which, in case of conflict, are deemed to be authoritative.

***NOTE 1:** For the purpose of determining the alphabetical order the following information has been ignored, even when it forms part of the proper shipping name: numbers; Greek letters; the abbreviations "sec" and "tert"; and the letters "N" (nitrogen), "n" (normal), "o" (ortho), "m" (meta), "p" (para) and "N.O.S." (not otherwise specified).*

***NOTE 2:** The name of a substance or article in block capital letters indicates a proper shipping name (see 3.1.2).*

***NOTE 3:** The name of a substance or article in block capital letters followed by the word "see" indicates an alternative proper shipping name or part of a proper shipping name (except for PCBs) (see 3.1.2.1).*

***NOTE 4:** An entry in lower case letters followed by the word "see" indicates that the entry is not a proper shipping name; it is a synonym.*

***NOTE 5:** Where an entry is partly in block capital letters and partly in lower case letters, the latter part is considered not to be part of the proper shipping name (see 3.1.2.1).*

***NOTE 6:** A proper shipping name may be used in the singular or plural, as appropriate, for the purposes of documentation and package marking (see 3.1.2.3).*

***NOTE 7:** For the exact determination of a proper shipping name, see 3.1.2.*

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Name and description	UN No.	Class	Remarks	Name and description	UN No.	Class	Remarks
Accumulators, electric, see	2794	8		ADHESIVES containing flammable liquid	1133	3	
	2795	8					
	2800	8		ADIPONITRILE	2205	6.1	
	3028	8		Aeroplane flares, see	0093	1	
	3292	4.3			0403	1	
ACETAL	1088	3			0404	1	
ACETALDEHYDE	1089	3			0420	1	
ACETALDEHYDE AMMONIA	1841	9			0421	1	
ACETALDEHYDE OXIME	2332	3		AEROSOLS	1950	2	
ACETIC ACID, GLACIAL	2789	8		AGENT, BLASTING, TYPE B	0331	1	
ACETIC ACID SOLUTION, more than 10% but not more than 80% acid, by mass	2790	8		AGENT, BLASTING, TYPE E	0332	1	
ACETIC ACID SOLUTION, more than 80% acid, by mass	2789	8		AIR BAG INFLATORS	0503	1	
ACETIC ANHYDRIDE	1715	8			3268	9	
Acetoin, see	2621	3		AIR BAG MODULES	0503	1	
ACETONE	1090	3			3268	9	
ACETONE CYANOHYDRIN, STABILIZED	1541	6.1		AIR, COMPRESSED	1002	2	
ACETONE OILS	1091	3		Aircraft evacuation slides, see	2990	9	
ACETONITRILE	1648	3		AIRCRAFT HYDRAULIC POWER UNIT FUEL TANK (containing a mixture of anhydrous hydrazine and methylhydrazine) (M86 fuel)	3165	3	
ACETYL BROMIDE	1716	8		Aircraft survival kits, see	2990	9	
ACETYL CHLORIDE	1717	3		AIR, REFRIGERATED LIQUID	1003	2	
ACETYLENE, DISSOLVED	1001	2		ALCOHOLATES SOLUTION, N.O.S., in alcohol	3274	3	
ACETYLENE, SOLVENT FREE	3374	2		Alcohol, denaturated, see	1986	3	
Acetylene tetrabromide, see	2504	6.1			1987	3	
Acetylene tetrachloride, see	1702	6.1		Alcohol, industrial, see	1986	3	
ACETYL IODIDE	1898	8			1987	3	
ACETYL METHYL CARBINOL	2621	3		ALCOHOLS, N.O.S.	1987	3	
Acid butyl phosphate, see	1718	8		ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.	1986	3	
Acid mixture, hydrofluoric and sulphuric, see	1786	8		ALCOHOLIC BEVERAGES, with more than 24% but not more than 70% alcohol by volume	3065	3	
Acid mixture, nitrating acid, see	1796	8		ALCOHOLIC BEVERAGES, with more than 70% alcohol by volume	3065	3	
Acid mixture, spent, nitrating acid, see	1826	8		Aldehyde, see	1989	3	
Acraldehyde, inhibited, see	1092	6.1		ALDEHYDES, N.O.S.	1989	3	
ACRIDINE	2713	6.1		ALDEHYDES, FLAMMABLE, TOXIC, N.O.S.	1988	3	
ACROLEIN DIMER, STABILIZED	2607	3		ALDOL	2839	6.1	
ACROLEIN, STABILIZED	1092	6.1		ALKALI METAL ALCOHOLATES, SELF-HEATING, CORROSIVE, N.O.S.	3206	4.2	
ACRYLAMIDE, SOLID	2074	6.1		ALKALI METAL ALLOY, LIQUID, N.O.S.	1421	4.3	
ACRYLAMIDE, SOLUTION	3426	6.1		ALKALI METAL AMALGAM, LIQUID	1389	4.3	
ACRYLIC ACID, STABILIZED	2218	8		ALKALI METAL AMALGAM, SOLID	3401	4.3	
ACRYLONITRILE, STABILIZED	1093	3		ALKALI METAL AMIDES	1390	4.3	
Actinolite, see	2590	9					
Activated carbon, see	1362	4.2					
Activated charcoal, see	1362	4.2					

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Name and description	UN No.	Class	Remarks	Name and description	UN No.	Class	Remarks
ALKALI METAL DISPERSION	1391	4.3		ALLYL GLYCIDYL ETHER	2219	3	
ALKALI METAL DISPERSION, FLAMMABLE	3482	4.3		ALLYL IODIDE	1723	3	
Alkaline corrosive battery fluid, see	2797	8		ALLYL ISOTHIOCYANATE, STABILIZED	1545	6.1	
ALKALINE EARTH METAL ALCOHOLATES, N.O.S.	3205	4.2		ALLYLTRICHLOROSILANE, STABILIZED	1724	8	
ALKALINE EARTH METAL ALLOY, N.O.S.	1393	4.3		Aluminium alkyls, see	3394	4.2	
ALKALINE EARTH METAL AMALGAM, LIQUID	1392	4.3		Aluminium alkyl halides, liquid, see	3394	4.2	
ALKALINE EARTH METAL AMALGAM, SOLID	3402	4.3		Aluminium alkyl halides, solid, see	3393	4.2	
ALKALINE EARTH METAL DISPERSION	1391	4.3		Aluminium alkyl hydrides, see	3394	4.2	
ALKALINE EARTH METAL DISPERSION, FLAMMABLE	1391	4.3		ALUMINIUM BOROHYDRIDE	2870	4.2	
ALKALOIDS, LIQUID, N.O.S.	3140	6.1		ALUMINIUM BOROHYDRIDE IN DEVICES	2870	4.2	
ALKALOIDS, SOLID, N.O.S.	1544	6.1		ALUMINIUM BROMIDE, ANHYDROUS	1725	8	
ALKALOID SALTS, LIQUID, N.O.S.	3140	6.1		ALUMINIUM BROMIDE SOLUTION	2580	8	
ALKALOID SALTS, SOLID, N.O.S.	1544	6.1		ALUMINIUM CARBIDE	1394	4.3	
Alkyl aluminium halides, see	3394	4.2		ALUMINIUM CHLORIDE, ANHYDROUS	1726	8	
ALKYLPHENOLS, LIQUID, N.O.S. (including C ₂ -C ₁₂ homologues)	3145	8		ALUMINIUM CHLORIDE SOLUTION	2581	8	
ALKYLPHENOLS, SOLID, N.O.S. (including C ₂ -C ₁₂ homologues)	2430	8		Aluminium dross, see	3170	4.3	
ALKYLSULPHONIC ACIDS, LIQUID with more than 5% free sulphuric acid	2584	8		ALUMINIUM FERROSILICON POWDER	1395	4.3	
ALKYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid	2586	8		ALUMINIUM HYDRIDE	2463	4.3	
ALKYLSULPHONIC ACIDS, SOLID with more than 5% free sulphuric acid	2583	8		ALUMINIUM NITRATE	1438	5.1	
ALKYLSULPHONIC ACIDS, SOLID with not more than 5% free sulphuric acid	2585	8		ALUMINIUM PHOSPHIDE	1397	4.3	
ALKYLSULPHURIC ACIDS	2571	8		ALUMINIUM PHOSPHIDE PESTICIDE	3048	6.1	
Allene, see	2200	2		ALUMINIUM POWDER, COATED	1309	4.1	
ALLYL ACETATE	2333	3		ALUMINIUM POWDER, UNCOATED	1396	4.3	
ALLYL ALCOHOL	1098	6.1		ALUMINIUM REMELTING BY-PRODUCTS	3170	4.3	
ALLYLAMINE	2334	6.1		ALUMINIUM RESINATE	2715	4.1	
ALLYL BROMIDE	1099	3		ALUMINIUM SILICON POWDER, UNCOATED	1398	4.3	
ALLYL CHLORIDE	1100	3		ALUMINIUM SMELTING BY-PRODUCTS	3170	4.3	
Allyl chlorocarbonate, see	1722	6.1		Amatols, see	0082	1	
ALLYL CHLOROFORMATE	1722	6.1		AMINES, FLAMMABLE, CORROSIVE, N.O.S.	2733	3	
ALLYL ETHYL ETHER	2335	3		AMINES, LIQUID, CORROSIVE, N.O.S.	2735	8	
ALLYL FORMATE	2336	3		AMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.	2734	8	
				AMINES, SOLID, CORROSIVE, N.O.S.	3259	8	
				Aminobenzene, see	1547	6.1	

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Name and description	UN No.	Class	Remarks	Name and description	UN No.	Class	Remarks
2-Aminobenzotrifluoride, see	2942	6.1		AMMONIUM HYDROGENDIFLUORIDE SOLUTION	2817	8	
3-Aminobenzotrifluoride, see	2948	6.1					
Aminobutane, see	1125	3		AMMONIUM HYDROGEN SULPHATE	2506	8	
2-AMINO-4-CHLOROPHENOL	2673	6.1		Ammonium hydrosulphide solution (treat as ammonium sulphide solution), see	2683	8	
2-AMINO-5-DIETHYL-AMINOPENTANE	2946	6.1		AMMONIUM METAVANADATE	2859	6.1	
2-AMINO-4,6-DINITROPHENOL, WETTED with not less than 20% water, by mass	3317	4.1		AMMONIUM NITRATE with more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance	0222	1	
2-(2-AMINOETHOXY) ETHANOL	3055	8					
N-AMINOETHYLPIPERAZINE	2815	8		AMMONIUM NITRATE with not more than 0.2% total combustible material, including any organic substance calculated as carbon, to the exclusion of any other added substance	1942	5.1	
1-Amino-2-nitrobenzene, see	1661	6.1					
1-Amino-3-nitrobenzene, see	1661	6.1					
1-Amino-4-nitrobenzene, see	1661	6.1					
AMINOPHENOLS (o-, m-, p-)	2512	6.1		AMMONIUM NITRATE EMULSION, intermediate for blasting explosives, liquid	3375	5.1	
AMINOPYRIDINES (o-, m-, p-)	2671	6.1					
AMMONIA, ANHYDROUS	1005	2		AMMONIUM NITRATE EMULSION, intermediate for blasting explosives, solid	3375	5.1	
AMMONIA SOLUTION relative density between 0.880 and 0.957 at 15 °C in water, with more than 10% but not more than 35% ammonia	2672	8		Ammonium nitrate explosive, see	0082 0331	1 1	
AMMONIA SOLUTION, relative density less than 0.880 at 15 °C in water, with more than 35% but not more than 50% ammonia	2073	2		AMMONIUM NITRATE BASED FERTILIZER	2067	5.1	
AMMONIA SOLUTION, relative density less than 0.880 at 15 °C in water, with more than 50% ammonia	3318	2		Ammonium nitrate based fertilizer, uniform mixtures of the nitrogen/phosphate, nitrogen/potash or nitrogen/phosphate/potash type, containing not more than 70% ammonium nitrate and not more than 0.4% total combustible/organic material calculated as carbon or with not more than 45% ammonium nitrate and unrestricted combustible material	2071	9	Not subject to ADR
AMMONIUM ARSENATE	1546	6.1					
Ammonium bichromate, see	1439	5.1					
Ammonium bifluoride solid, see	1727	8		AMMONIUM NITRATE GEL, intermediate for blasting explosives, liquid	3375	5.1	
Ammonium bifluoride solution, see	2817	8					
Ammonium bisulphate, see	2506	8		AMMONIUM NITRATE GEL, intermediate for blasting explosives, solid	3375	5.1	
Ammonium bisulphite solution, see	2693	8					
AMMONIUM DICHROMATE	1439	5.1		AMMONIUM NITRATE, LIQUID hot concentrated solution, in a concentration of more than 80% but not more than 93%	2426	5.1	
AMMONIUM DINITRO-o-CRESOLATE, SOLID	1843	6.1		AMMONIUM NITRATE SUSPENSION, intermediate for blasting explosives, liquid	3375	5.1	
AMMONIUM DINITRO-o-CRESOLATE, SOLUTION	3424	6.1					
AMMONIUM FLUORIDE	2505	6.1		AMMONIUM NITRATE SUSPENSION, intermediate for blasting explosives, solid	3375	5.1	
AMMONIUM FLUORO-SILICATE	2854	6.1					
Ammonium hexafluorosilicate, see	2854	6.1					
AMMONIUM HYDROGENDIFLUORIDE, SOLID	1727	8					

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Name and description	UN No.	Class	Remarks	Name and description	UN No.	Class	Remarks
AMMONIUM PERCHLORATE	0402	1		AMMUNITION, SMOKE with or without burster, expelling charge or propelling charge	0015	1	
	1442	5.1			0016	1	
Ammonium permanganate, see	1482	5.1			0303	1	
AMMONIUM PERSULPHATE	1444	5.1		Ammunition, smoke (water-activated contrivances), white phosphorus with burster, expelling charge or propelling charge, see	0248	1	
AMMONIUM PICRATE dry or wetted with less than 10% water, by mass	0004	1		Ammunition, smoke (water-activated contrivances), without white phosphorus or phosphides with burster, expelling charge or propelling charge, see	0249	1	
AMMONIUM PICRATE, WETTED with not less than 10% water, by mass	1310	4.1		AMMUNITION, SMOKE, WHITE PHOSPHORUS with burster, expelling charge or propelling charge	0245	1	
AMMONIUM POLYSULPHIDE SOLUTION	2818	8			0246	1	
AMMONIUM POLYVANADATE	2861	6.1		Ammunition, sporting, see	0012	1	
Ammonium silicofluoride, see	2854	6.1			0328	1	
AMMONIUM SULPHIDE SOLUTION	2683	8			0339	1	
Ammunition, blank, see	0014	1			0417	1	
	0326	1		AMMUNITION, TEAR-PRODUCING, NON-EXPLOSIVE without burster or expelling charge, non-fuzed	2017	6.1	
	0327	1					
	0338	1		AMMUNITION, TEAR-PRODUCING with burster, expelling charge or propelling charge	0018	1	
	0413	1			0019	1	
Ammunition, fixed	0005	1			0301	1	
Ammunition, semi-fixed	0006	1		AMMUNITION, TOXIC with burster, expelling charge or propelling charge	0020	1	Carriage prohibited
Ammunition, separate loading, see	0007	1			0021	1	Carriage prohibited
	0321	1		Ammunition, toxic (water-activated contrivances) with burster, expelling charge or propelling charge, see	0248	1	
	0348	1			0249	1	
	0412	1		AMMUNITION, TOXIC, NON-EXPLOSIVE without burster or expelling charge, non-fuzed	2016	6.1	
AMMUNITION, ILLUMINATING with or without burster, expelling charge or propelling charge	0171	1		Amosite, see	2212	9	
	0254	1		AMYL ACETATES	1104	3	
	0297	1		AMYL ACID PHOSPHATE	2819	8	
AMMUNITION, INCENDIARY, liquid or gel, with burster, expelling charge or propelling charge	0247	1		Amyl aldehyde, see	2058	3	
AMMUNITION, INCENDIARY with or without burster, expelling charge or propelling charge	0009	1		AMYLAMINE	1106	3	
	0010	1		AMYL BUTYRATES	2620	3	
	0300	1		AMYL CHLORIDE	1107	3	
Ammunition, incendiary (water-activated contrivances) with burster, expelling charge or propelling charge, see	0248	1		n-AMYLENE, see	1108	3	
	0249	1		AMYL FORMATES	1109	3	
AMMUNITION, INCENDIARY, WHITE PHOSPHORUS with burster, expelling charge or propelling charge	0243	1		AMYL MERCAPTAN	1111	3	
	0244	1		n-AMYL METHYL KETONE	1110	3	
Ammunition, industrial, see	0275	1		AMYL NITRATE	1112	3	
	0276	1		AMYL NITRITE	1113	3	
	0277	1					
	0278	1					
	0323	1					
	0381	1					
Ammunition, lachrymatory, see	0018	1					
	0019	1					
	0301	1					
	2017	1					
AMMUNITION, PRACTICE	0362	1					
	0488	1					
AMMUNITION, PROOF	0363	1					

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AMYLTRICHLOROSILANE	1728	8		ARSENICAL PESTICIDE, SOLID, TOXIC	2759	6.1	
Anaesthetic ether, see	1155	3		ARSENIC BROMIDE	1555	6.1	
ANILINE	1547	6.1		Arsenic (III) bromide, see	1555	6.1	
Aniline chloride, see	1548	6.1		Arsenic chloride, see	1560	6.1	
ANILINE HYDROCHLORIDE	1548	6.1		ARSENIC COMPOUND, LIQUID, N.O.S., inorganic, including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	1556	6.1	
Aniline oil, see	1547	6.1		ARSENIC COMPOUND, SOLID, N.O.S., inorganic, including: Arsenates, n.o.s.; Arsenites, n.o.s.; and Arsenic sulphides, n.o.s.	1557	6.1	
Aniline salt, see	1548	6.1		Arsenic (III) oxide, see	1561	6.1	
ANISIDINES	2431	6.1		Arsenic (V) oxide, see	1559	6.1	
ANISOLE	2222	3		ARSENIC PENTOXIDE	1559	6.1	
ANISOYL CHLORIDE	1729	8		Arsenic sulphides, see	1556	6.1	
Anthophyllite, see	2590	9		1557	6.1		
Antimonous chloride, see	1733	8		ARSENIC TRICHLORIDE	1560	6.1	
ANTIMONY COMPOUND, INORGANIC, LIQUID, N.O.S.	3141	6.1		ARSENIC TRIOXIDE	1561	6.1	
ANTIMONY COMPOUND, INORGANIC, SOLID, N.O.S.	1549	6.1		Arsenious chloride, see	1560	6.1	
Antimony hydride, see	2676	2		Arsenites, n.o.s., see	1556	6.1	
ANTIMONY LACTATE	1550	6.1		1557	6.1		
Antimony (III) lactate, see	1550	6.1		Arsenous chloride, see	1560	6.1	
ANTIMONY PENTACHLORIDE, LIQUID	1730	8		ARSINE	2188	2	
ANTIMONY PENTACHLORIDE SOLUTION	1731	8		ARTICLES, EEI, see	0486	1	
ANTIMONY PENTAFLUORIDE	1732	8		ARTICLES, EXPLOSIVE, EXTREMELY INSENSITIVE	0486	1	
Antimony perchloride, liquid, see	1730	8		ARTICLES, EXPLOSIVE, N.O.S.	0349	1	
ANTIMONY POTASSIUM TARTRATE	1551	6.1		0350	1		
ANTIMONY POWDER	2871	6.1		0351	1		
ANTIMONY TRICHLORIDE	1733	8		0352	1		
A.n.t.u., see	1651	6.1		0353	1		
ARGON, COMPRESSED	1006	2		0354	1		
ARGON, REFRIGERATED LIQUID	1951	2		0355	1		
Arsenates, n.o.s., see	1556	6.1		0356	1		
	1557	6.1		0462	1		
ARSENIC	1558	6.1		0463	1		
ARSENIC ACID, LIQUID	1553	6.1		0464	1		
ARSENIC ACID, SOLID	1554	6.1		0465	1		
ARSENICAL DUST	1562	6.1		0466	1		
Arsenical flue dust, see	1562	6.1		0467	1		
ARSENICAL PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	2760	3		0468	1		
ARSENICAL PESTICIDE, LIQUID, TOXIC	2994	6.1		0469	1		
ARSENICAL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	2993	6.1		0470	1		
				0471	1		
				0472	1		
				ARTICLES, PRESSURIZED, HYDRAULIC (containing non-flammable gas)	3164	2	
				ARTICLES, PRESSURIZED, PNEUMATIC (containing non-flammable gas)	3164	2	
				ARTICLES, PYROPHORIC	0380	1	

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ARTICLES, PYROTECHNIC for technical purposes	0428	1		BARIUM NITRATE	1446	5.1	
	0429	1		BARIUM OXIDE	1884	6.1	
	0430	1		BARIUM PERCHLORATE, SOLID	1447	5.1	
	0431	1		BARIUM PERCHLORATE, SOLUTION	3406	5.1	
	0432	1		BARIUM PERMANGANATE	1448	5.1	
ARYLSULPHONIC ACIDS, LIQUID with more than 5% free sulphuric acid	2584	8		BARIUM PEROXIDE	1449	5.1	
ARYLSULPHONIC ACIDS, LIQUID with not more than 5% free sulphuric acid	2586	8		Barium selenate, see	2630	6.1	
				Barium selenite, see	2630	6.1	
ARYLSULPHONIC ACIDS, SOLID with more than 5% free sulphuric acid	2583	8		Barium superoxide, see	1449	5.1	
				BATTERIES, CONTAINING SODIUM	3292	4.3	
ARYLSULPHONIC ACIDS, SOLID with not more than 5% free sulphuric acid	2585	8		BATTERIES, DRY, CONTAINING POTASSIUM HYDROXIDE	3028	8	
				SOLID, electric storage			
Asbestos, blue or brown, see	2212	9		Batteries, nickel-metal hydride	3496	9	Not subject to ADR
Asbestos, white, see	2590	9		BATTERIES, WET, FILLED WITH ACID, electric storage	2794	8	
Asphalt, with a flash-point above 60 °C, at or above its flash-point, see	3256	3		BATTERIES, WET, FILLED WITH ALKALI, electric storage	2795	8	
Asphalt, at or above 100 °C and below its flash-point, see	3257	9		BATTERIES, WET, NON-SPILLABLE, electric storage	2800	8	
Aviation regulated liquid, n.o.s.	3334	9	Not subject to ADR	BATTERY FLUID, ACID	2796	8	
Aviation regulated solid, n.o.s.	3335	9	Not subject to ADR	BATTERY FLUID, ALKALI	2797	8	
				Battery-powered vehicle or Battery-powered equipment	3171	9	Not subject to ADR, see also special provision 240 of Chapter 3.3.
AZODICARBONAMIDE	3242	4.1		BENZALDEHYDE	1990	9	
Bag charges, see	0242	1		BENZENE	1114	3	
	0279	1		BENZENESULPHONYL CHLORIDE	2225	8	
	0414	1		Benzenethiol, see	2337	6.1	
Ballistite, see	0160	1		BENZIDINE	1885	6.1	
	0161	1		Benzol, see	1114	3	
Bangalore torpedoes, see	0136	1		Benzolene, see	1268	3	
	0137	1		BENZONITRILE	2224	6.1	
	0138	1		BENZOQUINONE	2587	6.1	
	0294	1		Benzosulphochloride, see	2225	8	
BARIUM	1400	4.3		BENZOTRICHLORIDE	2226	8	
BARIUM ALLOYS, PYROPHORIC	1854	4.2		BENZOTRIFLUORIDE	2338	3	
BARIUM AZIDE, dry or wetted with less than 50% water, by mass	0224	1		BENZOYL CHLORIDE	1736	8	
BARIUM AZIDE, WETTED with not less than 50% water, by mass	1571	4.1		BENZYL BROMIDE	1737	6.1	
				BENZYL CHLORIDE	1738	6.1	
Barium binoxide, see	1449	5.1		Benzyl chlorocarbonate, see	1739	8	
BARIUM BROMATE	2719	5.1		BENZYL CHLOROFORMATE	1739	8	
BARIUM CHLORATE, SOLID	1445	5.1					
BARIUM CHLORATE, SOLUTION	3405	5.1					
BARIUM COMPOUND, N.O.S.	1564	6.1					
BARIUM CYANIDE	1565	6.1					
Barium dioxide, see	1449	5.1					
BARIUM HYPOCHLORITE with more than 22% available chlorine	2741	5.1					

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Benzyl cyanide, see	2470	6.1		Bombs, illuminating, see	0254	1	
BENZYLDIMETHYLAMINE	2619	8		BOMBS, PHOTO-FLASH	0037	1	
BENZYLIDENE CHLORIDE	1886	6.1			0038	1	
BENZYL IODIDE	2653	6.1			0039	1	
BERYLLIUM COMPOUND, N.O.S.	1566	6.1		BOMBS, SMOKE, NON- EXPLOSIVE with corrosive liquid, without initiating device	0299	1	
BERYLLIUM NITRATE	2464	5.1			2028	8	
BERYLLIUM POWDER	1567	6.1		Bombs, target identification, see	0171	1	
Bhusa	1327	4.1	Not subject to ADR		0254	1	
					0297	1	
BICYCLO[2.2.1]HEPTA-2,5- DIENE, STABILIZED	2251	3		BOMBS WITH FLAMMABLE LIQUID with bursting charge	0399	1	
Bifluorides, n.o.s., see	1740	8			0400	1	
BIOLOGICAL SUBSTANCE, CATEGORY B	3373	6.2		BOOSTERS WITH DETONATOR	0225	1	
(BIO) MEDICAL WASTE, N.O.S.	3291	6.2			0268	1	
BIPYRIDILIUM PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	2782	3		BOOSTERS without detonator	0042	1	
BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC	3016	6.1			0283	1	
BIPYRIDILIUM PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	3015	6.1		Borate and chlorate mixture, see	1458	5.1	
BIPYRIDILIUM PESTICIDE, SOLID, TOXIC	2781	6.1		BORNEOL	1312	4.1	
BISULPHATES, AQUEOUS SOLUTION	2837	8		BORON TRIBROMIDE	2692	8	
BISULPHITES, AQUEOUS SOLUTION, N.O.S.	2693	8		BORON TRICHLORIDE	1741	2	
Bitumen, with a flash-point above 60 °C, at or above its flash-point, see	3256	3		BORON TRIFLUORIDE ACETIC ACID COMPLEX, LIQUID	1742	8	
Bitumen, at or above 100 °C and below its flash-point, see	3257	9		BORON TRIFLUORIDE ACETIC ACID COMPLEX, SOLID	3419	8	
BLACK POWDER, COMPRESSED	0028	1		BORON TRIFLUORIDE	1008	2	
BLACK POWDER, granular or as a meal	0027	1		BORON TRIFLUORIDE DIETHYL ETHERATE	2604	8	
BLACK POWDER, IN PELLETS	0028	1		BORON TRIFLUORIDE	2851	8	
Blasting cap assemblies, see	0360	1		BORON TRIFLUORIDE DIHYDRATE	2965	4.3	
	0361	1		BORON TRIFLUORIDE DIMETHYL ETHERATE	1743	8	
Blasting caps, electric, see	0030	1		BORON TRIFLUORIDE PROPIONIC ACID COMPLEX, LIQUID	1743	8	
	0255	1		BORON TRIFLUORIDE	3420	8	
	0456	1		BORON TRIFLUORIDE PROPIONIC ACID COMPLEX, SOLID			
Blasting caps, non electric, see	0029	1		BROMATES, INORGANIC, N.O.S.	1450	5.1	
	0267	1		BROMATES, INORGANIC, AQUEOUS SOLUTION, N.O.S	3213	5.1	
	0455	1		BROMINE	1744	8	
Bleaching powder, see	2208	5.1		BROMINE CHLORIDE	2901	2	
BLUE ASBESTOS (crocidolite)	2212	9		BROMINE PENTAFLUORIDE	1745	5.1	
BOMBS with bursting charge	0033	1		BROMINE SOLUTION	1744	8	
	0034	1		BROMINE TRIFLUORIDE	1746	5.1	
	0035	1		BROMOACETIC ACID, SOLID	3425	8	
	0291	1		BROMOACETIC ACID, SOLUTION	1938	8	
				BROMOACETONE	1569	6.1	
				omega-Bromoacetone, see	2645	6.4	

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BROMOACETYL BROMIDE	2513	8		Butanone, see	1193	3	
BROMOBENZENE	2514	3		2-Butenal, see	1143	6.1	
BROMOBENZYL CYANIDES, LIQUID	1694	6.1		Butene, see	1012	2	
BROMOBENZYL CYANIDES, SOLID	3449	6.1		Bute-1-ene-3-one, see	1251	3	
1-BROMOBUTANE	1126	3		1,2-Buteneoxide, see	3022	3	
2-BROMOBUTANE	2339	3		2-Buten-1-ol, see	2614	3	
BROMOCHLOROMETHANE	1887	6.1		BUTYL ACETATES	1123	3	
1-BROMO-3-CHLOROPROPANE	2688	6.1		Butyl acetate, secondary, see	1123	3	
1-Bromo-2,3-epoxypropane, see	2558	6.1		BUTYL ACID PHOSPHATE	1718	8	
Bromoethane, see	1891	6.1		BUTYL ACRYLATES, STABILIZED	2348	3	
2-BROMOETHYL ETHYL ETHER	2340	3		Butyl alcohols, see	1120	3	
BROMOFORM	2515	6.1		n-BUTYLAMINE	1125	3	
Bromomethane, see	1062	2		N-BUTYLANILINE	2738	6.1	
1-BROMO-3-METHYLBUTANE	2341	3		sec-Butyl benzene, see	2709	3	
BROMOMETHYLPROPANES	2342	3		BUTYLBENZENES	2709	3	
2-BROMO-2-NITROPROPANE-1,3-DIOL	3241	4.1		n-Butyl bromide, see	1126	3	
2-BROMOPENTANE	2343	3		n-Butyl chloride, see	1127	3	
BROMOPROPANES	2344	3		n-BUTYL CHLOROFORMATE	2743	6.1	
3-BROMOPROPYNE	2345	3		tert-BUTYLCYCLOHEXYL CHLOROFORMATE	2747	6.1	
BROMOTRIFLUOROETHYLENE	2419	2		BUTYLENES MIXTURE or 1-BUTYLENE or CIS-2-BUTYLENE or TRANS-2-BUTYLENE	1012	2	
BROMOTRIFLUOROMETHANE	1009	2		1,2-BUTYLENE OXIDE, STABILIZED	3022	3	
BROWN ASBESTOS (amosite, mysorite)	2212	9		Butyl ethers, see	1149	3	
BRUCINE	1570	6.1		Butyl ethyl ether, see	1179	3	
BURSTERS, explosive	0043	1		n-BUTYL FORMATE	1128	3	
BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, having a vapour pressure at 70 °C not exceeding 1.1 MPa (11 bar) and a density at 50 °C not lower than 0.525 kg/l	1010	2		tert-BUTYL HYPOCHLORITE	3255	4.2	Carriage prohibited
BUTADIENES, STABILIZED, (1,2-butadiene)	1010	2		N,n-BUTYLIMIDAZOLE	2690	6.1	
BUTADIENES, STABILIZED, (1,3-butadiene)	1010	2		N,n-Butyliminazole, see	2690	6.1	
BUTANE	1011	2		n-BUTYL ISOCYANATE	2485	6.1	
BUTANEDIONE	2346	3		tert-BUTYL ISOCYANATE	2484	6.1	
Butane-1-thiol, see	2347	3		Butyl lithium, see	3394	4.2	
BUTANOLS	1120	3		BUTYL MERCAPTAN	2347	3	
1-Butanol, see	1120	3		n-BUTYL METHACRYLATE, STABILIZED	2227	3	
Butan-2-ol, see	1120	3		BUTYL METHYL ETHER	2350	3	
Butanol, secondary, see	1120	3		BUTYL NITRITES	2351	3	
Butanol, tertiary, see	1120	3		Butylphenols, liquid, see	3145	8	
				Butylphenols, solid, see	2430	8	
				BUTYL PROPIONATES	1914	3	
				p-tert-Butyltoluene, see	2667	6.1	
				BUTYLTOLUENES	2667	6.1	

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BUTYLTRICHLOROSILANE	1747	8		CALCIUM HYPOCHLORITE, DRY with more than 39% available chlorine (8.8% available oxygen)	1748	5.1	
5-tert-BUTYL-2,4,6-TRINITRO-m-XYLENE	2956	4.1		CALCIUM HYPOCHLORITE, DRY, CORROSIVE with more than 39% available chlorine (8.8% available oxygen)	3485	5.1	
BUTYL VINYL ETHER, STABILIZED	2352	3					
But-1-yne, see	2452	2					
1,4-BUTYNEDIOL	2716	6.1		CALCIUM HYPOCHLORITE, HYDRATED with not less than 5.5% but not more than 16% water	2880	5.1	
2-Butyne-1,4-diol, see	2716	6.1					
BUTYRALDEHYDE	1129	3		CALCIUM HYPOCHLORITE, HYDRATED MIXTURE with not less than 5.5% but not more than 16% water	2880	5.1	
BUTYRALDOXIME	2840	3					
BUTYRIC ACID	2820	8					
BUTYRIC ANHYDRIDE	2739	8		CALCIUM HYPOCHLORITE, HYDRATED, CORROSIVE with not less than 5.5% but not more than 16% water	3487	5.1	
Butyrone, see	2710	3					
BUTYRONITRILE	2411	3					
Butyryl chloride, see	2353	3		CALCIUM HYPOCHLORITE, HYDRATED MIXTURE, CORROSIVE with not less than 5.5% but not more than 16% water	3487	5.1	
BUTYRYL CHLORIDE	2353	3					
Cable cutters, explosive, see	0070	1					
CACODYLIC ACID	1572	6.1		CALCIUM HYPOCHLORITE MIXTURE, DRY with more than 10% but not more than 39% available chlorine	2208	5.1	
CADMIUM COMPOUND	2570	6.1					
CAESIUM	1407	4.3					
CAESIUM HYDROXIDE	2682	8		CALCIUM HYPOCHLORITE MIXTURE, DRY with more than 39% available chlorine (8.8% available oxygen)	1748	5.1	
CAESIUM HYDROXIDE SOLUTION	2681	8					
CAESIUM NITRATE	1451	5.1		CALCIUM HYPOCHLORITE MIXTURE, DRY, CORROSIVE with more than 10% but not more than 39% available chlorine	3486	5.1	
Caffeine, see	1544	6.1					
Cajeputene, see	2052	3					
CALCIUM	1401	4.3		CALCIUM HYPOCHLORITE MIXTURE, DRY, CORROSIVE with more than 39% available chlorine (8.8% available oxygen)	3485	5.1	
CALCIUM ALLOYS, PYROPHORIC	1855	4.2					
CALCIUM ARSENATE	1573	6.1		CALCIUM MANGANESE SILICON	2844	4.3	
CALCIUM ARSENATE AND CALCIUM ARSENITE MIXTURE, SOLID	1574	6.1		CALCIUM NITRATE	1454	5.1	
Calcium bisulphite solution, see	2693	8		Calcium oxide	1910	8	Not subject to ADR
CALCIUM CARBIDE	1402	4.3		CALCIUM PERCHLORATE	1455	5.1	
CALCIUM CHLORATE	1452	5.1		CALCIUM PERMANGANATE	1456	5.1	
CALCIUM CHLORATE, AQUEOUS SOLUTION	2429	5.1		CALCIUM PEROXIDE	1457	5.1	
CALCIUM CHLORITE	1453	5.1		CALCIUM PHOSPHIDE	1360	4.3	
CALCIUM CYANAMIDE with more than 0.1% calcium carbide	1403	4.3		CALCIUM, PYROPHORIC	1855	4.2	
				CALCIUM RESINATE	1313	4.1	
CALCIUM CYANIDE	1575	6.1		CALCIUM RESINATE, FUSED	1314	4.1	
CALCIUM DITHIONITE	1923	4.2		Calcium selenate, see	2630	6.1	
CALCIUM HYDRIDE	1404	4.3		CALCIUM SILICIDE	1405	4.3	
CALCIUM HYDROSULPHITE, see	1923	4.2		Calcium silicon, see	1405	4.3	
				Calcium superoxide, see	1457	5.1	

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CAPACITOR, electric double layer (with an energy storage capacity greater than 0.3 Wh)	3499	9		Cartridges, actuating, for fire extinguisher or apparatus valve, see	0275 0276 0323 0381	1 1 1 1	
Camphanone, see	2717	4.1		Cartridges, explosive, see	0048	1	
CAMPBOR OIL	1130	3		CARTRIDGES, FLASH	0049 0050	1 1	
CAMPBOR, synthetic	2717	4.1		CARTRIDGES FOR TOOLS, BLANK	0014	1	
CAPROIC ACID	2829	8		CARTRIDGES FOR WEAPONS with bursting charge	0005 0006 0007 0321 0348 0412	1 1 1 1 1 1	
CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	2758	3		CARTRIDGES FOR WEAPONS, BLANK	0014 0326 0327 0338 0413	1 1 1 1 1	
CARBAMATE PESTICIDE, LIQUID, TOXIC	2992	6.1		CARTRIDGES FOR WEAPONS, INERT PROJECTILE	0012 0328 0339 0417	1 1 1 1	
CARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	2991	6.1		Cartridges, illuminating, see	0171 0254 0297	1 1 1	
CARBAMATE PESTICIDE, SOLID, TOXIC	2757	6.1		CARTRIDGES, OIL WELL	0277 0278	1 1	
Carbolic acid, see	1671 2312 2821	6.1 6.1 6.1		CARTRIDGES, POWER DEVICE	0275 0276 0323 0381	1 1 1 1	
CARBON, animal or vegetable origin	1361	4.2		CARTRIDGES, SIGNAL	0054 0312 0405	1 1 1	
CARBON, ACTIVATED	1362	4.2		CARTRIDGES, SMALL ARMS	0012 0339 0417	1 1 1	
Carbon bisulphide, see	1131	3		CARTRIDGES, SMALL ARMS, BLANK	0014 0327 0338	1 1 1	
Carbon black (animal or vegetable origin), see	1361	4.2		Cartridges, starter, jet engine, see	0275 0276 0323 0381	1 1 1 1	
CARBON DIOXIDE	1013	2		CASES, CARTRIDGE, EMPTY, WITH PRIMER	0055 0379	1 1	
Carbon dioxide and ethylene oxide mixture, see	1041 1952 3300	2 2 2		CASES, COMBUSTIBLE, EMPTY, WITHOUT PRIMER	0446 0447	1 1	
CARBON DIOXIDE, REFRIGERATED LIQUID	2187	2		Casinghead gasoline, see	1203	3	
Carbon dioxide, solid	1845	9	Not subject to ADR - when used as a coolant, see 5.5.3	CASTOR BEANS	2969	9	
CARBON DISULPHIDE	1131	3		CASTOR FLAKE	2969	9	
Carbonic anhydride, see	1013 1845 2187	2 9 2		CASTOR MEAL	2969	9	
CARBON MONOXIDE, COMPRESSED	1016	2		CASTOR POMACE	2969	9	
Carbon oxysulphide, see	2204	2.3					
CARBON TETRABROMIDE	2516	6.1					
CARBON TETRACHLORIDE	1846	6.1					
Carbonyl chloride, see	1076	2					
CARBONYL FLUORIDE	2417	2					
CARBONYL SULPHIDE	2204	2					
Cartridge cases, empty, primed, see	0055 0379	1 1					

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CAUSTIC ALKALI LIQUID, N.O.S.	1719	8		CHEMICAL UNDER PRESSURE, FLAMMABLE, CORROSIVE, N.O.S.	3505	2	
Caustic potash, see	1814	8		CHEMICAL UNDER PRESSURE, FLAMMABLE, TOXIC, N.O.S.	3504	2	
Caustic soda, see	1824	8		CHEMICAL UNDER PRESSURE, TOXIC, N.O.S.	3502	2	
Caustic soda liquor, see	1824	8		Chile saltpetre, see	1498	5.1	
CELLS, CONTAINING SODIUM	3292	4.3		CHLORAL, ANHYDROUS, STABILIZED	2075	6.1	
CELLULOID in block, rods, rolls, sheets, tubes, etc., except scrap	2000	4.1		CHLORATE AND BORATE MIXTURE	1458	5.1	
CELLULOID, SCRAP	2002	4.2		CHLORATE AND MAGNESIUM CHLORIDE MIXTURE, SOLID	1459	5.1	
Cement, see	1133	3		CHLORATE AND MAGNESIUM CHLORIDE MIXTURE, SOLUTION	3407	5.1	
CERIUM, slabs, ingots or rods	1333	4.1		CHLORATES, INORGANIC, N.O.S.	1461	5.1	
CERIUM, turnings or gritty powder	3078	4.3		CHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	3210	5.1	
Cer mishmetall, see	1323	4.1		CHLORIC ACID, AQUEOUS SOLUTION with not more than 10% chloric acid	2626	5.1	
Charcoal, activated, see	1362	4.1		CHLORINE	1017	2	
Charcoal, non-activated, see	1361	4.2		CHLORINE PENTAFLUORIDE	2548	2	
CHARGES, BURSTING, PLASTICS BONDED	0457	1		CHLORINE TRIFLUORIDE	1749	2	
	0458	1		CHLORITES, INORGANIC, N.O.S.	1462	5.1	
	0459	1		CHLORITE SOLUTION	1908	8	
	0460	1		Chloroacetaldehyde, see	2232	6.1	
CHARGES, DEMOLITION	0048	1		CHLOROACETIC ACID, MOLTEN	3250	6.1	
CHARGES, DEPTH	0056	1		CHLOROACETIC ACID, SOLID	1751	6.1	
Charges, expelling, explosive, for fire extinguishers, see	0275	1		CHLOROACETIC ACID SOLUTION	1750	6.1	
	0276	1		CHLOROACETONE, STABILIZED	1695	6.1	
	0323	1		CHLOROACETONITRILE	2668	6.1	
	0381	1		CHLOROACETOPHENONE, LIQUID	3416	6.1	
CHARGES, EXPLOSIVE, COMMERCIAL without detonator	0442	1		CHLOROACETOPHENONE, SOLID	1697	6.1	
	0443	1		CHLOROACETYL CHLORIDE	1752	6.1	
	0444	1		CHLOROANILINES, LIQUID	2019	6.1	
	0445	1		CHLOROANILINES, SOLID	2018	6.1	
CHARGES, PROPELLING	0271	1		CHLOROANISIDINES	2233	6.1	
	0272	1		CHLOROBENZENE	1134	3	
	0415	1		CHLOROBENZO-TRIFLUORIDES	2234	3	
	0491	1		CHLOROBENZYL CHLORIDES, LIQUID	2235	6.1	
CHARGES, PROPELLING, FOR CANNON	0242	1		CHLOROBENZYL CHLORIDES, SOLID	3427	6.1	
	0279	1					
	0414	1					
CHARGES, SHAPED, FLEXIBLE, LINEAR	0237	1					
	0288	1					
CHARGES, SHAPED, without detonator	0059	1					
	0439	1					
	0440	1					
	0441	1					
CHARGES, SUPPLEMENTARY, EXPLOSIVE	0060	1					
CHEMICAL KIT	3316	9					
CHEMICAL SAMPLE, TOXIC	3315	6.1					
CHEMICAL UNDER PRESSURE, N.O.S.	3500	2					
CHEMICAL UNDER PRESSURE, CORROSIVE, N.O.S.	3503	2					
CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.	3501	2					

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1-Chloro-3-bromopropane, see	2688	6.1		CHLORONITROBENZENES LIQUID	3409	6.1	
1-Chlorobutane, see	1127	3		CHLORONITROBENZENES SOLID	1578	6.1	
2-Chlorobutane, see	1127	3		CHLORONITROTOLUENES, LIQUID	2433	6.1	
CHLOROBUTANES	1127	3		CHLORONITROTOLUENES, SOLID	3457	6.1	
CHLOROCRESOLS, SOLUTION	2669	6.1		CHLOROPENTAFLUORO-ETHANE	1020	2	
CHLOROCRESOLS, SOLID	3437	6.1		CHLOROPHENOLATES, LIQUID	2904	8	
CHLORODIFLUORO-BROMOMETHANE	1974	2		CHLOROPHENOLATES, SOLID	2905	8	
1-CHLORO-1,1-DIFLUORO-ETHANE	2517	2		CHLOROPHENOLS, LIQUID	2021	6.1	
CHLORODIFLUOROMETHANE	1018	2		CHLOROPHENOLS, SOLID	2020	6.1	
CHLORODIFLUOROMETHANE AND CHLORO-PENTAFLUOROETHANE MIXTURE with fixed boiling point, with approximately 49% chlorodifluoromethane	1973	2		CHLOROPHENYL-TRICHLOROSILANE	1753	8	
3-Chloro-1,2-dihydroxypropane, see	2689	6.1		CHLOROPICRIN	1580	6.1	
Chlorodimethyl ether, see	1239	6.1		CHLOROPICRIN AND METHYL BROMIDE MIXTURE, with more than 2% chloropicrin	1581	2	
CHLORODINITROBENZENES, LIQUID	1577	6.1		CHLOROPICRIN AND METHYL CHLORIDE MIXTURE	1582	2	
CHLORODINITROBENZENES, SOLID	3441	6.1		CHLOROPICRIN MIXTURE, N.O.S.	1583	6.1	
2-CHLOROETHANAL	2232	6.1		CHLOROPLATINIC ACID, SOLID	2507	8	
Chloroethane, see	1037	2		CHLOROPRENE, STABILIZED	1991	3	
Chloroethane nitrile, see	2668	6.1		1-CHLOROPROPANE	1278	3	
2-Chloroethanol, see	1135	6.1		2-CHLOROPROPANE	2356	3	
CHLOROFORM	1888	6.1		3-Chloro-propanediol-1,2, see	2689	6.1	
CHLOROFORMATES, TOXIC, CORROSIVE, N.O.S.	3277	6.1		3-CHLOROPROPANOL-1	2849	6.1	
CHLOROFORMATES, TOXIC, CORROSIVE, FLAMMABLE, N.O.S.	2742	6.1		2-CHLOROPROPENE	2456	3	
Chloromethane, see	1063	2		3-Chloropropene, see	1100	3	
1-Chloro-3-methylbutane, see	1107	3		3-Chloroprop-1-ene, see	1100	3	
2-Chloro-2-methylbutane, see	1107	3		2-CHLOROPROPIONIC ACID	2511	8	
CHLOROMETHYL CHLOROFORMATE	2745	6.1		2-CHLOROPYRIDINE	2822	6.1	
Chloromethyl cyanide, see	2668	6.1		CHLOROSILANES, CORROSIVE, N.O.S.	2987	8	
CHLOROMETHYL ETHYL ETHER	2354	3		CHLOROSILANES, CORROSIVE, FLAMMABLE, N.O.S.	2986	8	
Chloromethyl methyl ether, see	1239	6.1		CHLOROSILANES, FLAMMABLE, CORROSIVE, N.O.S.	2985	3	
3-CHLORO-4-METHYLPHENYL ISOCYANATE, LIQUID	2236	6.1		CHLOROSILANES, TOXIC, CORROSIVE, N.O.S.	3361	6.1	
3-CHLORO-4-METHYLPHENYL ISOCYANATE, SOLID	3428	6.1		CHLOROSILANES, TOXIC, CORROSIVE, FLAMMABLE, N.O.S.	3362	6.1	
3-Chloro-2-methylprop-1-ene, see	2554	3					
CHLORONITROANILINES	2237	6.1					

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CHLOROSILANES, WATER-REACTIVE, FLAMMABLE, CORROSIVE, N.O.S.	2988	4.3		COATING SOLUTION (includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining)	1139	3	
CHLOROSULPHONIC ACID (with or without sulphur trioxide)	1754	8		COBALT NAPHTHENATES, POWDER	2001	4.1	
1-CHLORO-1,2,2,2-TETRA-FLUOROETHANE	1021	2		COBALT RESINATE, PRECIPITATED	1318	4.1	
CHLOROTOLUENES	2238	3		Cocculus, see	3172 3462	6.1 6.1	
4-CHLORO-o-TOLUIDINE HYDROCHLORIDE, SOLID	1579	6.1		Collodion cottons, see	0340 0341 0342	1 1 1	
4-CHLORO-o-TOLUIDINE HYDROCHLORIDE, SOLUTION	3410	6.1			2059 2555 2556 2557	3 4.1 4.1 4.1	
CHLOROTOLUIDINES LIQUID	3429	6.1		COMPONENTS, EXPLOSIVE TRAIN, N.O.S.	0382 0383 0384 0461	1 1 1 1	
CHLOROTOLUIDINES SOLID	3429	6.1		Composition B, see	0118	1	
1-CHLORO-2,2,2-TRIFLUORO-ETHANE	1983	2		COMPRESSED GAS, N.O.S.	1956	2	
Chlorotrifluoroethylene, see	1082	2		COMPRESSED GAS, FLAMMABLE, N.O.S.	1954	2	
CHLOROTRIFLUOROMETHANE	1022	2		COMPRESSED GAS, OXIDIZING, N.O.S.	3156	2	
CHLOROTRIFLUOROMETHANE AND TRIFLUOROMETHANE AZEOTROPIC MIXTURE with approximately 60% chlorotrifluoromethane	2599	2		COMPRESSED GAS, TOXIC, N.O.S.	1955	2	
Chromic acid, solid, see	1463	5.1		COMPRESSED GAS, TOXIC, CORROSIVE, N.O.S.	3304	2	
CHROMIC ACID SOLUTION	1755	8		COMPRESSED GAS, TOXIC, FLAMMABLE, N.O.S.	1953	2	
Chromic anhydride, solid, see	1463	5.1		COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	3305	2	
CHROMIC FLUORIDE, SOLID	1756	8		COMPRESSED GAS, TOXIC, OXIDIZING, N.O.S.	3303	2	
CHROMIC FLUORIDE SOLUTION	1757	8		COMPRESSED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	3306	2	
Chromic nitrate, see	2720	5.1		CONTRIVANCES, WATER-ACTIVATED with burster, expelling charge or propelling charge	0248 0249	1 1	
Chromium (VI) dichloride dioxide, see	1758	8		COPPER ACETOARSENITE	1585	6.1	
Chromium (III) fluoride, solid, see	1756	8		COPPER ARSENITE	1586	6.1	
CHROMIUM NITRATE	2720	5.1		Copper (II) arsenite, see	1586	6.1	
Chromium (III) nitrate, see	2720	5.1		COPPER BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	2776	3	
CHROMIUM OXYCHLORIDE	1758	8		COPPER BASED PESTICIDE, LIQUID, TOXIC	3010	6.1	
CHROMIUM TRIOXIDE, ANHYDROUS	1463	5.1					
CHROMOSULPHURIC ACID	2240	8					
Chrysothile, see	2590	9					
Cinene, see	2052	3					
Cinnamene, see	2055	3					
Cinnamol, see	2055	3					
CLINICAL WASTE, UNSPECIFIED, N.O.S.	3291	6.2					
COAL GAS, COMPRESSED	1023	2					
COAL TAR DISTILLATES, FLAMMABLE	1136	3					
Coal tar naphtha, see	1268	3					
Coal tar oil, see	1136	3					

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COPPER BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	3009	6.1		CORROSIVE SOLID, OXIDIZING, N.O.S.	3084	8	
COPPER BASED PESTICIDE, SOLID, TOXIC	2775	6.1		CORROSIVE SOLID, SELF-HEATING, N.O.S.	3095	8	
COPPER CHLORATE	2721	5.1		CORROSIVE SOLID, TOXIC, N.O.S.	2923	8	
Copper (II) chlorate, see	2721	5.1		CORROSIVE SOLID, WATER-REACTIVE, N.O.S.	3096	8	
COPPER CHLORIDE	2802	8		COTTON WASTE, OILY	1364	4.2	
COPPER CYANIDE	1587	6.1		COTTON, WET	1365	4.2	
Copper selenate, see	2630	6.1		COUMARIN DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3024	3	
Copper selenite, see	2630	6.1		COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC	3026	6.1	
COPRA	1363	4.2		COUMARIN DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	3025	6.1	
CORD, DETONATING, flexible	0065	1		COUMARIN DERIVATIVE PESTICIDE, SOLID, TOXIC	3027	6.1	
	0289	1		Creosote, see	2810	6.1	
CORD, DETONATING, metal clad	0102	1		Creosote salts, see	1334	4.1	
	0290	1		CRESOLS, LIQUID	2076	6.1	
CORD, DETONATING, MILD EFFECT, metal clad	0104	1		CRESOLS, SOLID	3455	6.1	
CORD, IGNITER	0066	1		CRESYLIC ACID	2022	6.1	
Cordite, see	0160	1		Crocidolite, see	2212	9	
	0161	1		CROTONALDEHYDE or CROTONALDEHYDE, STABILIZED	1143	6.1	
CORROSIVE LIQUID, N.O.S.	1760	8		CROTONIC ACID, LIQUID	3472	8	
CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.	3264	8		CROTONIC ACID, SOLID	2823	8	
CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.	3265	8		Crotonic aldehyde / Crotonic aldehyde, stabilized, see	1143	6.1	
CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S.	3266	8		CROTONYLENE	1144	3	
CORROSIVE LIQUID, BASIC, ORGANIC, N.O.S.	3267	8		Crude naphtha, see	1268	3	
CORROSIVE LIQUID, FLAMMABLE, N.O.S.	2920	8		Cumene, see	1918	3	
CORROSIVE LIQUID, OXIDIZING, N.O.S.	3093	8		Cupric chlorate, see	2721	5.1	
CORROSIVE LIQUID, SELF-HEATING, N.O.S.	3301	8		CUPRIETHYLENEDIAMINE SOLUTION	1761	8	
CORROSIVE LIQUID, TOXIC, N.O.S.	2922	8		Cutback bitumen, with a flash-point not greater than 60 °C, see	1999	3	
CORROSIVE LIQUID, WATER-REACTIVE, N.O.S.	3094	8		Cutback bitumen, with a flash-point above 60 °C, at or above its flash-point, see	3256	3	
CORROSIVE SOLID, N.O.S.	1759	8		Cutback bitumen, at or above 100 °C and below its flash-point, see	3257	9	
CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.	3260	8		CUTTERS, CABLE, EXPLOSIVE	0070	1	
CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.	3261	8		CYANIDE SOLUTION, N.O.S.	1935	6.1	
CORROSIVE SOLID, BASIC, INORGANIC, N.O.S.	3262	8					
CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.	3263	8					
CORROSIVE SOLID, FLAMMABLE, N.O.S.	2921	8					

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CYANIDES, INORGANIC, SOLID, N.O.S.	1588	6.1		CYCLOOCTADIENE PHOSPHINES, see	2940	4.2	
Cyanides, organic, flammable, toxic, n.o.s., see	3273	3		CYCLOOCTATETRAENE	2358	3	
Cyanides, organic, toxic, n.o.s., see	3276	6.1		CYCLOPENTANE	1146	3	
	3439			CYCLOPENTANOL	2244	3	
Cyanides, organic, toxic, flammable, n.o.s., see	3275	6.1		CYCLOPENTANONE	2245	3	
				CYCLOPENTENE	2246	3	
Cyanoacetonitrile, see	2647	6.1		CYCLOPROPANE	1027	2	
CYANOGEN	1026	2		CYCLOTETRAMETHYLENE-TETRANITRAMINE, DESENSITIZED	0484	1	
CYANOGEN BROMIDE	1889	6.1					
CYANOGEN CHLORIDE, STABILIZED	1589	2		CYCLOTETRAMETHYLENE-TETRANITRAMINE, WETTED with not less than 15% water, by mass	0226	1	
CYANURIC CHLORIDE	2670	8					
CYCLOBUTANE	2601	2		CYCLOTETRAMETHYLENE-TETRANITRAMINE MIXTURE, DESENSITIZED with not less than 10% phlegmatizer by mass			
CYCLOBUTYL CHLOROFORMATE	2744	6.1			0391	1	
1,5,9-CYCLODODECATRIENE	2518	6.1		CYCLOTETRAMETHYLENE-TETRANITRAMINE, WETTED with not less than 15% water, by mass			
CYCLOHEPTANE	2241	3					
CYCLOHEPTATRIENE	2603	3		CYCLOTETRAMETHYLENE-TETRANITRAMINE AND CYCLOTETRAMETHYLENE-TETRANITRAMINE MIXTURE, WETTED with not less than 15% water, by mass	0391	1	
1,3,5-Cycloheptatriene, see	2603	3					
CYCLOHEPTENE	2242	3		CYMENES	2046	3	
1,4-Cyclohexadienedione, see	2587	6.1		Cymol, see	2046	3	
CYCLOHEXANE	1145	3		Deanol, see	2051	8	
Cyclehexanethiol, see	3054	3		Dangerous goods in machinery or dangerous goods in apparatus	3363	9	Not subject to ADR [see also 1.1.3.1 (b)]
CYCLOHEXANONE	1915	3					
CYCLOHEXENE	2256	3		DECABORANE	1868	4.1	
CYCLOHEXENYLTRI-CHLOROSILANE	1762	8		DECAHYDRONAPHTHALENE	1147	3	
				Decalin, see	1147	3	
CYCLOHEXYL ACETATE	2243	3		n-DECANE	2247	3	
CYCLOHEXYLAMINE	2357	8		DEFLAGRATING METAL SALTS OF AROMATIC NITRODERIVATIVES, N.O.S.	0132	1	
CYCLOHEXYL ISOCYANATE	2488	6.1		Depth charge, see	0056	1	
CYCLOHEXYL MERCAPTAN	3054	3		DESENSITIZED EXPLOSIVE, LIQUID, N.O.S.	3379	3	
CYCLOHEXYLTRICHLORO-SILANE	1763	8		DESENSITIZED EXPLOSIVE, SOLID, N.O.S.	3380	4.1	
CYCLONITE AND CYCLOTETRAMETHYLENE-TETRANITRAMINE MIXTURE, WETTED with not less than 15% water, by mass or DESENSITIZED with not less than 10% phlegmatizer by mass, see	0391	1					
CYCLONITE, DESENSITIZED, see	0483	1					
CYCLONITE, WETTED with not less than 15% water, by mass, see	0072	1					
CYCLOOCTADIENES	2520	3					

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Name and description	UN No.	Class	Remarks	Name and description	UN No.	Class	Remarks
Detonating relays, see	0029	1		DICHLOROACETYL CHLORIDE	1765	8	
	0267	1		DICHLOROANILINES, LIQUID	1590	6.1	
	0360	1		DICHLOROANILINES, SOLID	3442	6.1	
	0361	1		o-DICHLOROBENZENE	1591	6.1	
	0455	1		2,2'-DICHLORODIETHYL ETHER	1916	6.1	
	0500	1		DICHLORODIFLUORO-METHANE	1028	2	
DETONATOR ASSEMBLIES, NON-ELECTRIC for blasting	0360	1		DICHLORODIFLUORO-METHANE AND DIFLUOROETHANE AZEOTROPIC MIXTURE with approximately 74% dichlorodifluoromethane	2602	2	
	0361	1					
	0500	1					
DETONATORS FOR AMMUNITION	0073	1		Dichlorodifluoromethane and ethylene oxide mixture, see	3070	2	
	0364	1					
	0365	1					
	0366	1					
DETONATORS, ELECTRIC for blasting	0030	1		DICHLORODIMETHYL ETHER, SYMMETRICAL	2249	6.1	Carriage prohibited
	0255	1		1,1-DICHLOROETHANE	2362	3	
	0456	1		1,2-Dichloroethane, see	1184	3	
DETONATORS, NON-ELECTRIC for blasting	0029	1		1,2-DICHLOROETHYLENE	1150	3	
	0267	1		Di(2-chloroethyl) ether, see	1916	6.1	
	0455	1		DICHLOROFLUOROMETHANE	1029	2	
DEUTERIUM, COMPRESSED	1957	2		alpha-Dichlorohydrin, see	2750	6.1	
DEVICES, SMALL, HYDROCARBON GAS POWERED with release device	3150	2		DICHLOROISOCYANURIC ACID, DRY	2465	5.1	
DIACETONE ALCOHOL	1148	3		DICHLOROISOCYANURIC ACID SALTS	2465	5.1	
DIALLYLAMINE	2359	3		DICHLOROISOPROPYL ETHER	2490	6.1	
DIALLYL ETHER	2360	3		DICHLOROMETHANE	1593	6.1	
4,4'-DIAMINODIPHENYL- METHANE	2651	6.1		1,1-DICHLORO-1-NITROETHANE	2650	6.1	
1,2-Diaminoethane, see	1604	8		DICHLOROPENTANES	1152	3	
Diaminopropylamine, see	2269	8		Dichlorophenol, see	2020	6.1	
DI-n-AMYLAMINE	2841	3		2021	6.1		
DIAZODINITROPHENOL, WETTED with not less than 40% water, or mixture of alcohol and water, by mass	0074	1		DICHLOROPHENYL ISOCYANATES	2250	6.1	
Dibenzopyridine, see	2713	6.1		DICHLOROPHENYLTRI- CHLOROSILANE	1766	8	
DIBENZYLDICHLORO-SILANE	2434	8		1,2-DICHLOROPROPANE	1279	3	
DIBORANE	1911	2		1,3-DICHLOROPROPANOL-2	2750	6.1	
1,2-DIBROMOBUTAN-3-ONE	2648	6.1		1,3-Dichloro-2-propanone, see	2649	6.1	
DIBROMOCHLOROPROPANES	2872	6.1		DICHLOROPROPENES	2047	3	
1,2-Dibromo-3-chloropropane, see	2872	6.1		DICHLOROSILANE	2189	2	
DIBROMODIFLUOROMETHANE	1941	9		1,2-DICHLORO-1,1,2,2- TETRAFLUROETHANE	1958	2	
DIBROMOMETHANE	2664	6.1		Dichloro-s-triazine-2,4,6-trione, see	2465	5.1	
DI-n-BUTYLAMINE	2248	8		1,4-Dicyanobutane, see	2205	6.1	
DIBUTYLAMINOETHANOL	2873	6.1		Dicycloheptadiene, see	2251	3	
2-Dibutylaminoethanol, see	2873	6.1		DICYCLOHEXYLAMINE	2565	8	
N,N-Di-n-butylaminoethanol, see	2873	6.1					
DIBUTYL ETHERS	1149	3					
DICHLOROACETIC ACID	1764	8					
1,3-DICHLOROACETONE	2649	6.1					

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Dicyclohexylamine nitrite, see	2687	4.1		Difluoromethane, pentafluoroethane, and 1,1,1,2-tetrafluoroethane zeotropic mixture with approximately 10% difluoromethane and 70% pentafluoroethane, see	3339	2	
DICYCLOHEXYL-AMMONIUM NITRITE	2687	4.1		Difluoromethane, pentafluoroethane, and 1,1,1,2-tetrafluoroethane zeotropic mixture with approximately 20% difluoromethane and 40% pentafluoroethane, see	3338	2	
DICYCLOPENTADIENE	2048	3		Difluoromethane, pentafluoroethane, and 1,1,1,2-tetrafluoroethane zeotropic mixture with approximately 23% difluoromethane and 25% pentafluoroethane, see	3340	2	
1,2-DI-(DIMETHYLAMINO) ETHANE	2372	3		DIFLUOROPHOSPHORIC ACID, ANHYDROUS	1768	8	
DIDYMIUM NITRATE	1465	5.1		2,3-DIHYDROPYRAN	2376	3	
DIESEL FUEL	1202	3		DIISOBUTYLAMINE	2361	3	
1,1-Diethoxyethane, see	1088	3		DIISOBUTYLENE, ISOMERIC COMPOUNDS	2050	3	
1,2-Diethoxyethane, see	1153	3		alpha-Diisobutylene, see	2050	3	
DIETHOXYMETHANE	2373	3		beta-Diisobutylene, see	2050	3	
3,3-DIETHOXYPROPENE	2374	3		DIISOBUTYL KETONE	1157	3	
DIETHYLAMINE	1154	3		DIISOCTYL ACID PHOSPHATE	1902	8	
2-DIETHYLAMINOETHANOL	2686	8		DIISOPROPYLAMINE	1158	3	
3-DIETHYLAMINO-PROPYLAMINE	2684	3		DIISOPROPYL ETHER	1159	3	
N,N-DIETHYLANILINE	2432	6.1		DIKETENE, STABILIZED	2521	6.1	
DIETHYLBENZENE	2049	3		1,1-DIMETHOXYETHANE	2377	3	
Diethylcarbinol, see	1105	3		1,2-DIMETHOXYETHANE	2252	3	
DIETHYL CARBONATE	2366	3		Dimethoxystrychnine, see	1570	6.1	
DIETHYLDICHLOROSILANE	1767	8		DIMETHYLAMINE, ANHYDROUS	1032	2	
Diethylenediamine, see	2579	8		DIMETHYLAMINE AQUEOUS SOLUTION	1160	3	
DIETHYLENEGLYCOL DINITRATE, DESENSITIZED with not less than 25% non-volatile, water-insoluble phlegmatizer, by mass	0075	1		2-DIMETHYLAMINO-ACETONITRILE	2378	3	
DIETHYLENETRIAMINE	2079	8		2-DIMETHYLAMINOETHANOL	2051	8	
N,N-Diethylethanolamine, see	2686	3		2-DIMETHYLAMINOETHYL ACRYLATE	3302	6.1	
DIETHYL ETHER	1155	3		2-DIMETHYLAMINOETHYL METHACRYLATE	2522	6.1	
N,N-DIETHYLETHYLENE-DIAMINE	2685	8		N,N-DIMETHYLANILINE	2253	6.1	
Di-(2-ethylhexyl) phosphoric acid, see	1902	8		Dimethylarsenic acid, see	1572	6.1	
DIETHYL KETONE	1156	3		N,N-Dimethylbenzylamine, see	2619	8	
DIETHYL SULPHATE	1594	6.1		2,3-DIMETHYLBUTANE	2457	3	
DIETHYL SULPHIDE	2375	3		1,3-DIMETHYLBUTYLAMINE	2379	3	
DIETHYLTHIOPHOSPHORYL CHLORIDE	2751	8		DIMETHYLCARBAMOYL CHLORIDE	2262	8	
Diethylzinc, see	3394	4.2					
2,4-Difluoroaniline, see	2941	6.1					
Difluorochloroethane, see	2517	2					
1,1-DIFLUOROETHANE	1030	2					
1,1-DIFLUOROETHYLENE	1959	2					
DIFLUOROMETHANE	3252	2					

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DIMETHYL CARBONATE	1161	3		DINITRORESORCINOL, WETTED with not less than 15% water, by mass	1322	4.1	
DIMETHYLCYCLOHEXANES	2263	3		DINITROSOBENZENE	0406	1	
N,N-DIMETHYLCYCLOHEXYLAMINE	2264	8		Dinitrotoluene mixed with sodium chlorate, see	0083	1	
DIMETHYLDICHLOROSILANE	1162	3		DINITROTOLUENES, LIQUID	2038	6.1	
DIMETHYLDIETHOXSILANE	2380	3		DINITROTOLUENES, MOLTEN	1600	6.1	
DIMETHYLDIOXANES	2707	3		DINITROTOLUENES, SOLID	3454	6.1	
DIMETHYL DISULPHIDE	2381	3		DIOXANE	1165	3	
Dimethylethanolamine, see	2051	8		DIOXOLANE	1166	3	
DIMETHYL ETHER	1033	2		DIPENTENE	2052	3	
N,N-DIMETHYLFORMAMIDE	2265	3		DIPHENYLAMINE CHLOROARSINE	1698	6.1	
DIMETHYLHYDRAZINE, SYMMETRICAL	2382	6.1		DIPHENYLCHLOROARSINE, LIQUID	1699	6.1	
DIMETHYLHYDRAZINE, UNSYMMETRICAL	1163	6.1		DIPHENYLCHLOROARSINE, SOLID	3450	6.1	
1,1-Dimethylhydrazine, see	1163	6.1		DIPHENYLDICHLOROSILANE	1769	8	
N,N-Dimethyl-4-nitrosoaniline, see	1369	4.2		DIPHENYLMETHYL BROMIDE	1770	8	
2,2-DIMETHYLPROPANE	2044	2		DIPICRYLAMINE, see	0079	1	
DIMETHYL-N-PROPYLAMINE	2266	3		DIPICRYL SULPHIDE, dry or wetted with less than 10% water, by mass	0401	1	
DIMETHYL SULPHATE	1595	6.1		DIPICRYL SULPHIDE, WETTED with not less than 10% water, by mass	2852	4.1	
DIMETHYL SULPHIDE	1164	3		DIPROPYLAMINE	2383	3	
DIMETHYL THIOPHOSPHORYL CHLORIDE	2267	6.1		Dipropylene triamine, see	2269	8	
Dimethylzinc, see	3394	4.2		DI-n-PROPYL ETHER	2384	3	
DINGU, see	0489	1		DIPROPYL KETONE	2710	3	
DINITROANILINES	1596	6.1		DISINFECTANT, LIQUID, CORROSIVE, N.O.S.	1903	8	
DINITROBENZENES, LIQUID	1597	6.1		DISINFECTANT, LIQUID, TOXIC, N.O.S.	3142	6.1	
DINITROBENZENES, SOLID	3443	6.1		DISINFECTANT, SOLID, TOXIC, N.O.S.	1601	6.1	
Dinitrochlorobenzene, see	1577	6.1		DISODIUM TRIOXSILICATE	3253	8	
	3441	6.1		DIVINYL ETHER, STABILIZED	1167	3	
DINITRO-o-CRESOL	1598	6.1		DODECYLTRICHLOROSILANE	1771	8	
DINITROGEN TETROXIDE	1067	2		Dry ice, see	1845	9	Not subject toADR
DINITROGLYCOLURIL	0489	1		DYE INTERMEDIATE, LIQUID, CORROSIVE, N.O.S.	2801	8	
DINITROPHENOL, dry or wetted with less than 15% water, by mass	0076	1		DYE INTERMEDIATE, LIQUID, TOXIC, N.O.S.	1602	6.1	
DINITROPHENOL SOLUTION	1599	6.1		DYE INTERMEDIATE, SOLID, CORROSIVE, N.O.S.	3147	8	
DINITROPHENOL, WETTED with not less than 15% water, by mass	1320	4.1		DYE INTERMEDIATE, SOLID, TOXIC, N.O.S.	3143	6.1	
DINITROPHENOLATES, alkali metals, dry or wetted with less than 15% water, by mass	0077	1					
DINITROPHENOLATES, WETTED with not less than 15% water, by mass	1321	4.1					
DINITRORESORCINOL, dry or wetted with less than 15% water, by mass	0078	1					

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DYE, LIQUID, CORROSIVE, N.O.S.	2801	8		Engine, fuel cell, flammable gas powered	3166	9	Not subject to ADR
DYE, LIQUID, TOXIC, N.O.S.	1602	6.1		Engine, fuel cell, flammable liquid powered	3166	9	Not subject to ADR
DYE, SOLID, CORROSIVE, N.O.S.	3147	8		Engine, internal combustion	3166	9	Not subject to ADR
DYE, SOLID, TOXIC, N.O.S.	3143	6.1					
Dynamite, see	0081	1		Engines, rocket, see	0250	1	
Electric storage batteries, see	2794	8			0322	1	
	2795	8		ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	3082	9	
	2800	8					
	3028	8					
Electrolyte (acid or alkaline) for batteries, see	2796	8		ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	3077	9	
	2797	8					
ELEVATED TEMPERATURE LIQUID, N.O.S., at or above 100 °C and below its flash-point (including molten metals, molten salts, etc.)	3257	9		EPIBROMOHYDRIN	2558	6.1	
				EPICHLOROHYDRIN	2023	6.1	
				1,2-Epoxybutane, stabilized, see	3022	3	
ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S. with flashpoint above 60 °C, at or above its flashpoint and at or above 100 °C	3256	3		Epoxyethane, see	1040	2	
				1,2-EPOXY-3-ETHOXYPROPANE	2752	3	
				2,3-Epoxy-1-propanal, see	2622	3	
				2,3-Epoxypropyl ethyl ether, see	2752	3	
ELEVATED TEMPERATURE LIQUID, FLAMMABLE, N.O.S. with flashpoint above 60 °C, at or above its flashpoint and below 100 °C	3256	3		ESTERS, N.O.S.	3272	3	
				ETHANE	1035	2	
ELEVATED TEMPERATURE SOLID, N.O.S., at or above 240 °C	3258	9		ETHANE, REFRIGERATED LIQUID	1961	2	
Empty battery-vehicle, uncleaned			See 4.3.2.4, 5.1.3 and 5.4.1.1.6	Ethanethiol, see	2363	3	
				ETHANOL	1170	3	
Empty IBC, uncleaned			See 4.1.1.11, 5.1.3 and 5.4.1.1.6	ETHANOL AND GASOLINE MIXTURE or ETHANOL AND MOTOR SPIRIT MIXTURE or ETHANOL AND PETROL MIXTURE, with more than 10% ethanol	3475	3	
Empty large packaging, uncleaned			See 4.1.1.11, 5.1.3 and 5.4.1.1.6	ETHANOL SOLUTION	1170	3	
				ETHANOLAMINE	2491	8	
Empty MEGC, uncleaned			See 4.3.2.4, 5.1.3 and 5.4.1.1.6	ETHANOLAMINE SOLUTION	2491	8	
				Ether, see	1155	3	
Empty packaging, uncleaned			See 4.1.1.11, 5.1.3 and 5.4.1.1.6	ETHERS, N.O.S.	3271	3	
				2-Ethoxyethanol, see	1171	3	
Empty receptacle, uncleaned			See 5.1.3 and 5.4.1.1.6	2-Ethoxyethyl acetate, see	1172	3	
				Ethoxy propane-1, see	2615	3	
Empty tank, uncleaned			See 4.3.2.4, 5.1.3 and 5.4.1.1.6	ETHYL ACETATE	1173	3	
				ETHYLACETYLENE, STABILIZED	2452	2	
Empty vehicle, uncleaned			See 5.1.3 and 5.4.1.1.6	ETHYL ACRYLATE, STABILIZED	1917	3	
				ETHYL ALCOHOL, see	1170	3	
Enamel, see	1263	3		ETHYL ALCOHOL SOLUTION, see	1170	3	
	3066	8					
	3469	3		ETHYLAMINE	1036	2	
	3470	8					

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ETHYLAMINE, AQUEOUS SOLUTION with not less than 50% but not more than 70% ethylamine	2270	3		ETHYLENE GLYCOL MONOETHYL ETHER ACETATE	1172	3	
ETHYL AMYL KETONE	2271	3		ETHYLENE GLYCOL MONOMETHYL ETHER	1188	3	
N-ETHYLANILINE	2272	6.1		ETHYLENE GLYCOL MONOMETHYL ETHER ACETATE	1189	3	
2-ETHYLANILINE	2273	6.1		ETHYLENEIMINE, STABILIZED	1185	6.1	
ETHYLBENZENE	1175	3		ETHYLENE OXIDE	1040	2	
N-ETHYL-N-BENZYLANILINE	2274	6.1		ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with more than 87% ethylene oxide	3300	2	
N-ETHYLBENZYL TOLUIDINES, LIQUID	2753	6.1		ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with more than 9% but not more than 87% ethylene oxide	1041	2	
N-ETHYLBENZYL TOLUIDINES, SOLID	3460	6.1		ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with not more than 9% ethylene oxide	1952	2	
ETHYL BORATE	1176	3		ETHYLENE OXIDE AND CHLOROTETRAFLUOROETHANE MIXTURE with not more than 8.8% ethylene oxide	3297	2	
ETHYL BROMIDE	1891	6.1		ETHYLENE OXIDE AND DICHLORODIFLUOROMETHANE MIXTURE with not more than 12.5% ethylene oxide	3070	2	
ETHYL BROMOACETATE	1603	6.1		ETHYLENE OXIDE AND PENTAFLUOROETHANE MIXTURE with not more than 7.9% ethylene oxide	3298	2	
2-ETHYLBUTANOL	2275	3		ETHYLENE OXIDE AND PROPYLENE OXIDE MIXTURE, not more than 30% ethylene oxide	2983	3	
2-ETHYLBUTYL ACETATE	1177	3		ETHYLENE OXIDE AND TETRAFLUOROETHANE MIXTURE with not more than 5.6% ethylene oxide	3299	2	
ETHYL BUTYL ETHER	1179	3		ETHYLENE OXIDE WITH NITROGEN up to a total pressure of 1 MPa (10 bar) at 50 °C	1040	2	
2-ETHYLBUTYRALDEHYDE	1178	3		ETHYLENE, REFRIGERATED LIQUID	1038	2	
ETHYL BUTYRATE	1180	3		ETHYL ETHER, see	1155	3	
ETHYL CHLORIDE	1037	2		ETHYL FLUORIDE	2453	2	
ETHYL CHLOROACETATE	1181	6.1		ETHYL FORMATE	1190	3	
Ethyl chlorocarbonate, see	1182	6.1		2-ETHYLHEXYLAMINE	2276	3	
ETHYL CHLOROFORMATE	1182	6.1		2-ETHYLHEXYL CHLOROFORMATE	2748	6.1	
ETHYL 2-CHLOROPROPIONATE	2935	3		Ethylidene chloride, see	2362	3	
Ethyl-alpha-chloropropionate, see	2935	3		ETHYL ISOBUTYRATE	2385	3	
ETHYL CHLOROTHIOFORMATE	2826	8		ETHYL ISOCYANATE	2481	6.1	
ETHYL CROTONATE	1862	3		ETHYL LACTATE	1192	3	
ETHYLDICHLOROARSINE	1892	6.1					
ETHYLDICHLOROSILANE	1183	4.3					
ETHYLENE, ACETYLENE AND PROPYLENE MIXTURE, REFRIGERATED LIQUID containing at least 71.5% ethylene with not more than 22.5% acetylene and not more than 6% propylene	3138	2					
ETHYLENE CHLOROHYDRIN	1135	6.1					
ETHYLENE	1962	2					
ETHYLENEDIAMINE	1604	8					
ETHYLENE DIBROMIDE	1605	6.1					
Ethylene dibromide and methyl bromide, liquid mixture, see	1647	6.1					
ETHYLENE DICHLORIDE	1184	3					
ETHYLENE GLYCOL DIETHYL ETHER	1153	3					
ETHYLENE GLYCOL MONOETHYL ETHER	1171	3					

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ETHYL MERCAPTAN	2363	3		FERRIC CHLORIDE SOLUTION	2582	8	
ETHYL METHACRYLATE, STABILIZED	2277	3		FERRIC NITRATE	1466	5.1	
ETHYL METHYL ETHER	1039	2		FERROCERIUM	1323	4.1	
ETHYL METHYL KETONE	1193	3		FERROSILICON with 30% or more but less than 90% silicon	1408	4.3	
ETHYL NITRITE SOLUTION	1194	3		FERROUS ARSENATE	1608	6.1	
ETHYL ORTHOFORMATE	2524	3		FERROUS METAL BORINGS in a form liable to self-heating	2793	4.2	
ETHYL OXALATE	2525	6.1		FERROUS METAL CUTTINGS in a form liable to self-heating	2793	4.2	
ETHYLPHENYL-DICHLOROSILANE	2435	8		FERROUS METAL SHAVINGS in a form liable to self-heating	2793	4.2	
1-ETHYLPYPERIDINE	2386	3		FERROUS METAL TURNINGS in a form liable to self-heating	2793	4.2	
ETHYL PROPIONATE	1195	3		FERTILIZER AMMONIATING SOLUTION with free ammonia	1043	2	
ETHYL PROPYL ETHER	2615	3		Fertilizer with ammonium nitrate, n.o.s., see	2067	5.1	
Ethyl silicate, see	1292	3		Fibres, animal, burnt wet or damp	1372	4.2	Not subject to ADR
Ethyl sulphate, see	1594	6.1		FIBRES, ANIMAL, N.O.S. with oil	1373	4.2	
N-ETHYLTOLUIDINES	2754	6.1		FIBRES IMPREGNATED WITH WEAKLY NITRATED NITROCELLULOSE, N.O.S.	1353	4.1	
ETHYLTRICHLOROSILANE	1196	3		FIBRES, SYNTHETIC, N.O.S. with oil	1373	4.2	
EXPLOSIVE, BLASTING, TYPE A	0081	1		Fibres, vegetable, burnt wet or damp	1372	4.2	Not subject to ADR
EXPLOSIVE, BLASTING, TYPE B	0082	1		Fibres, vegetable, dry	3360	4.1	Not subject to ADR
	0331	1		FIBRES, VEGETABLE, N.O.S. with oil	1373	4.2	
EXPLOSIVE, BLASTING, TYPE C	0083	1		Films, nitrocellulose base, from which gelatine has been removed; film scrap, see	2002	4.2	
EXPLOSIVE, BLASTING, TYPE D	0084	1		FILMS, NITROCELLULOSE BASE, gelatin coated, except scrap	1324	4.1	
EXPLOSIVE, BLASTING, TYPE E	0241	1		Filler, liquid, see	1263	3	
	0332	1			3066	8	
Explosives, emulsion, see	0241	1			3469	3	
	0332	1			3470	8	
Explosive, seismic, see	0081	1		FIRE EXTINGUISHER CHARGES, corrosive liquid	1774	8	
	0082	1		Fire extinguisher charges, expelling, explosive, see	0275	1	
	0083	1			0276	1	
	0331	1			0323	1	
Explosive, slurry, see	0241	1			0381	1	
	0332	1		FIRE EXTINGUISHERS with compressed or liquefied gas	1044	2	
Explosive, water gel, see	0241	1		FIRELIGHTERS, SOLID with flammable liquid	2623	4.1	
	0332	1					
EXTRACTS, AROMATIC, LIQUID	1169	3					
EXTRACTS, FLAVOURING, LIQUID	1197	3					
FABRICS, ANIMAL, N.O.S. with oil	1373	4.2					
FABRICS IMPREGNATED WITH WEAKLY NITRATED NITROCELLULOSE, N.O.S.	1353	4.1					
FABRICS, SYNTHETIC, N.O.S. with oil	1373	4.2					
FABRICS, VEGETABLE, N.O.S. with oil	1373	4.2					
FERRIC ARSENATE	1606	6.1					
FERRIC ARSENITE	1607	6.1					
FERRIC CHLORIDE, ANHYDROUS	1773	8					

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FIREWORKS	0333	1	See 2.2.1.1.7	Flares, water-activated, see	0248	1	
	0334	1		0249	1		
	0335	1					
	0336	1		FLASH POWDER	0094	1	
	0337	1			0305	1	
FIRST AID KIT	3316	9		Flue dusts, toxic, see	1562	6.1	
Fish meal, stabilized	2216	9	Not subject to ADR	Fluoric acid, see	1790	8	
				FLUORINE, COMPRESSED	1045	2	
FISH MEAL, UNSTABILIZED	1374	4.2		FLUOROACETIC ACID	2642	6.1	
Fish scrap, stabilized, see	2216	9	Not subject to ADR	FLUOROANILINES	2941	6.1	
				2-Fluoroaniline, see	2941	6.1	
				4-Fluoroaniline, see	2941	6.1	
FISH SCRAP, UNSTABILIZED, see	1374	4.2		o-Fluoroaniline, see	2941	6.1	
Flammable gas in lighters, see	1057	2		p-Fluoroaniline, see	2941	6.1	
FLAMMABLE LIQUID, N.O.S.	1993	3		FLUOROBENZENE	2387	3	
FLAMMABLE LIQUID, CORROSIVE, N.O.S.	2924	3		FLUOROBORIC ACID	1775	8	
FLAMMABLE LIQUID, TOXIC, N.O.S.	1992	3		Fluoroethane, see	2453	2	
FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.	3286	3		Fluoroform, see	1984	2	
				Fluoromethane, see	2454	2	
FLAMMABLE SOLID, CORROSIVE, INORGANIC, N.O.S.	3180	4.1		FLUOROPHOSPHORIC ACID, ANHYDROUS	1776	8	
				FLUOROSILICATES, N.O.S.	2856	6.1	
FLAMMABLE SOLID, CORROSIVE, ORGANIC, N.O.S.	2925	4.1		FLUOROSILICIC ACID	1778	8	
FLAMMABLE SOLID, INORGANIC, N.O.S.	3178	4.1		FLUOROSULPHONIC ACID	1777	8	
FLAMMABLE SOLID, ORGANIC, N.O.S.	1325	4.1		FLUOROTOLUENES	2388	3	
FLAMMABLE SOLID, ORGANIC, MOLTEN, N.O.S.	3176	4.1		FORMALDEHYDE SOLUTION with not less than 25% formaldehyde	2209	8	
				FORMALDEHYDE SOLUTION, FLAMMABLE	1198	3	
FLAMMABLE SOLID, OXIDIZING, N.O.S.	3097	4.1	Carriage prohibited	Formalin, see	1198 2209	3 8	
FLAMMABLE SOLID, TOXIC, INORGANIC, N.O.S.	3179	4.1		Formamidine sulphinic acid, see	3341	4.2	
FLAMMABLE SOLID, TOXIC, ORGANIC, N.O.S.	2926	4.1		FORMIC ACID with more than 85% acid by mass	1779	8	
FLARES, AERIAL	0093	1		FORMIC ACID with not more than 85% acid by mass	3412	8	
	0403	1					
	0404	1		Formic aldehyde, see	1198	3	
	0420	1			2209	8	
	0421	1		2-Formyl-3,4-dihydro-2H-pyran, see	2607	3	
Flares, aeroplane, see	0093	1		FRACTURING DEVICES, EXPLOSIVE without detonator, for oil wells	0099	1	
	0403	1					
	0404	1					
	0420	1					
	0421	1		FUEL, AVIATION, TURBINE ENGINE	1863	3	
Flares, highway, Flares, distress, small, Flares, railway or highway, see	0191	1		FUEL CELL CARTRIDGES	3478	2	
	0373	1			3479	2	
FLARES, SURFACE	0092	1			3473	3	
	0418	1			3476	4.3	
	0419	1			3477	8	

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FUEL CELL CARTRIDGES CONTAINED IN EQUIPMENT	3478	2		GAS, REFRIGERATED LIQUID, N.O.S.	3158	2	
	3479	2					
	3473	3					
	3476	4.3		GAS, REFRIGERATED LIQUID, FLAMMABLE, N.O.S.	3312	2	
	3477	8					
FUEL CELL CARTRIDGES PACKED WITH EQUIPMENT	3478	2		GAS, REFRIGERATED LIQUID, OXIDIZING, N.O.S.	3311	2	
	3479	2					
	3473	3		GAS SAMPLE, NON- PRESSURIZED, FLAMMABLE, N.O.S., not refrigerated liquid	3167	2	
	3476	4.3					
	3477	8					
Fumaroyl dichloride, see	1780	3		GAS SAMPLE, NON- PRESSURIZED, TOXIC, N.O.S., not refrigerated liquid	3169	2	
FUMARYL CHLORIDE	1780	8					
FUMIGATED CARGO TRANSPORT UNIT	3359	9		GAS SAMPLE, NON- PRESSURIZED, TOXIC, FLAMMABLE, N.O.S., not refrigerated liquid	3168	2	
FURALDEHYDES	1199	6.1					
FURAN	2389	3		Gelatin, blasting, see	0081	1	
FURFURYL ALCOHOL	2874	6.1		Gelatin, dynamites, see	0081	1	
FURFURYLAMINE	2526	3		GENETICALLY MODIFIED MICROORGANISMS	3245	9	
Furyl carbinol, see	2874	6.1		GENETICALLY MODIFIED ORGANISMS	3245	9	
FUSE, DETONATING, metal clad	0102	1		GERMANE	2192	2	
	0290	1		Germanium hydride, see	2192	2	
FUSE, DETONATING, MILD EFFECT, metal clad	0104	1		Glycer-1,3-dichlorohydrin, see	2750	6.1	
FUSE, IGNITER, tubular, metal clad	0103	1		GLYCEROL alpha- MONOCHLOROHYDRIN	2689	6.1	
FUSE, NON-DETONATING	0101	1		Glyceryl trinitrate, see	0143	1	
FUSEL OIL	1201	3			0144	1	
FUSE, SAFETY	0105	1			1204	3	
Fuze, combination, percussion or time, see	0106	1			3064	3	
	0107	1		GLYCIDALDEHYDE	2622	3	
	0257	1		GRENADES, hand or rifle, with bursting charge	0284	1	
	0316	1			0285	1	
	0317	1			0292	1	
	0367	1			0293	1	
	0368	1		Grenades, illuminating, see	0171	1	
FUZES, DETONATING	0106	1			0254	1	
	0107	1			0297	1	
	0257	1		GRENADES, PRACTICE, hand or rifle	0110	1	
	0367	1			0318	1	
FUZES, DETONATING with protective features	0408	1			0372	1	
	0409	1			0452	1	
	0410	1		Grenades, smoke, see	0015	1	
FUZES, IGNITING	0316	1			0016	1	
	0317	1			0245	1	
	0368	1			0246	1	
GALLIUM	2803	8			0303	1	
GAS CARTRIDGES without a release device, non-refillable, see	2037	2		GUANIDINE NITRATE	1467	5.1	
Gas drips, hydrocarbon, see	3295	3		GUANYLNITROSAMINO- GUANYLIDENE HYDRAZINE, WETTED with not less than 30% water, by mass	0113	1	
GAS OIL	1202	3					
GASOLINE	1203	3					
Gasoline and ethanol mixture, with more than 10% ethanol, see	3475	3					
Gasoline, casinghead, see	1203	3					

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GUANYLNITROSAMINO-GUANYLTETRAZENE, WETTED with not less than 30% water, or mixture of alcohol and water, by mass	0114	1		HEXAFLUOROPHOSPHORIC ACID	1782	8	
				HEXAFLUOROPROPYLENE	1858	2	
				Hexahydrocresol, see	2617	3	
GUNPOWDER, COMPRESSED, see	0028	1		Hexahydromethyl phenol, see	2617	3	
GUNPOWDER, granular or as a meal, see	0027	1		HEXALDEHYDE	1207	3	
GUNPOWDER, IN PELLETS, see	0028	1		HEXAMETHYLENEDIAMINE, SOLID	2280	8	
Gutta percha solution, see	1287	3		HEXAMETHYLENEDIAMINE SOLUTION	1783	8	
HAFNIUM POWDER, DRY	2545	4.2		HEXAMETHYLENE DIISOCYANATE	2281	6.1	
HAFNIUM POWDER, WETTED with not less than 25% water	1326	4.1		HEXAMETHYLENEIMINE	2493	3	
Hay	1327	4.1	Not subject to ADR	HEXAMETHYLENETETRAMINE	1328	4.1	
				Hexamine, see	1328	4.1	
HEATING OIL, LIGHT	1202	3		HEXANES	1208	3	
Heavy hydrogen, see	1957	2		HEXANITRODIPHENYLAMINE	0079	1	
HELIUM, COMPRESSED	1046	2		HEXANITROSTILBENE	0392	1	
HELIUM, REFRIGERATED LIQUID	1963	2		Hexanoic acid, see	2829	8	
HEPTAFLUOROPROPANE	3296	2		HEXANOLS	2282	3	
n-HEPTALDEHYDE	3056	3		1-HEXENE	2370	3	
n-Heptanal, see	3056	3		HEXOGEN AND CYCLOTETRAMETHYLENE-TETRANITRAMINE MIXTURE, WETTED with not less than 15% water, by mass or DESENSITIZED with not less than 10% phlegmatizer by mass, see	0391	1	
HEPTANES	1206	3					
4-Heptanone, see	2710	3		HEXOGEN, DESENSITIZED, see	0483	1	
n-HEPTENE	2278	3		HEXOGEN, WETTED with not less than 15% water, by mass, see	0072	1	
HEXACHLOROACETONE	2661	6.1		HEXOLITE, dry or wetted with less than 15% water, by mass	0118	1	
HEXACHLORO BENZENE	2729	6.1		HEXOTOL, dry or wetted with less than 15% water, by mass, see	0118	1	
HEXACHLOROBUTADIENE	2279	6.1		HEXOTONAL	0393	1	
Hexachloro-1,3-butadiene, see	2279	6.1		HEXOTONAL, cast, see	0393	1	
HEXACHLOROCYCLOPENTADIENE	2646	6.1		HEXYL, see	0079	1	
HEXACHLOROPHENE	2875	6.1		HEXYLTRICHLOROSILANE	1784	8	
Hexachloro-2-propanone, see	2661	6.1		HMX, see	0391	1	
HEXADECYLTRICHLOROSILANE	1781	8		HMX, DESENSITIZED, see	0484	1	
HEXADIENES	2458	3		HMX, WETTED with not less than 15% water, by mass, see	0226	1	
HEXAETHYL TETRAPHOSPHATE	1611	6.1		HYDRAZINE, ANHYDROUS	2029	8	
HEXAETHYL TETRAPHOSPHATE AND COMPRESSED GAS MIXTURE	1612	2		HYDRAZINE AQUEOUS SOLUTION, with more than 37% hydrazine by mass	2030	8	
HEXAFLUROACETONE	2420	2		HYDRAZINE, AQUEOUS SOLUTION with not more than 37% hydrazine, by mass	3293	6.1	
HEXAFLUROACETONE HYDRATE, LIQUID	2552	6.1					
HEXAFLUROACETONE HYDRATE, SOLID	3436	6.1					
HEXAFLUROETHANE	2193	2					

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Hydrosilicofluoric acid, see	1778	8		IRON OXIDE, SPENT obtained from coal gas purification	1376	4.2	
1-HYDROXYBENZOTRIAZOLE, ANHYDROUS, dry or wetted with less than 20% water, by mass	0508	1		IRON PENTACARBONYL	1994	6.1	
1-HYDROXYBENZOTRIAZOLE MONOHYDRATE	3474	4.1		Iron perchloride, anhydrous, see	1773	8	
3-Hydroxybutan-2-one, see	2621	3		Iron powder, pyrophoric, see	1383	4.2	
HYDROXYLAMINE SULPHATE	2865	8		Iron sesquichloride, anhydrous, see	1773	8	
1-Hydroxy-3-methyl-2-penten-4-yne, see	2705	8		IRON SPONGE, SPENT obtained from coal gas purification	1376	4.2	
3-Hydroxyphenol, see	2876	6.1		Iron swarf, see	2793	4.2	
HYPOCHLORITES, INORGANIC, N.O.S.	3212	5.1		ISOBUTANE	1969	2	
HYPOCHLORITE SOLUTION	1791	8		ISOBUTANOL	1212	3	
IGNITERS	0121	1		Isobutene, see	1055	2	
	0314	1		ISOBUTYL ACETATE	1213	3	
	0315	1		ISOBUTYL ACRYLATE, STABILIZED	2527	3	
	0325	1		ISOBUTYL ALCOHOL, see	1212	3	
	0454	1		ISOBUTYL ALDEHYDE, see	2045	3	
3,3'-IMINODIPROPYLAMINE	2269	8		ISOBUTYLAMINE	1214	3	
Indiarubber, see	1287	3		ISOBUTYLENE	1055	2	
INFECTIOUS SUBSTANCE, AFFECTING ANIMALS only	2900	6.2		ISOBUTYL FORMATE	2393	3	
INFECTIOUS SUBSTANCE, AFFECTING HUMANS	2814	6.2		ISOBUTYL ISOBUTYRATE	2528	3	
Ink, printer's, flammable, see	1210	3		ISOBUTYL ISOCYANATE	2486	6.1	
INSECTICIDE GAS, N.O.S.	1968	2		ISOBUTYL METHACRYLATE, STABILIZED	2283	3	
INSECTICIDE GAS, FLAMMABLE, N.O.S.	3354	2		ISOBUTYL PROPIONATE	2394	3	
INSECTICIDE GAS, TOXIC, N.O.S.	1967	2		ISOBUTYRALDEHYDE	2045	3	
INSECTICIDE GAS, TOXIC, FLAMMABLE, N.O.S.	3355	2		ISOBUTYRIC ACID	2529	3	
IODINE	3495	8		ISOBUTYRONITRILE	2284	3	
IODINE MONOCHLORIDE, LIQUID	3498	8		ISOBUTYRYL CHLORIDE	2395	3	
IODINE MONOCHLORIDE, SOLID	1792	8		ISOCYANATES, FLAMMABLE, TOXIC, N.O.S.	2478	3	
IODINE PENTAFLUORIDE	2495	5.1		ISOCYANATES, TOXIC, N.O.S.	2206	6.1	
2-IODOBUTANE	2390	3		ISOCYANATES, TOXIC, FLAMMABLE, N.O.S.	3080	6.1	
Iodomethane, see	2644	6.1		ISOCYANATE SOLUTION, FLAMMABLE, TOXIC, N.O.S.	2478	3	
IODOMETHYLPROPANES	2391	3		ISOCYANATE SOLUTION, TOXIC, N.O.S.	2206	6.1	
IODOPROPANES	2392	3		ISOCYANATE SOLUTION, TOXIC, FLAMMABLE, N.O.S.	3080	6.1	
alpha-Iodotoluene, see	2653	6.1		ISOCYANATO-BENZOTRIFLUORIDES	2285	6.1	
I.p.d.i., see	2290	6.1		3-Isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate, see	2290	6.1	
Iron chloride, anhydrous, see	1773	8		Isododecane, see	2286	3	
Iron (III) chloride, anhydrous, see	1773	8		ISOHEPTENE	2287	3	
Iron chloride solution, see	2582	8		ISOHEXENE	2288	3	

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Isooctane, see	1262	3		KETONES, LIQUID, N.O.S.	1224	3	
ISOCTENE	1216	3		KRILL MEAL	3497	4.2	
Isopentane, see	1265	3		KRYPTON, COMPRESSED	1056	2	
ISOPENTENES	2371	3		KRYPTON, REFRIGERATED LIQUID	1970	2	
Isopentylamine, see	1106	3		Lacquer, see	1263	3	
Isopentyl nitrite, see	1113	3			3066	8	
ISOPHORONEDIAMINE	2289	8			3469	3	
ISOPHORONE DIISOCYANATE	2290	6.1			3470	8	
ISOPRENE, STABILIZED	1218	3		Lacquer base, liquid, see	1263	3	
ISOPROPANOL	1219	3			3066	8	
ISOPROPENYL ACETATE	2403	3			3469	3	
ISOPROPENYLBENZENE	2303	3			3470	8	
ISOPROPYL ACETATE	1220	3		Lacquer base or lacquer chips, nitrocellulose, dry, see	2557	4.1	
ISOPROPYL ACID PHOSPHATE	1793	8		Lacquer base or lacquer chips, plastic, wet with alcohol or solvent, see	1263	3	
ISOPROPYL ALCOHOL, see	1219	3			2059	3	
ISOPROPYLAMINE	1221	3			2555	4.1	
ISOPROPYLBENZENE	1918	3		LEAD ACETATE	2556	4.1	
ISOPROPYL BUTYRATE	2405	3		LEAD (II) acetate, see	1616	6.1	
Isopropyl chloride, see	2356	3		LEAD ARSENATES	1617	6.1	
ISOPROPYL CHLOROACETATE	2947	3		LEAD ARSENITES	1618	6.1	
ISOPROPYL CHLOROFORMATE	2407	6.1		LEAD AZIDE, WETTED with not less than 20% water, or mixture of alcohol and water, by mass	0129	1	
ISOPROPYL 2-CHLORO-PROPIONATE	2934	3		Lead chloride, solid, see	2291	6.1	
Isopropyl-alpha-chloropropionate, see	2934	3		LEAD COMPOUND, SOLUBLE, N.O.S.	2291	6.1	
Isopropyl ether, see	1159	3		LEAD CYANIDE	1620	6.1	
Isopropylethylene, see	2561	3		Lead (II) cyanide	1620	6.1	
Isopropyl formate, see	1281	3		LEAD DIOXIDE	1872	5.1	
ISOPROPYL ISOBUTYRATE	2406	3		LEAD NITRATE	1469	5.1	
ISOPROPYL ISOCYANATE	2483	6.1		Lead (II) nitrate	1469	5.1	
Isopropyl mercaptan, see	2402	3		LEAD PERCHLORATE, SOLID	1470	5.1	
ISOPROPYL NITRATE	1222	3		LEAD PERCHLORATE, SOLUTION	3408	5.1	
ISOPROPYL PROPIONATE	2409	3		Lead (II) perchlorate	1470	5.1	
Isolpropyltoluene, see	2046	3			3408	5.1	
Isopropyltoluol, see	2046	3		Lead peroxide, see	1872	5.1	
ISOSORBIDE DINITRATE MIXTURE with not less than 60% lactose, mannose, starch or calcium hydrogen phosphate	2907	4.1		LEAD PHOSPHITE, DIBASIC	2989	4.1	
ISOSORBIDE-5-MONONITRATE	3251	4.1		LEAD STYPHNATE, WETTED with not less than 20% water, or mixture of alcohol and water, by mass	0130	1	
Isovaleraldehyde, see	2058	3		LEAD SULPHATE with more than 3% free acid	1794	8	
JET PERFORATING GUNS, CHARGED, oil well, without detonator	0124	1		Lead tetraethyl, see	1649	6.1	
	0494	1		Lead tetramethyl, see	1649	6.1	
Jet tappers, without detonator, see	0059	1					
KEROSENE	1223	3					

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LEAD TRINITRORESORCINATE, WETTED with not less than 20% water, or mixture of alcohol and water, by mass, see	0130	1		LITHIUM HYDRIDE	1414	4.3	
LIFE-SAVING APPLIANCES NOT SELF-INFLATING containing dangerous goods as equipment	3072	9		LITHIUM HYDRIDE, FUSED SOLID	2805	4.3	
LIFE-SAVING APPLIANCES, SELF-INFLATING	2990	9		LITHIUM HYDROXIDE	2680	8	
LIGHTER REFILLS containing flammable gas	1057	2		LITHIUM HYDROXIDE SOLUTION	2679	8	
LIGHTERS containing flammable gas	1057	2		LITHIUM HYPOCHLORITE, DRY	1471	5.1	
LIGHTERS, FUSE	0131	1		LITHIUM HYPOCHLORITE MIXTURE	1471	5.1	
Limonene, inactive, see	2052	3		Lithium in cartouches, see	1415	4.3	
LIQUEFIED GAS, N.O.S.	3163	2		LITHIUM ION BATTERIES (including lithium ion polymer batteries)	3480	9	
LIQUEFIED GAS, FLAMMABLE, N.O.S.	3161	2		LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT (including lithium ion polymer batteries)	3481	9	
LIQUEFIED GASES, non-flammable, charged with nitrogen, carbon dioxide or air	1058	2		LITHIUM ION BATTERIES PACKED WITH EQUIPMENT (including lithium ion polymer batteries)	3481	9	
LIQUEFIED GAS, OXIDIZING, N.O.S.	3157	2		LITHIUM METAL BATTERIES (including lithium alloy batteries)	3090	9	
LIQUEFIED GAS, TOXIC, N.O.S.	3162	2		LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT (including lithium alloy batteries)	3091	9	
LIQUEFIED GAS, TOXIC, CORROSIVE, N.O.S.	3308	2		LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT (including lithium alloy batteries)	3091	9	
LIQUEFIED GAS, TOXIC, FLAMMABLE, N.O.S.	3160	2		LITHIUM NITRATE	2722	5.1	
LIQUEFIED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	3309	2		LITHIUM NITRIDE	2806	4.3	
LIQUEFIED GAS, TOXIC, OXIDIZING, N.O.S.	3307	2		LITHIUM PEROXIDE	1472	5.1	
LIQUEFIED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	3310	2		Lithium silicide, see	1417	4.3	
Liquefied petroleum gas, see	1075	2		LITHIUM SILICON	1417	4.3	
Liquid filler, see	1263 3066 3469 3470	3 8 3 8		L.n.g., see	1972	2	
Liquid lacquer base, see	1263 3066 3469 3470	3 8 3 8		LONDON PURPLE	1621	6.1	
LITHIUM	1415	4.3		L.p.g., see	1075	2	
Lithium alkyls, liquid, see	3394	4.2		Lye, see	1823	8	
Lithium alkyls, solid, see	3393	4.2		Lythene, see	1268	3	
LITHIUM ALUMINIUM HYDRIDE	1410	4.3		MAGNESIUM in pellets, turnings or ribbons	1869	4.1	
LITHIUM ALUMINIUM HYDRIDE, ETHEREAL	1411	4.3		Magnesium alkyls, see	3394	4.2	
LITHIUM BOROHYDRIDE	1413	4.3		MAGNESIUM ALLOYS with more than 50% magnesium in pellets, turnings or ribbons	1869	4.1	
LITHIUM FERROSILICON	2830	4.3		MAGNESIUM ALLOYS POWDER	1418	4.3	
				MAGNESIUM ALUMINIUM PHOSPHIDE	1419	4.3	
				MAGNESIUM ARSENATE	1622	6.1	
				Magnesium bisulphite solution, see	2693	8	

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MAGNESIUM BROMATE	1473	5.1		MATCHES, "STRIKE ANYWHERE"	1331	4.1	
MAGNESIUM CHLORATE	2723	5.1		MATCHES, WAX "VESTA"	1945	4.1	
Magnesium chloride and chlorate mixture, see	1459	5.1		MEDICAL WASTE, N.O.S.	3291	6.2	
	3407	5.1		MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S.	3248	3	
MAGNESIUM DIAMIDE	2004	4.2		MEDICINE, LIQUID, TOXIC, N.O.S.	1851	6.1	
Magnesium diphenyl, see	3393	4.2		MEDICINE, SOLID, TOXIC, N.O.S.	3249	6.1	
MAGNESIUM FLUORO-SILICATE	2853	6.1		p-Mentha-1,8-diene, see	2052	8	
MAGNESIUM GRANULES, COATED, particle size not less than 149 microns	2950	4.3		MERCAPTANS, LIQUID, FLAMMABLE, N.O.S.	3336	3	
MAGNESIUM HYDRIDE	2010	4.3		MERCAPTANS, LIQUID, FLAMMABLE, TOXIC, N.O.S.	1228	3	
MAGNESIUM NITRATE	1474	5.1		MERCAPTANS, LIQUID, TOXIC, FLAMMABLE, N.O.S.	3071	6.1	
MAGNESIUM PERCHLORATE	1475	5.1		MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, N.O.S.	3336	3	
MAGNESIUM PEROXIDE	1476	5.1		MERCAPTAN MIXTURE, LIQUID, FLAMMABLE, TOXIC, N.O.S.	1228	3	
MAGNESIUM PHOSPHIDE	2011	4.3		MERCAPTAN MIXTURE, LIQUID, TOXIC, FLAMMABLE, N.O.S.	3071	6.1	
MAGNESIUM POWDER	1418	4.3		Magnetized material	2807	9	Not subject to ADR
Magnesium scrap, see	1869	4.1		MALEIC ANHYDRIDE	2215	8	
MAGNESIUM SILICIDE	2624	4.3		MALEIC ANHYDRIDE, MOLTEN	2215	8	
Magnesium silicofluoride, see	2853	6.1		Malonic dinitrile, see	2647	6.1	
				Malonodinitrile, see	2647	6.1	
				MALONONITRILE	2647	6.1	
				MANEB	2210	4.2	
				MANEB PREPARATION with not less than 60% maneb	2210	4.2	
				MANEB PREPARATION, STABILIZED against self-heating	2968	4.3	
				MANEB, STABILIZED against self-heating	2968	4.3	
				Manganese ethylene-dithiocarbamate, see	2210	4.2	
				Manganese ethylene-1,2-dithiocarbamate, see	2210	4.2	
				MANGANESE NITRATE	2724	5.1	
				Manganese (II) nitrate, see	2724	5.1	
				MANGANESE RESINATE	1330	4.1	
				Manganous nitrate, see	2724	5.1	
				MANNITOL HEXANITRATE, WETTED with not less than 40% water, or mixture of alcohol and water, by mass	0133	1	
				MATCHES, FUSEE	2254	4.1	
				MATCHES, SAFETY (book, card or strike on box)	1944	4.1	
				MERCURY ACETATE	1629	6.1	
				MERCURY AMMONIUM CHLORIDE	1630	6.1	
				MERCURY BASED PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	2778	3	
				MERCURY BASED PESTICIDE, LIQUID, TOXIC	3012	6.1	
				MERCURY BASED PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	3011	6.1	

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Name and description	UN No.	Class	Remarks	Name and description	UN No.	Class	Remarks
MERCURY BASED PESTICIDE, SOLID, TOXIC	2777	6.1		METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S.	3208	4.3	
MERCURY BENZOATE	1631	6.1		METALLIC SUBSTANCE, WATER-REACTIVE, SELF-HEATING, N.O.S.	3209	4.3	
Mercury bichloride, see	1624	6.1		METAL POWDER, FLAMMABLE, N.O.S.	3089	4.1	
MERCURY BROMIDES	1634	6.1		METAL POWDER, SELF-HEATING, N.O.S.	3189	4.2	
MERCURY COMPOUND, LIQUID, N.O.S.	2024	6.1		METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S.	3181	4.1	
MERCURY COMPOUND, SOLID, N.O.S.	2025	6.1		METHACRYLALDEHYDE, STABILIZED	2396	3	
MERCURY CONTAINED IN MANUFACTURED ARTICLES	3506	8		METHACRYLIC ACID, STABILIZED	2531	8	
MERCURY CYANIDE	1636	6.1		METHACRYLONITRILE, STABILIZED	3079	6.1	
MERCURY FULMINATE, WETTED with not less than 20% water, or mixture of alcohol and water, by mass	0135	1		METHALLYL ALCOHOL	2614	3	
MERCURY GLUCONATE	1637	6.1		Methanal, see	1198 2209	3 8	
MERCURY IODIDE	1638	6.1		Methane and hydrogen mixture, see	2034	2	
MERCURY NUCLEATE	1639	6.1		METHANE, COMPRESSED	1971	2	
MERCURY OLEATE	1640	6.1		METHANE, REFRIGERATED LIQUID	1972	2	
MERCURY OXIDE	1641	6.1		METHANESULPHONYL CHLORIDE	3246	6.1	
MERCURY OXYCYANIDE, DESENSITIZED	1642	6.1		METHANOL	1230	3	
MERCURY POTASSIUM IODIDE	1643	6.1		2-Methoxyethyl acetate, see	1189	3	
MERCURY SALICYLATE	1644	6.1		METHOXYMETHYL ISOCYANATE	2605	6.1	
MERCURY SULPHATE	1645	6.1		4-METHOXY-4-METHYLPENTAN-2-ONE	2293	3	
MERCURY THIOCYANATE	1646	6.1		1-Methoxy-2-nitrobenzene, see	2730 3458	6.1 6.1	
Mesitylene, see	2325	3		1-Methoxy-3-nitrobenzene, see	2730 3458	6.1 6.1	
MESITYL OXIDE	1229	3		1-Methoxy-4-nitrobenzene, see	2730 3458	6.1 6.1	
Metal alkyl halides, water-reactive, n.o.s. / Metal aryl halides, water-reactive, n.o.s., see	3394	4.2		1-METHOXY-2-PROPANOL	3092	3	
Metal alkyl hydrides, water-reactive, n.o.s. / Metal aryl hydrides, water-reactive, n.o.s., see	3394	4.2		METHYL ACETATE	1231	3	
Metal alkyls, water-reactive, n.o.s. / Metal aryls, water-reactive, n.o.s., see	3393	4.2		METHYLACETYLENE AND PROPADIENE MIXTURE, STABILIZED such as mixture P1 or mixture P2	1060	2	
METAL CARBONYLS, LIQUID, N.O.S.	3281	6.1		beta-Methyl acrolein, see	1143	6.1	
METAL CARBONYLS, SOLID, N.O.S.	3466	6.1		METHYL ACRYLATE, STABILIZED	1919	3	
METAL CATALYST, DRY	2881	4.2		METHYLAL	1234	3	
METAL CATALYST, WETTED with a visible excess of liquid	1378	4.2		Methyl alcohol, see	1230	3	
METALDEHYDE	1332	4.1		Methyl allyl alcohol, see	2614	3	
METAL HYDRIDES, FLAMMABLE, N.O.S.	3182	4.1					
METAL HYDRIDES, WATER-REACTIVE, N.O.S.	1409	4.3					

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METHYLALLYL CHLORIDE	2554	3		METHYLCYCLOHEXANOLS, flammable	2617	3	
METHYLAMINE, ANHYDROUS	1061	2		METHYLCYCLOHEXANONE	2297	3	
METHYLAMINE, AQUEOUS SOLUTION	1235	3		METHYLCYCLOPENTANE	2298	3	
METHYLAMYL ACETATE	1233	3		METHYL DICHLOROACETATE	2299	6.1	
Methyl amyl alcohol, see	2053	3		METHYLDICHLOROSILANE	1242	4.3	
Methyl amyl ketone, see	1110	3		Methylene bromide, see	2664	6.1	
N-METHYLANILINE	2294	6.1		Methylene chloride, see	1593	6.1	
Methylated spirit, see	1986 1987	3 3		Methylene chloride and methyl chloride mixture, see	1912	2	
alpha-METHYLBENZYL ALCOHOL, LIQUID	2937	6.1		Methylene cyanide, see	2647	6.1	
alpha-METHYLBENZYL ALCOHOL, SOLID	3438	6.1		p,p'-Methylene dianiline, see	2651	6.1	
METHYL BROMIDE with not more than 2% chloropicrin	1062	2		Methylene dibromide, see	2664	6.1	
Methyl bromide and chloropicrin mixture, with more than 2% chloropicrin, see	1581	2		2,2'-Methylene-di-(3,4,6- trichlorophenol), see	2875	6.1	
METHYL BROMIDE AND ETHYLENE DIBROMIDE MIXTURE, LIQUID	1647	6.1		Methyl ethyl ether, see	1039	2	
METHYL BROMOACETATE	2643	6.1		METHYL ETHYL KETONE, see	1193	3	
2-METHYLBUTANAL	3371	3		2-METHYL-5-ETHYLPYRIDINE	2300	6.1	
3-METHYLBUTAN-2-ONE	2397	3		METHYL FLUORIDE	2454	2	
2-METHYL-1-BUTENE	2459	3		METHYL FORMATE	1243	3	
2-METHYL-2-BUTENE	2460	3		2-METHYLFURAN	2301	3	
3-METHYL-1-BUTENE	2561	3		Methyl glycol, see	1188	3	
N-METHYLBUTYLAMINE	2945	3		Methyl glycol acetate, see	1189	3	
METHYL tert-BUTYL ETHER	2398	3		2-METHYL-2-HEPTANETHIOL	3023	6.1	
METHYL BUTYRATE	1237	3		5-METHYLHEXAN-2-ONE	2302	3	
METHYL CHLORIDE	1063	2		METHYLHYDRAZINE	1244	6.1	
Methyl chloride and chloropicrin mixture, see	1582	2		METHYL IODIDE	2644	6.1	
METHYL CHLORIDE AND METHYLENE CHLORIDE MIXTURE	1912	2		METHYL ISOBUTYL CARBINOL	2053	3	
METHYL CHLOROACETATE	2295	6.1		METHYL ISOBUTYL KETONE	1245	3	
Methyl chlorocarbonate, see	1238	6.1		METHYL ISOCYANATE	2480	6.1	
Methyl chloroform, see	2831	6.1		METHYL ISOPROPENYL KETONE, STABILIZED	1246	3	
METHYL CHLOROFORMATE	1238	6.1		METHYL ISOTHIOCYANATE	2477	6.1	
METHYL CHLOROMETHYL ETHER	1239	6.1		METHYL ISOVALERATE	2400	3	
METHYL 2-CHLORO- PROPIONATE	2933	3		METHYL MAGNESIUM BROMIDE IN ETHYL ETHER	1928	4.3	
Methyl alpha-chloropropionate, see	2933	3		METHYL MERCAPTAN	1064	2	
METHYLCHLOROSILANE	2534	2		Methyl mercapto-propionaldehyde, see	2785	6.1	
Methyl cyanide, see	1648	3		METHYL METHACRYLATE MONOMER, STABILIZED	1247	3	
METHYLCYCLOHEXANE	2296	3		4-METHYLMORPHOLINE	2535	3	
				N-METHYLMORPHOLINE, see	2535	3	
				METHYL NITRITE	2455	2	Carriage prohibited
				METHYL ORTHOSILICATE	2606	6.1	
				METHYLPENTADIENE	2461	3	

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Methylpentanes, see	1208	3		Mixture P1 or mixture P2, see	1060	2	
2-METHYLPENTAN-2-OL	2560	3		MOLYBDENUM PENTACHLORIDE	2508	8	
4-Methylpentan-2-ol, see	2053	3		Monochloroacetic acid, see	1750	6.1	
3-Methyl-2-penten-4ynol, see	2705	8			1751	6.1	
METHYLPHENYL-DICHLOROSILANE	2437	8		Monochlorobenzene, see	1134	3	
2-Methyl-2-phenylpropane, see	2709	3		Monochlorodifluoromethane, see	1018	2	
1-METHYLPYPERIDINE	2399	3		Monochlorodifluoromethane and monochloropentafluoroethane mixture, see	1973	2	
METHYL PROPIONATE	1248	3		Monochlorodifluoromonobromomethane, see	1974	2	
Methylpropylbenzene, see	2046	3		Monochloropentafluoroethane and monochlorodifluoromethane mixture, see	1973	2	
METHYL PROPYL ETHER	2612	3		Monoethylamine, see	1036	2	
METHYL PROPYL KETONE	1249	3		MONONITROTOLUIDINES, see	2660	6.1	
Methyl pyridines, see	2313	3		Monopropylamine, see	1277	3	
Methylstyrene, inhibited, see	2618	3		MORPHOLINE	2054	8	
alpha-Methylstyrene, see	2303	3		MOTOR FUEL ANTI-KNOCK MIXTURE	1649	6.1	
Methyl sulphate, see	1595	6.1		MOTOR FUEL ANTI-KNOCK MIXTURE, FLAMMABLE	3483	6.1	
Methyl sulphide, see	1164	3		MOTOR SPIRIT	1203	3	
METHYLTETRAHYDROFURAN	2536	3		Motor spirit and ethanol mixture, with more than 10% ethanol, see	3475	3	
METHYL TRICHLOROACETATE	2533	6.1		Muriatic acid, see	1789	8	
METHYLTRICHLOROSILANE	1250	3		MUSK XYLENE, see	2956	4.1	
alpha-METHYLVALERAL-DEHYDE	2367	3		Mysorite, see	2212	9	
Methyl vinyl benzene, inhibited, see	2618	3		Naphta, see	1268	3	
METHYL VINYL KETONE, STABILIZED	1251	6.1		Naphta, petroleum, see	1268	3	
M.i.b.c., see	2053	3		Naphta, solvent, see	1268	3	
MINES with bursting charge	0136	1		NAPHTHALENE, CRUDE	1334	4.1	
	0137	1		NAPHTHALENE, MOLTEN	2304	4.1	
	0138	1		NAPHTHALENE, REFINED	1334	4.1	
	0294	1		alpha-NAPHTHYLAMINE	2077	6.1	
Mirbane oil, see	1662	6.1		beta-NAPHTHYLAMINE, SOLID	1650	6.1	
Missiles, guided, see	0180	1		beta-NAPHTHYLAMINE, SOLUTION	3411	6.1	
	0181	1		NAPHTHYLTHIOUREA	1651	6.1	
	0182	1		1-Naphthylthiourea, see	1651	6.1	
	0183	1		NAPHTHYLUREA	1652	6.1	
	0295	1		NATURAL GAS, COMPRESSED with high methane content	1971	2	
	0397	1		NATURAL GAS, REFRIGERATED LIQUID with high methane content	1972	2	
	0398	1		Natural gasoline, see	1203	3	
	0436	1		Neohexane, see	1208	3	
	0437	1					
	0438	1					
Mixtures A, A01, A02, A0, A1, B1, B2, B or C, see	1965	2					
Mixture F1, mixture F2 or mixture F3, see	1078	2					
MIXTURES OF 1,3-BUTADIENE AND HYDROCARBONS, STABILIZED, having a vapour pressure at 70 °C not exceeding 1.1 MPa (11 bar) and a density at 50 °C not lower than 0.525 kg/l	1010	2					

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Name and description	UN No.	Class	Remarks	Name and description	UN No.	Class	Remarks
NEON, COMPRESSED	1065	2		NITRIC ACID, other than red fuming, with less than 65% nitric acid	2031	8	
NEON, REFRIGERATED LIQUID	1913	2					
Neothyl, see	2612	3		NITRIC ACID, other than red fuming, with more than 70% nitric acid	2031	8	
NICKEL CARBONYL	1259	6.1		NITRIC ACID, RED FUMING	2032	8	
NICKEL CYANIDE	1653	6.1		NITRIC OXIDE, COMPRESSED	1660	2	
Nickel (II) cyanide, see	1653	6.1		NITRIC OXIDE AND DINITROGEN TETROXIDE MIXTURE	1975	2	
NICKEL NITRATE	2725	5.1		NITRIC OXIDE AND NITROGEN DIOXIDE MIXTURE, see	1975	2	
Nickel (II) nitrate, see	2725	5.1		NITRILES, FLAMMABLE, TOXIC, N.O.S.	3273	3	
NICKEL NITRITE	2726	5.1		NITRILES, LIQUID, TOXIC, N.O.S.	3276	6.1	
Nickel (II) nitrite, see	2726	5.1		NITRILES, SOLID, TOXIC, N.O.S.	3439	6.1	
Nickelous nitrate, see	2725	5.1		NITRILES, TOXIC, FLAMMABLE, N.O.S.	3275	6.1	
Nickelous nitrite, see	2726	5.1		NITRITES, INORGANIC, N.O.S.	2627	5.1	
Nickel tetracarbonyl, see	1259	6.1		NITRITES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	3219	5.1	
NICOTINE	1654	6.1		NITROANILINES (o-, m-, p-)	1661	6.1	
NICOTINE COMPOUND, LIQUID, N.O.S.	3144	6.1		NITROANISOLES, LIQUID	2730	6.1	
NICOTINE COMPOUND, SOLID, N.O.S.	1655	6.1		NITROANISOLES, SOLID	3458	6.1	
NICOTINE HYDROCHLORIDE, LIQUID	1656	6.1		NITROBENZENE	1662	6.1	
NICOTINE HYDROCHLORIDE, SOLID	3444	6.1		Nitrobenzene bromide, see	2732	6.1	
NICOTINE HYDROCHLORIDE, SOLUTION	1656	6.1		NITROBENZENESULPHONIC ACID	2305	8	
NICOTINE PREPARATION, LIQUID, N.O.S.	3144	6.1		Nitrobenzol, see	1662	6.1	
NICOTINE PREPARATION, SOLID, N.O.S.	1655	6.1		5-NITROBENZOTRIAZOL	0385	1	
NICOTINE SALICYLATE	1657	6.1		NITROBENZOTRIFLUORIDES, LIQUID	2306	6.1	
NICOTINE SULPHATE, SOLID	3445	6.1		NITROBENZOTRIFLUORIDES, SOLID	3431	6.1	
NICOTINE SULPHATE, SOLUTION	1658	6.1		NITROBROMOBENZENES, LIQUID	2732	6.1	
NICOTINE TARTRATE	1659	6.1		NITROBROMOBENZENES, SOLID	3459	6.1	
NITRATES, INORGANIC, N.O.S.	1477	5.1		NITROCELLULOSE, dry or wetted with less than 25% water (or alcohol), by mass	0340	1	
NITRATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	3218	5.1		NITROCELLULOSE, unmodified or plasticized with less than 18% plasticizing substance, by mass	0341	1	
NITRATING ACID MIXTURE with more than 50% nitric acid	1796	8		NITROCELLULOSE MEMBRANE FILTERS, with not more than 12.6% nitrogen, by dry mass	3270	4.1	
NITRATING ACID MIXTURE with not more than 50% nitric acid	1796	8					
NITRATING ACID MIXTURE, SPENT, with more than 50% nitric acid	1826	8					
NITRATING ACID MIXTURE, SPENT, with not more than 50% nitric acid	1826	8					
NITRIC ACID, other than red fuming, with at least 65% but not more than 70% nitric acid	2031	8					

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Name and description	UN No.	Class	Remarks	Name and description	UN No.	Class	Remarks
NITROCELLULOSE, with not more than 12.6% nitrogen, by dry mass, MIXTURE WITH PLASTICIZER, WITH PIGMENT	2557	4.1		NITROGLYCERIN MIXTURE, DESENSITIZED, LIQUID, FLAMMABLE, N.O.S. with not more than 30% nitroglycerin, by mass	3343	3	
NITROCELLULOSE, with not more than 12.6% nitrogen, by dry mass, MIXTURE WITH PLASTICIZER, WITHOUT PIGMENT	2557	4.1		NITROGLYCERIN MIXTURE, DESENSITIZED, SOLID, N.O.S. with more than 2% but not more than 10% nitroglycerin, by mass	3319	4.1	
NITROCELLULOSE, with not more than 12.6% nitrogen, by dry mass, MIXTURE WITHOUT PLASTICIZER, WITH PIGMENT	2557	4.1		NITROGLYCERIN, SOLUTION IN ALCOHOL with more than 1% but not more than 5% nitroglycerin	3064	3	
NITROCELLULOSE, with not more than 12.6% nitrogen, by dry mass, MIXTURE WITHOUT PLASTICIZER, WITHOUT PIGMENT	2557	4.1		NITROGLYCERIN SOLUTION IN ALCOHOL with more than 1% but not more than 10% nitroglycerin	0144	1	
NITROCELLULOSE, PLASTICIZED with not less than 18% plasticizing substance, by mass	0343	1		NITROGLYCERIN SOLUTION IN ALCOHOL with not more than 1% nitroglycerin	1204	3	
NITROCELLULOSE SOLUTION, FLAMMABLE with not more than 12.6% nitrogen, by dry mass, and not more than 55% nitrocellulose	2059	3		NITROGUANIDINE, dry or wetted with less than 20% water, by mass	0282	1	
NITROCELLULOSE, WETTED with not less than 25% alcohol, by mass	0342	1		NITROGUANIDINE, WETTED with not less than 20% water, by mass	1336	4.1	
NITROCELLULOSE WITH ALCOHOL (not less than 25% alcohol, by mass, and not more than 12.6% nitrogen, by dry mass)	2556	4.1		NITROHYDROCHLORIC ACID	1798	8	Carriage prohibited
NITROCELLULOSE WITH WATER (not less than 25% water, by mass)	2555	4.1		NITROMANNITE, WETTED, see	0133	1	
Nitrochlorobenzenes, see	1578 3409	6.1		NITROMETHANE	1261	3	
3-NITRO-4-CHLOROBENZO-TRIFLUORIDE	2307	6.1		Nitromuriatic acid, see	1798	8	
NITROCRESOLS, LIQUID	3434	6.1		NITRONAPHTHALENE	2538	4.1	
NITROCRESOLS, SOLID	2446	6.1		NITROPHENOLS (o-, m-, p-)	1663	6.1	
NITROETHANE	2842	3		4-NITROPHENYL-HYDRAZINE, with not less than 30% water, by mass	3376	4.1	
NITROGEN, COMPRESSED	1066	2		NITROPROPANES	2608	3	
NITROGEN DIOXIDE, see	1067	2		p-NITROSODIMETHYLANILINE	1369	4.2	
NITROGEN, REFRIGERATED LIQUID	1977	2		NITROSTARCH, dry or wetted with less than 20% water, by mass	0146	1	
NITROGEN TRIFLUORIDE	2451	2		NITROSTARCH, WETTED with not less than 20% water, by mass	1337	4.1	
NITROGEN TRIOXIDE	2421	2	Carriage prohibited	NITROSYL CHLORIDE	1069	2	
NITROGLYCERIN, DESENSITIZED with not less than 40% non-volatile water-insoluble phlegmatizer, by mass	0143	1		NITROSYLSULPHURIC ACID, LIQUID	2308	8	
NITROGLYCERIN MIXTURE, DESENSITIZED, LIQUID, N.O.S. with not more than 30% nitroglycerin, by mass	3357	3		NITROSYLSULPHURIC ACID, SOLID	3456	8	
				NITROTOLUENES, LIQUID	1664	6.1	
				NITROTOLUENES, SOLID	3446	6.1	
				NITROTOLUIDINES	2660	6.1	
				NITROTRIAZOLONE	0490	1	
				NITRO UREA	0147	1	
				NITROUS OXIDE	1070	2	
				NITROUS OXIDE, REFRIGERATED LIQUID	2201	2	

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Name and description	UN No.	Class	Remarks	Name and description	UN No.	Class	Remarks
NITROXYLENES, LIQUID	1665	6.1		ORGANIC PEROXIDE TYPE C, SOLID, TEMPERATURE CONTROLLED	3114	5.2	
NITROXYLENES, SOLID	3447	6.1					
Non-activated carbon, see	1361	4.2		ORGANIC PEROXIDE TYPE D, LIQUID	3105	5.2	
Non-activated charcoal, see	1361	4.2					
NONANES	1920	3		ORGANIC PEROXIDE TYPE D, LIQUID, TEMPERATURE CONTROLLED	3115	5.2	
NONYLTRICHLOROSILANE	1799	8					
2,5-NORBORNADIENE, STABILIZED, see	2251	3		ORGANIC PEROXIDE TYPE D, SOLID	3106	5.2	
Normal propyl alcohol, see	1274	3					
NTO, see	0490	1		ORGANIC PEROXIDE TYPE D, SOLID, TEMPERATURE CONTROLLED	3116	5.2	
OCTADECYLTRICHLOROSILANE	1800	8		ORGANIC PEROXIDE TYPE E, LIQUID	3107	5.2	
OCTADIENE	2309	3					
OCTAFLUOROBUT-2-ENE	2422	2		ORGANIC PEROXIDE TYPE E, LIQUID, TEMPERATURE CONTROLLED	3117	5.2	
OCTAFLUOROCYCLOBUTANE	1976	2					
OCTAFLUOROPROPANE	2424	2		ORGANIC PEROXIDE TYPE E, SOLID	3108	5.2	
OCTANES	1262	3					
OCTOGEN, see	0226	1		ORGANIC PEROXIDE TYPE E, SOLID, TEMPERATURE CONTROLLED	3118	5.2	
	0391	1					
	0484	1					
OCTOL, dry or wetted with less than 15% water, by mass, see	0266	1		ORGANIC PEROXIDE TYPE F, LIQUID	3109	5.2	
OCTOLITE, dry or wetted with less than 15% water, by mass	0266	1		ORGANIC PEROXIDE TYPE F, LIQUID, TEMPERATURE CONTROLLED	3119	5.2	
OCTONAL	0496	1		ORGANIC PEROXIDE TYPE F, SOLID	3110	5.2	
OCTYL ALDEHYDES	1191	3					
tert-Octyl mercaptan, see	3023	6.1		ORGANIC PEROXIDE TYPE F, SOLID, TEMPERATURE CONTROLLED	3120	5.2	
OCTYLTRICHLOROSILANE	1801	8					
Oenanthol, see	3056	3		Organic peroxides, see 2.2.52.4 for an alphabetic list of currently assigned organic peroxides and see	3101 to 3120	5.2	
OIL GAS, COMPRESSED	1071	2					
Oleum, see	1831	8		ORGANIC PIGMENTS, SELF-HEATING	3313	4.2	
ORGANIC PEROXIDE TYPE B, LIQUID	3101	5.2					
ORGANIC PEROXIDE TYPE B, LIQUID, TEMPERATURE CONTROLLED	3111	5.2		ORGANOARSENIC COMPOUND, LIQUID, N.O.S.	3280	6.1	
				ORGANOARSENIC COMPOUND, SOLID, N.O.S.	3465	6.1	
ORGANIC PEROXIDE TYPE B, SOLID	3102	5.2		ORGANOCHLORINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	2762	3	
ORGANIC PEROXIDE TYPE B, SOLID, TEMPERATURE CONTROLLED	3112	5.2		ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC	2996	6.1	
				ORGANOCHLORINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	2995	6.1	
ORGANIC PEROXIDE TYPE C, LIQUID	3103	5.2		ORGANOCHLORINE PESTICIDE, SOLID, TOXIC	2761	6.1	
ORGANIC PEROXIDE TYPE C, LIQUID, TEMPERATURE CONTROLLED	3113	5.2					
				ORGANOMETALLIC COMPOUND, LIQUID, TOXIC, N.O.S.	3282	6.1	
ORGANIC PEROXIDE TYPE C, SOLID	3104	5.2					

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ORGANOMETALLIC COMPOUND, SOLID, TOXIC, N.O.S.	3467	6.1		ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	3017	6.1	
Organometallic compound, solid, water-reactive, flammable, n.o.s., see	3396	4.3		ORGANOPHOSPHORUS PESTICIDE, SOLID, TOXIC	2783	6.1	
Organometallic compound or Organometallic compound solution or Organometallic compound dispersion, water-reactive, flammable, n.o.s., see	3399	4.3		ORGANOTIN COMPOUND, LIQUID, N.O.S.	2788	6.1	
ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC	3392	4.2		ORGANOTIN COMPOUND, SOLID, N.O.S.	3146	6.1	
ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC	3391	4.2		ORGANOTIN PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	2787	3	
ORGANOMETALLIC SUBSTANCE, SOLID, SELF-HEATING	3400	4.2		ORGANOTIN PESTICIDE, LIQUID, TOXIC	3020	6.1	
ORGANOMETALLIC SUBSTANCE, LIQUID, PYROPHORIC, WATER-REACTIVE	3394	4.2		ORGANOTIN PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	3019	6.1	
ORGANOMETALLIC SUBSTANCE, SOLID, PYROPHORIC, WATER-REACTIVE	3393	4.2		ORGANOTIN PESTICIDE, SOLID, TOXIC	2786	6.1	
ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE	3398	4.3		Orthophosphoric acid, see	1805	8	
ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE	3395	4.3		OSMIUM TETROXIDE	2471	6.1	
ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE	3399	4.3		OXIDIZING LIQUID, N.O.S.	3139	5.1	
ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, FLAMMABLE	3396	4.3		OXIDIZING LIQUID, CORROSIVE, N.O.S.	3098	5.1	
ORGANOMETALLIC SUBSTANCE, SOLID, WATER-REACTIVE, SELF-HEATING	3397	4.3		OXIDIZING LIQUID, TOXIC, N.O.S.	3099	5.1	
ORGANOPHOSPHORUS COMPOUND, LIQUID, TOXIC, N.O.S.	3278	6.1		OXIDIZING SOLID, N.O.S.	1479	5.1	
ORGANOPHOSPHORUS COMPOUND, SOLID, TOXIC, N.O.S.	3464	6.1		OXIDIZING SOLID, CORROSIVE, N.O.S.	3085	5.1	
ORGANOPHOSPHORUS COMPOUND, TOXIC, FLAMMABLE, N.O.S.	3279	6.1		OXIDIZING SOLID, FLAMMABLE, N.O.S.	3137	5.1	Carriage prohibited
ORGANOPHOSPHORUS PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	2784	3		OXIDIZING SOLID, SELF-HEATING, N.O.S.	3100	5.1	Carriage prohibited
ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC	3018	6.1		OXIDIZING SOLID, TOXIC, N.O.S.	3087	5.1	
				OXIDIZING SOLID, WATER-REACTIVE, N.O.S.	3121	5.1	Carriage prohibited
				Oxirane, see	1040	2	
				OXYGEN, COMPRESSED	1072	2	
				OXYGEN DIFLUORIDE, COMPRESSED	2190	2	
				OXYGEN GENERATOR, CHEMICAL	3356	5.1	
				OXYGEN, REFRIGERATED LIQUID	1073	2	
				1-Oxy-4-nitrobenzene, see	1663	6.1	
				PAINT (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base)	1263	3	
					3066	8	
					3469	3	
					3470	8	

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PAINT RELATED MATERIAL (including paint thinning and reducing compound)	1263	3		PENTOLITE, dry or wetted with less than 15% water, by mass	0151	1	
	3066	8					
	3469	3		Pentyl nitrite, see	1113	3	
	3470	8					
Paint thinning and reducing compound, see	1263	3		PERCHLORATES, INORGANIC, N.O.S.	1481	5.1	
	3066	8					
	3469	3		PERCHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	3211	5.1	
	3470	8					
PAPER, UNSATURATED OIL TREATED, incompletely dried (including carbon paper)	1379	4.2		PERCHLORIC ACID with more than 50% but not more than 72% acid, by mass	1873	5.1	
Paraffin, see	1223	3		PERCHLORIC ACID with not more than 50% acid, by mass	1802	8	
PARAFORMALDEHYDE	2213	4.1		Perchlorobenzene, see	2729	6.1	
PARALDEHYDE	1264	3		Perchlorocyclopentadiene, see	2646	6.1	
PCBs, see	2315	9		Perchloroethylene, see	1897	6.1	
	3432	9					
PENTABORANE	1380	4.2		PERCHLOROMETHYL MERCAPTAN	1670	6.1	
PENTACHLOROETHANE	1669	6.1		PERCHLORYL FLUORIDE	3083	2	
PENTACHLOROPHENOL	3155	6.1		Perfluoroacetylchloride, see	3057	2	
PENTAERYTHRITE TETRANITRATE with not less than 7% wax, by mass	0411	1		PERFLUORO (ETHYL VINYL ETHER)	3154	2	
PENTAERYTHRITE TETRANITRATE, DESENSITIZED with not less than 15% phlegmatizer, by mass	0150	1		PERFLUORO (METHYL VINYL ETHER)	3153	2	
				Perfluoropropane, see	2424	2	
PENTAERYTHRITE TETRANITRATE MIXTURE, DESENSITIZED, SOLID, N.O.S. with more than 10% but not more than 20% PETN, by mass	3344	4.1		PERFUMERY PRODUCTS with flammable solvents	1266	3	
				PERMANGANATES, INORGANIC, N.O.S.	1482	5.1	
PENTAERYTHRITE TETRANITRATE, WETTED with not less than 25% water, by mass	0150	1		PERMANGANATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	3214	5.1	
				PEROXIDES, INORGANIC, N.O.S.	1483	5.1	
PENTAERYTHRITOL TETRANITRATE, see	0150	1		PERSULPHATES, INORGANIC, N.O.S.	3215	5.1	
	0411	1					
	3344	4.1		PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.	3216	5.1	
PENTAFLUROETHANE	3220	2		PESTICIDE, LIQUID, FLAMMABLE, TOXIC, N.O.S., flash-point less than 23 °C	3021	3	
Pentafluoroethane, 1,1,1- trifluoroethane, and 1,1,1,2- tetrafluoroethane zeotropic mixture with approximately 44% pentafluoroethane and 52% 1,1,1- trifluoroethane, see	3337	2		PESTICIDE, LIQUID, TOXIC, N.O.S.	2902	6.1	
				PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S., flash-point not less than 23 °C	2903	6.1	
PENTAMETHYLHEPTANE	2286	3		PESTICIDE, SOLID, TOXIC, N.O.S.	2588	6.1	
Pentanal, see	2058	3		Pesticide, toxic, under compressed gas, n.o.s, see	1950	2	
PENTANE-2,4-DIONE	2310	3		PETN, see	0150	1	
PENTANES, liquid	1265	3			0411	1	
n-Pentane, see	1265	3			3344	4.1	
PENTANOLS	1105	3					
3-Pentanol, see	1105	3		PETN/TNT, see	0151	1	
1-PENTENE	1108	3					
1-PENTOL	2705	8					

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PETROL	1203	3		Phenylethylene, see	2055	3	
Petrol and ethanol mixture, with more than 10% ethanol, see	3475	3		PHENYLHYDRAZINE	2572	6.1	
PETROLEUM CRUDE OIL	1267	3		PHENYL ISOCYANATE	2487	6.1	
PETROLEUM DISTILLATES, N.O.S.	1268	3		Phenylisocyanodichloride, see	1672	6.1	
Petroleum ether, see	1268	3		PHENYL MERCAPTAN	2337	6.1	
PETROLEUM GASES, LIQUEFIED	1075	2		PHENYLMERCURIC ACETATE	1674	6.1	
Petroleum naphtha, see	1268	3		PHENYLMERCURIC COMPOUND, N.O.S.	2026	6.1	
Petroleum oil, see	1268	3		PHENYLMERCURIC HYDROXIDE	1894	6.1	
PETROLEUM PRODUCTS, N.O.S.	1268	3		PHENYLMERCURIC NITRATE	1895	6.1	
Petroleum raffinate, see	1268	3		PHENYLPHOSPHORUS DICHLORIDE	2798	8	
PETROLEUM SOUR CRUDE OIL, FLAMMABLE, TOXIC	3494	3		PHENYLPHOSPHORUS THIODICHLORIDE	2799	8	
Petroleum spirit, see	1268	3		2-Phenylpropene, see	2303	3	
PHENACYL BROMIDE	2645	6.1		PHENYLTRICHLOROSILANE	1804	8	
PHENETIDINES	2311	6.1		PHOSGENE	1076	2	
PHENOLATES, LIQUID	2904	8		9-PHOSPHABICYCLO-NONANES	2940	4.2	
PHENOLATES, SOLID	2905	8		PHOSPHINE	2199	2	
PHENOL, MOLTEN	2312	6.1		Phosphoretted hydrogen, see	2199	2	
PHENOL, SOLID	1671	6.1		PHOSPHORIC ACID, SOLUTION	1805	8	
PHENOL SOLUTION	2821	6.1		PHOSPHORIC ACID, SOLID	3453	8	
PHENOLSULPHONIC ACID, LIQUID	1803	8		Phosphoric acid, anhydrous, see	1807	8	
PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3346	3		PHOSPHOROUS ACID	2834	8	
PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC	3348	6.1		PHOSPHORUS, AMORPHOUS	1338	4.1	
PHENOXYACETIC ACID DERIVATIVE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	3347	6.1		Phosphorus bromide, see	1808	8	
PHENOXYACETIC ACID DERIVATIVE PESTICIDE, SOLID, TOXIC	3345	6.1		Phosphorus chloride, see	1809	6.1	
PHENYLACETONITRILE, LIQUID	2470	6.1		PHOSPHORUS HEPTASULPHIDE, free from yellow and white phosphorus	1339	4.1	
PHENYLACETYL CHLORIDE	2577	8		PHOSPHORUS OXYBROMIDE	1939	8	
Phenylamine, see	1547	6.1		PHOSPHORUS OXYBROMIDE, MOLTEN	2576	8	
1-Phenylbutane, see	2709	3		PHOSPHORUS OXYCHLORIDE	1810	6.1	
2-Phenylbutane, see	2709	3		PHOSPHORUS PENTABROMIDE	2691	8	
PHENYL CARBYLAMINE CHLORIDE	1672	6.1		PHOSPHORUS PENTACHLORIDE	1806	8	
PHENYL CHLOROFORMATE	2746	6.1		PHOSPHORUS PENTAFLUORIDE	2198	2	
Phenyl cyanide, see	2224	6.1		PHOSPHORUS PENTASULPHIDE, free from yellow and white phosphorus	1340	4.3	
PHENYLENEDIAMINES (o-, m-, p-)	1673	6.1		PHOSPHORUS PENTOXIDE	1807	8	
				PHOSPHORUS SESQUISULPHIDE, free from yellow and white phosphorus	1341	4.1	
				Phosphorus (V) sulphide, free from yellow and white phosphorus, see	1340	4.3	
				Phosphorus sulphochloride, see	1837	8	

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PHOSPHORUS TRIBROMIDE	1808	8		POLYAMINES, LIQUID, CORROSIVE, N.O.S.	2735	8	
PHOSPHORUS TRICHLORIDE	1809	6.1		POLYAMINES, LIQUID, CORROSIVE, FLAMMABLE, N.O.S.	2734	8	
PHOSPHORUS TRIOXIDE	2578	8		POLYAMINES, SOLID, CORROSIVE, N.O.S.	3259	8	
PHOSPHORUS TRISULPHIDE, free from yellow and white phosphorus	1343	4.1		POLYCHLORINATED BIPHENYLS, LIQUID	2315	9	
PHOSPHORUS, WHITE, DRY	1381	4.2		POLYCHLORINATED BIPHENYLS, SOLID	3432	9	
PHOSPHORUS, WHITE IN SOLUTION	1381	4.2		POLYESTER RESIN KIT	3269	3	
PHOSPHORUS, WHITE, MOLTEN	2447	4.2		POLYHALOGENATED BIPHENYLS, LIQUID	3151	9	
PHOSPHORUS, WHITE, UNDER WATER	1381	4.2		POLYHALOGENATED BIPHENYLS, SOLID	3152	9	
PHOSPHORUS, YELLOW, DRY	1381	4.2		POLYHALOGENATED TERPHENYLS, LIQUID	3151	9	
PHOSPHORUS, YELLOW, IN SOLUTION	1381	4.2		POLYHALOGENATED TERPHENYLS, SOLID	3152	9	
PHOSPHORUS, YELLOW, UNDER WATER	1381	4.2		POLYMERIC BEADS, EXPANDABLE, evolving flammable vapour	2211	9	
Phosphoryl chloride, see	1810	6.1		Polystyrene beads, expandable, see	2211	9	
PHTHALIC ANHYDRIDE with more than 0.05% of maleic anhydride	2214	8		POTASSIUM	2257	4.3	
PICOLINES	2313	3		POTASSIUM ARSENATE	1677	6.1	
PICRAMIDE, see	0153	1		POTASSIUM ARSENITE	1678	6.1	
PICRIC ACID, WETTED, see	1344 3364	4.1 4.1		Potassium bifluoride, see	1811	8	
PICRITE, see	0282	1		Potassium bisulphate, see	2509	8	
PICRITE, WETTED, see	1336	4.1		Potassium bisulphite solution, see	2693	8	
Picrotoxin, see	3172 3462	6.1 6.1		POTASSIUM BOROHYDRIDE	1870	4.3	
PICRYL CHLORIDE, see	0155	1		POTASSIUM BROMATE	1484	5.1	
PICRYL CHLORIDE, WETTED, see	3365	4.1		POTASSIUM CHLORATE	1485	5.1	
alpha-PINENE	2368	3		POTASSIUM CHLORATE, AQUEOUS SOLUTION	2427	5.1	
PINE OIL	1272	3		Potassium chlorate mixed with mineral oil, see	0083	1	
PIPERAZINE	2579	8		POTASSIUM CUPROCYANIDE	1679	6.1	
PIPERIDINE	2401	8		POTASSIUM CYANIDE, SOLID	1680	6.1	
Pivaloyl chloride, see	2438	6.1		POTASSIUM CYANIDE, SOLUTION	3413	6.1	
Plastic explosives, see	0084	1		Potassium dicyanocuprate (I), see	1679	6.1	
PLASTICS MOULDING COMPOUND in dough, sheet or extruded rope form evolving flammable vapour	3314	9		POTASSIUM DITHIONITE	1929	4.2	
PLASTICS, NITROCELLULOSE-BASED, SELF-HEATING, N.O.S.	2006	4.2		POTASSIUM FLUORIDE, SOLID	1812	6.1	
Polish, see	1263 3066 3469 3470	3 8 3 8		POTASSIUM FLUORIDE, SOLUTION	3422	6.1	
POLYAMINES, FLAMMABLE, CORROSIVE, N.O.S.	2733	3		POTASSIUM FLUOROACETATE	2628	6.1	
				POTASSIUM FLUROSILICATE	2655	6.1	
				Potassium hexafluorosilicate, see	2655	6.1	

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Potassium hydrate, see	1814	8		POWDER CAKE, WETTED with not less than 17% alcohol, by mass	0433	1	
POTASSIUM HYDROGENDIFLUORIDE, SOLID	1811	8		POWDER CAKE, WETTED with not less than 25% water, by mass	0159	1	
POTASSIUM HYDROGENDIFLUORIDE, SOLUTION	3421	8		POWDER PASTE, see	0159 0433	1 1	
POTASSIUM HYDROGEN SULPHATE	2509	8		POWDER, SMOKELESS	0160 0161 0509	1 1 1	
POTASSIUM HYDROSULPHITE, see	1929	4.2		Power devices, explosive, see	0275 0276 0323 0381	1 1 1 1	
Potassium hydroxide, liquid, see	1814	8		PRIMERS, CAP TYPE	0044 0377 0378	1 1 1	
POTASSIUM HYDROXIDE, SOLID	1813	8		Primers, small arms, see	0044	1	
POTASSIUM HYDROXIDE SOLUTION	1814	8		PRIMERS, TUBULAR	0319 0320 0376	1 1 1	
POTASSIUM METAL ALLOYS, LIQUID	1420	4.3		PRINTING INK, flammable or PRINTING INK RELATED MATERIAL (including printing ink thinning or reducing compound), flammable	1210	3	
POTASSIUM METAL ALLOYS, SOLID	3403	4.3		Projectiles, illuminating, see	0171 0254 0297	1 1 1	
POTASSIUM METAVANADATE	2864	6.1		PROJECTILES, inert with tracer	0345 0424 0425	1 1 1	
POTASSIUM MONOXIDE	2033	8		PROJECTILES with burster or expelling charge	0346 0347 0426 0427	1 1 1 1	
POTASSIUM NITRATE	1486	5.1			0434 0435	1 1	
Potassium nitrate and sodium nitrate mixture, see	1499	5.1		PROJECTILES with bursting charge	0167 0168 0169 0324 0344	1 1 1 1 1	
POTASSIUM NITRATE AND SODIUM NITRITE MIXTURE	1487	5.1		PROPADIENE, STABILIZED	2200	2	
POTASSIUM NITRITE	1488	5.1		Propadiene and methyl acetylene mixture, stabilized, see	1060	2	
POTASSIUM PERCHLORATE	1489	5.1		PROPANE	1978	2	
POTASSIUM PERMANGANATE	1490	5.1		PROPANETHIOLS	2402	3	
POTASSIUM PEROXIDE	1491	5.1		n-PROPANOL	1274	3	
POTASSIUM PERSULPHATE	1492	5.1		PROPELLANT, LIQUID	0495 0497	1 1	
POTASSIUM PHOSPHIDE	2012	4.3		PROPELLANT, SOLID	0498 0499 0501	1 1 1	
Potassium selenate, see	2630	6.1		Propellant with a single base, Propellant with a double base, Propellant with a triple base, see	0160 0161	1 1	
Potassium selenite, see	2630	6.1					
Potassium silicofluoride, see	2655	6.1					
POTASSIUM SODIUM ALLOYS, LIQUID	1422	4.3					
POTASSIUM SODIUM ALLOYS, SOLID	3404	4.3					
POTASSIUM SULPHIDE with less than 30% water of crystallization	1382	4.2					
POTASSIUM SULPHIDE, ANHYDROUS	1382	4.2					
POTASSIUM SULPHIDE, HYDRATED with not less than 30% water of crystallization	1847	8					
POTASSIUM SUPEROXIDE	2466	5.1					
Potassium tetracyanomercurate (II), see	1626	6.1					

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Propene, see	1077	2		PYROPHORIC LIQUID, INORGANIC, N.O.S.	3194	4.2	
PROPIONALDEHYDE	1275	3		PYROPHORIC LIQUID, ORGANIC, N.O.S.	2845	4.2	
PROPIONIC ACID with not less than 10% and less than 90% acid by mass	1848	8		PYROPHORIC METAL, N.O.S.	1383	4.2	
PROPIONIC ACID with not less than 90% acid by mass	3463	8		PYROPHORIC SOLID, INORGANIC, N.O.S.	3200	4.2	
PROPIONIC ANHYDRIDE	2496	8		PYROPHORIC SOLID, ORGANIC, N.O.S.	2846	4.2	
PROPIONITRILE	2404	3		PYROSULPHURYL CHLORIDE	1817	8	
PROPIONYL CHLORIDE	1815	3		Pyroxylin solution, see	2059	3	
n-PROPYL ACETATE	1276	3		PYRROLIDINE	1922	3	
PROPYL ALCOHOL, NORMAL, see	1274	3		QUINOLINE	2656	6.1	
PROPYLAMINE	1277	3		Quinone, see	2587	6.1	
n-PROPYLBENZENE	2364	3		RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - ARTICLES MANUFACTURED FROM NATURAL URANIUM or DEPLETED URANIUM or NATURAL THORIUM	2909	7	
Propyl chloride, see	1278	3		RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - EMPTY PACKAGING	2908	7	
n-PROPYL CHLOROFORMATE	2740	6.1		RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - INSTRUMENTS or ARTICLES	2911	7	
PROPYLENE	1077	2		RADIOACTIVE MATERIAL, EXCEPTED PACKAGE - LIMITED QUANTITY OF MATERIAL	2910	7	
PROPYLENE CHLOROHYDRIN	2611	6.1		RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-I), non fissile or fissile-excepted	2912	7	
1,2-PROPYLENEDIAMINE	2258	8		RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II), FISSILE	3324	7	
Propylene dichloride, see	1279	3		RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-II), non fissile or fissile-excepted	3321	7	
PROPYLENEIMINE, STABILIZED	1921	3		RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY, (LSA-III), FISSILE	3325	7	
PROPYLENE OXIDE	1280	3		RADIOACTIVE MATERIAL, LOW SPECIFIC ACTIVITY (LSA-III), non fissile or fissile-excepted	3322	7	
PROPYLENE TETRAMER	2850	3		RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I or SCO-II), FISSILE	3326	7	
Propylene trimer, see	2057	3		RADIOACTIVE MATERIAL, SURFACE CONTAMINATED OBJECTS (SCO-I or SCO-II), non fissile or fissile-excepted	2913	7	
PROPYL FORMATES	1281	3					
n-PROPYL ISOCYANATE	2482	6.1					
Propyl mercaptan, see	2402	3					
n-PROPYL NITRATE	1865	3					
PROPYLTRICHLOROSILANE	1816	8					
Pyrazine hexahydride, see	2579	8					
PYRETHROID PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	3350	3					
PYRETHROID PESTICIDE, LIQUID, TOXIC	3352	6.1					
PYRETHROID PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	3351	6.1					
PYRETHROID PESTICIDE, SOLID, TOXIC	3349	6.1					
PYRIDINE	1282	3					
PYROPHORIC ALLOY, N.O.S.	1383	4.2					
Pyrophoric organometallic compound, water-reactive, n.o.s., liquid, see	3394	4.2					
Pyrophoric organometallic compound, water-reactive, n.o.s., solid, see	3393	4.2					

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Name and description	UN No.	Class	Remarks	Name and description	UN No.	Class	Remarks
RADIOACTIVE MATERIAL, TRANSPORTED UNDER SPECIAL ARRANGEMENT, FISSILE	3331	7		REFRIGERANT GAS R 13, see	1022	2	
				REFRIGERANT GAS R 13B1, see	1009	2	
				REFRIGERANT GAS R 14, see	1982	2	
RADIOACTIVE MATERIAL, TRANSPORTED UNDER SPECIAL ARRANGEMENT, non fissile or fissile-excepted	2919	7		REFRIGERANT GAS R 21, see	1029	2	
				REFRIGERANT GAS R 22, see	1018	2	
				REFRIGERANT GAS R 23, see	1984	2	
RADIOACTIVE MATERIAL, TYPE A PACKAGE, FISSILE, non-special form	3327	7		REFRIGERANT GAS R 32, see	3252	2	
				REFRIGERANT GAS R 40, see	1063	2	
RADIOACTIVE MATERIAL, TYPE A PACKAGE, non-special form, non fissile or fissile-excepted	2915	7		REFRIGERANT GAS R 41, see	2454	2	
				REFRIGERANT GAS R 114, see	1958	2	
				REFRIGERANT GAS R 115, see	1020	2	
RADIOACTIVE MATERIAL, TYPE A PACKAGE, SPECIAL FORM, FISSILE	3333	7		REFRIGERANT GAS R 116, see	2193	2	
				REFRIGERANT GAS R 124, see	1021	2	
RADIOACTIVE MATERIAL, TYPE A PACKAGE, SPECIAL FORM, non fissile or fissile-excepted	3332	7		REFRIGERANT GAS R 125, see	3220	2	
				REFRIGERANT GAS R 133a, see	1983	2	
				REFRIGERANT GAS R 134a, see	3159	2	
RADIOACTIVE MATERIAL, TYPE B(M) PACKAGE, FISSILE	3329	7		REFRIGERANT GAS R 142b, see	2517	2	
				REFRIGERANT GAS R 143a, see	2035	2	
RADIOACTIVE MATERIAL, TYPE B(M) PACKAGE, non fissile or fissile-excepted	2917	7		REFRIGERANT GAS R 152a, see	1030	2	
				REFRIGERANT GAS R 161, see	2453	2	
RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, FISSILE	3328	7		REFRIGERANT GAS R 218, see	2424	2	
				REFRIGERANT GAS R 227, see	3296	2	
RADIOACTIVE MATERIAL, TYPE B(U) PACKAGE, non fissile or fissile-excepted	2916	7		REFRIGERANT GAS R 404A	3337	2	
				REFRIGERANT GAS R 407A	3338	2	
RADIOACTIVE MATERIAL, TYPE C PACKAGE, FISSILE	3330	7		REFRIGERANT GAS R 407B	3339	2	
				REFRIGERANT GAS R 407C	3340	2	
RADIOACTIVE MATERIAL, TYPE C PACKAGE, non fissile or fissile-excepted	3323	7		REFRIGERANT GAS R 500, see	2602	2	
				REFRIGERANT GAS R 502, see	1973	2	
RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, FISSILE	2977	7		REFRIGERANT GAS R 503, see	2599	2	
				REFRIGERANT GAS R 1132a, see	1959	2	
RADIOACTIVE MATERIAL, URANIUM HEXAFLUORIDE, non fissile or fissile-excepted	2978	7		REFRIGERANT GAS R 1216, see	1858	2	
				REFRIGERANT GAS R 1318, see	2422	2	
Rags, oily	1856	4.2	Not subject to ADR	REFRIGERANT GAS RC 318, see	1976	2	
RDX, see	0072	1		REFRIGERATING MACHINES containing flammable, non-toxic, liquefied gas	3358	2	
	0391	1					
	0483	1		REFRIGERATING MACHINES containing non-flammable, non-toxic, gases or ammonia solutions (UN 2672)	2857	2	
RECEPTACLES, SMALL, CONTAINING GAS without a release device, non-refillable	2037	2					
Red phosphorus, see	1338	4.1		REGULATED MEDICAL WASTE, N.O.S.	3291	6.2	
REFRIGERANT GAS, N.O.S., such as mixture F1, mixture F2 or mixture P2	1078	2		RELEASE DEVICES, EXPLOSIVE	0173	1	
				RESIN SOLUTION, flammable	1866	3	
REFRIGERANT GAS R 12, see	1028	2		Resorcin, see	2876	6.1	
REFRIGERANT GAS R 12B1, see	1974	2		RESORCINOL	2876	6.1	

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RIVETS, EXPLOSIVE	0174	1		SELENATES	2630	6.1	
Road oil, with a flash-point not greater than 60 °C, see	1999	3		SELENIC ACID	1905	8	
Road oil, with a flash-point above 60 °C, at or above its flash-point, see	3256	3		SELENITES	2630	6.1	
Road oil, at or above 100 °C and below its flash-point, see	3257	9		SELENIUM COMPOUND, LIQUID, N.O.S.	3440	6.1	
ROCKET MOTORS	0186	1		SELENIUM COMPOUND, SOLID, N.O.S.	3283	6.1	
	0280	1		SELENIUM DISULPHIDE	2657	6.1	
	0281	1		SELENIUM HEXAFLUORIDE	2194	2	
ROCKET MOTORS, LIQUID FUELLED	0395	1		SELENIUM OXYCHLORIDE	2879	8	
	0396	1		SELF-HEATING LIQUID, CORROSIVE, INORGANIC, N.O.S.	3188	4.2	
ROCKET MOTORS WITH HYPERGOLIC LIQUIDS with or without expelling charge	0250	1		SELF-HEATING LIQUID, CORROSIVE, ORGANIC, N.O.S.	3185	4.2	
	0322	1		SELF-HEATING LIQUID, TOXIC, INORGANIC, N.O.S.	3186	4.2	
ROCKETS with bursting charge	0180	1		SELF-HEATING LIQUID, ORGANIC, N.O.S.	3183	4.2	
	0181	1		SELF-HEATING LIQUID, TOXIC, INORGANIC, N.O.S.	3187	4.2	
	0182	1		SELF-HEATING LIQUID, TOXIC, ORGANIC, N.O.S.	3184	4.2	
	0295	1		SELF-HEATING LIQUID, TOXIC, ORGANIC, N.O.S.	3184	4.2	
ROCKETS with expelling charge	0436	1		SELF-HEATING SOLID, CORROSIVE, INORGANIC, N.O.S.	3192	4.2	
	0437	1		SELF-HEATING SOLID, CORROSIVE, ORGANIC, N.O.S.	3126	4.2	
	0438	1		SELF-HEATING SOLID, TOXIC, INORGANIC, N.O.S.	3190	4.2	
ROCKETS with inert head	0183	1		SELF-HEATING SOLID, TOXIC, ORGANIC, N.O.S.	3127	4.2	Carriage prohibited
	0502	1		SELF-HEATING SOLID, TOXIC, ORGANIC, N.O.S.	3191	4.2	
ROCKETS, LINE-THROWING	0238	1		SELF-HEATING SOLID, TOXIC, INORGANIC, N.O.S.	3128	4.2	
	0240	1		SELF-REACTIVE LIQUID TYPE B	3221	4.1	
	0453	1		SELF-REACTIVE LIQUID TYPE C, TEMPERATURE CONTROLLED	3233	4.1	
ROCKETS, LIQUID FUELLED with bursting charge	0397	1		SELF-REACTIVE LIQUID TYPE D	3225	4.1	
	0398	1		SELF-REACTIVE LIQUID TYPE E	3227	4.1	
ROSIN OIL	1286	3					
RUBBER SCRAP, powdered or granulated	1345	4.1					
RUBBER SHODDY, powdered or granulated	1345	4.1					
RUBBER SOLUTION	1287	3					
RUBIDIUM	1423	4.3					
RUBIDIUM HYDROXIDE	2678	8					
RUBIDIUM HYDROXIDE SOLUTION	2677	8					
Rubidium nitrate, see	1477	5.1					
Saltpetre, see	1486	5.1					
SAMPLES, EXPLOSIVE, other than initiating explosive	0190	1					
Sand acid, see	1778	8					
SEAT-BELT PRETENSIONERS	0503	1					
	3268	9					
SEED CAKE with more than 1.5% oil and not more than 11% moisture	1386	4.2					
SEED CAKE with not more than 1.5% oil and not more than 11% moisture	2217	4.2					
Seed expellers, see	1386	4.2					
	2217	4.2					

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SELF-REACTIVE LIQUID TYPE E, TEMPERATURE CONTROLLED	3237	4.1		SILICON TETRACHLORIDE	1818	8	
SELF-REACTIVE LIQUID TYPE F	3229	4.1		SILICON TETRAFLUORIDE	1859	2	
SELF-REACTIVE LIQUID TYPE F, TEMPERATURE CONTROLLED	3239	4.1		SILVER ARSENITE	1683	6.1	
SELF-REACTIVE SOLID TYPE B	3222	4.1		SILVER CYANIDE	1684	6.1	
SELF-REACTIVE SOLID TYPE B, TEMPERATURE CONTROLLED	3232	4.1		SILVER NITRATE	1493	5.1	
SELF-REACTIVE SOLID TYPE C	3224	4.1		SILVER PICRATE, WETTED with not less than 30% water, by mass	1347	4.1	
SELF-REACTIVE SOLID TYPE C, TEMPERATURE CONTROLLED	3234	4.1		SLUDGE ACID	1906	8	
SELF-REACTIVE SOLID TYPE D	3226	4.1		SODA LIME with more than 4% sodium hydroxide	1907	8	
SELF-REACTIVE SOLID TYPE D, TEMPERATURE CONTROLLED	3236	4.1		SODIUM	1428	4.3	
SELF-REACTIVE SOLID TYPE E	3228	4.1		Sodium aluminate, solid	2812	8	Not subject to ADR
SELF-REACTIVE SOLID TYPE E, TEMPERATURE CONTROLLED	3238	4.1		SODIUM ALUMINATE SOLUTION	1819	8	
SELF-REACTIVE SOLID TYPE F	3230	4.1		SODIUM ALUMINIUM HYDRIDE	2835	4.3	
SELF-REACTIVE SOLID TYPE F, TEMPERATURE CONTROLLED	3240	4.1		SODIUM AMMONIUM VANADATE	2863	6.1	
SHALE OIL	1288	3		SODIUM ARSANILATE	2473	6.1	
Shaped charges, see	0059	1		SODIUM ARSENATE	1685	6.1	
	0439	1		SODIUM ARSENITE, AQUEOUS SOLUTION	1686	6.1	
	0440	1		SODIUM ARSENITE, SOLID	2027	6.1	
	0441	1		SODIUM AZIDE	1687	6.1	
Shellac, see	1263	3		Sodium bifluoride, see	2439	8	
	3066	8		Sodium binoxide, see	1504	5.1	
	3469	3		Sodium bisulphite solution, see	2693	8	
	3470	8		SODIUM BOROHYDRIDE	1426	4.3	
SIGNAL DEVICES, HAND	0191	1		SODIUM BOROHYDRIDE AND SODIUM HYDROXIDE SOLUTION, with not more than 12% sodium borohydride and not more than 40% sodium hydroxide by mass	3320	8	
SIGNALS, DISTRESS, ship	0194	1		SODIUM BROMATE	1494	5.1	
	0195	1		SODIUM CACODYLATE	1688	6.1	
	0505	1		SODIUM CARBONATE PEROXYHYDRATE	3378	5.1	
	0506	1		SODIUM CHLORATE	1495	5.1	
Signals, distress, ship, water-activated, see	0249	1		SODIUM CHLORATE, AQUEOUS SOLUTION	2428	5.1	
SIGNALS, RAILWAY TRACK, EXPLOSIVE	0192	1		Sodium chlorate mixed with dinitrotoluene, see	0083	1	
	0193	1		SODIUM CHLORITE	1496	5.1	
	0492	1		SODIUM CHLOROACETATE	2659	6.1	
	0493	1		SODIUM CUPROCYANIDE, SOLID	2316	6.1	
SIGNALS, SMOKE	0196	1		SODIUM CUPROCYANIDE SOLUTION	2317	6.1	
	0197	1					
	0313	1					
	0487	1					
	0507	1					
SILANE	2203	2					
Silicofluoric acid, see	1778	8					
Silicofluorides, n.o.s., see	2856	6.1					
Silicon chloride, see	1818	8					
SILICON POWDER, AMORPHOUS	1346	4.1					

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SODIUM CYANIDE, SOLID	1689	6.1		Sodium nitrite and potassium nitrate mixture, see	1487	5.1	
SODIUM CYANIDE, SOLUTION	3414	6.1		SODIUM PENTACHLORO-HENATE	2567	6.1	
Sodium dicyanocuprate (I), solid, see	2316	6.1		SODIUM PERBORATE MONOHYDRATE	3377	5.1	
Sodium dicyanocuprate (I) solution, see	2317	6.1		SODIUM PERCHLORATE	1502	5.1	
Sodium dimethylarsenate, see	1688	6.1		SODIUM PERMANGANATE	1503	5.1	
SODIUM DINITRO-o-CRESOLATE, dry or wetted with less than 15% water, by mass	0234	1		SODIUM PEROXIDE	1504	5.1	
SODIUM DINITRO-o-CRESOLATE, WETTED with not less than 10% water, by mass	3369	4.1		SODIUM PEROXOBORATE, ANHYDROUS	3247	5.1	
SODIUM DINITRO-o-CRESOLATE, WETTED with not less than 15% water, by mass	1348	4.1		SODIUM PERSULPHATE	1505	5.1	
Sodium dioxide, see	1504	5.1		SODIUM PHOSPHIDE	1432	4.3	
SODIUM DITHIONITE	1384	4.2		SODIUM PICRAMATE, dry or wetted with less than 20% water, by mass	0235	1	
SODIUM FLUORIDE, SOLID	1690	6.1		SODIUM PICRAMATE, WETTED with not less than 20% water, by mass	1349	4.1	
SODIUM FLUORIDE, SOLUTION	3415	6.1		Sodium potassium alloys, liquid, see	1422	4.3	
SODIUM FLUOROACETATE	2629	6.1		Sodium selenate, see	2630	6.1	
SODIUM FLUROSILICATE	2674	6.1		Sodium selenite, see	2630	6.1	
Sodium hexafluorosilicate, see	2674	6.1		Sodium silicofluoride, see	2674	6.1	
Sodium hydrate, see	1824	8		SODIUM SULPHIDE, ANHYDROUS	1385	4.2	
SODIUM HYDRIDE	1427	4.3		SODIUM SULPHIDE with less than 30% water of crystallization	1385	4.2	
Sodium hydrogen 4-amino-phenylarsenate, see	2473	6.1		SODIUM SULPHIDE, HYDRATED with not less than 30% water	1849	8	
SODIUM HYDROGEN-DIFLUORIDE	2439	8		SODIUM SUPEROXIDE	2547	5.1	
SODIUM HYDROSULPHIDE with less than 25% water of crystallization	2318	4.2		SOLIDS CONTAINING CORROSIVE LIQUID, N.O.S.	3244	8	
SODIUM HYDROSULPHIDE, HYDRATED with not less than 25% water of crystallization	2949	8		SOLIDS or mixtures of solids (such as preparations and wastes) CONTAINING FLAMMABLE LIQUID, N.O.S. having a flash-point up to 60 °C	3175	4.1	
SODIUM HYDROSULPHITE, see	1384	4.2		SOLIDS CONTAINING TOXIC LIQUID, N.O.S.	3243	6.1	
SODIUM HYDROXIDE, SOLID	1823	8		Solvents, flammable, n.o.s., see	1993	3	
SODIUM HYDROXIDE SOLUTION	1824	8		Solvents, flammable, toxic, n.o.s., see	1992	3	
Sodium metasilicate pentahydrate, see	3253	8		SOUNDING DEVICES, EXPLOSIVE	0204	1	
SODIUM METHYLATE	1431	4.2			0296	1	
SODIUM METHYLATE SOLUTION in alcohol	1289	3			0374	1	
SODIUM MONOXIDE	1825	8			0375	1	
SODIUM NITRATE	1498	5.1		Squibs, see	0325	1	
SODIUM NITRATE AND POTASSIUM NITRATE MIXTURE	1499	5.1		Stain, see	0454	1	
SODIUM NITRITE	1500	5.1			1263	3	
					3066	8	
					3469	3	
					3470	8	

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STANNIC CHLORIDE, ANHYDROUS	1827	8		SUBSTITUTED NITROPHENOL PESTICIDE, SOLID, TOXIC	2779	6.1	
STANNIC CHLORIDE PENTAHYDRATE	2440	8		SULPHAMIC ACID	2967	8	
STANNIC PHOSPHIDES	1433	4.3		SULPHUR	1350	4.1	
Steel swarf, see	2793	4.2		SULPHUR CHLORIDES	1828	8	
STIBINE	2676	2		Sulphur dichloride, see	1828	8	
Straw	1327	4.1	Not subject to ADR	SULPHUR DIOXIDE	1079	2	
				Sulphuretted hydrogen, see	1053	2	
Strontium alloys, pyrophoric, see	1383	4.2		SULPHUR HEXAFLUORIDE	1080	2	
STRONTIUM ARSENITE	1691	6.1		SULPHURIC ACID with more than 51% acid	1830	8	
STRONTIUM CHLORATE	1506	5.1		SULPHURIC ACID with not more than 51% acid	2796	8	
Strontium dioxide, see	1509	5.1		SULPHURIC ACID, FUMING	1831	8	
STRONTIUM NITRATE	1507	5.1		SULPHURIC ACID, SPENT	1832	8	
STRONTIUM PERCHLORATE	1508	5.1		Sulphuric and hydrofluoric acid mixture, see	1786	8	
STRONTIUM PEROXIDE	1509	5.1		SULPHUR, MOLTEN	2448	4.1	
STRONTIUM PHOSPHIDE	2013	4.3		Sulphur monochloride, see	1828	8	
STRYCHNINE	1692	6.1		SULPHUROUS ACID	1833	8	
STRYCHNINE SALTS	1692	6.1		SULPHUR TETRAFLUORIDE	2418	2	
STYPHNIC ACID, see	0219	1		SULPHUR TRIOXIDE, STABILIZED	1829	8	
	0394	1		SULPHURYL CHLORIDE	1834	6.1	
STYRENE MONOMER, STABILIZED	2055	3		SULPHURYL FLUORIDE	2191	2	
SUBSTANCES, EVI, N.O.S., see	0482	1		Talcum with tremolite and/or actinolite, see	2590	9	
SUBSTANCES, EXPLOSIVE, N.O.S.	0357	1		TARS, LIQUID, including road oils, and cutback bitumens, with a flash-point not greater than 60 °C	1999	3	
	0358	1		Tars, liquid, with a flash-point above 60 °C, at or above its flash-point, see	3256	3	
	0359	1		Tars, liquid, at or above 100 °C and below its flash-point, see	3257	9	
	0473	1		Tartar emetic, see	1551	6.1	
	0474	1		TEAR GAS CANDLES	1700	6.1	
	0475	1		TEAR GAS SUBSTANCE, LIQUID, N.O.S.	1693	6.1	
	0476	1		TEAR GAS SUBSTANCE, SOLID, N.O.S.	3448	6.1	
	0477	1		TELLURIUM COMPOUND, N.O.S.	3284	6.1	
	0478	1		TELLURIUM HEXAFLUORIDE	2195	2	
	0479	1		TERPENE HYDROCARBONS, N.O.S.	2319	3	
	0480	1		TERPINOLENE	2541	3	
	0481	1		TETRABROMOETHANE	2504	6.1	
	0485	1		1,1,2,2-TETRACHLOROETHANE	1702	6.1	
SUBSTANCES, EXPLOSIVE, VERY INSENSITIVE, N.O.S.	0482	1		TETRACHLOROETHYLENE	1897	6.1	
Substances liable to spontaneous combustion, n.o.s., see	2845	4.2					
	2846	4.2					
	3194	4.2					
	3200	4.2					
SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	2780	3					
SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC	3014	6.1					
SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	3013	6.1					

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TETRAETHYL DITHIO-PYROPHOSPHATE	1704	6.1		Thalious chlorate, see	2573	5.1	
TETRAETHYLENEPENTAMINE	2320	8		4-THIAPENTANAL	2785	6.1	
Tetraethyl lead, see	1649	6.1		Thia-4-pentanal, see	2785	6.1	
TETRAETHYL SILICATE	1292	3		THIOACETIC ACID	2436	3	
Tetraethoxysilane, see	1292	3		THIOCARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	2772	3	
Tetrafluorodichloroethane, see	1958	2		THIOCARBAMATE PESTICIDE, LIQUID, TOXIC	3006	6.1	
1,1,1,2-TETRAFLUOROETHANE	3159	2		THIOCARBAMATE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	3005	6.1	
TETRAFLUOROETHYLENE, STABILIZED	1081	2		THIOCARBAMATE PESTICIDE, LIQUID, TOXIC	2771	6.1	
TETRAFLUOROMETHANE	1982	2		THIOGLYCOL	2966	6.1	
1,2,3,6-TETRAHYDRO-BENZALDEHYDE	2498	3		THIOGLYCOLIC ACID	1940	8	
TETRAHYDROFURAN	2056	3		THIOLACTIC ACID	2936	6.1	
TETRAHYDRO-FURFURYLAMINE	2943	3		THIONYL CHLORIDE	1836	8	
Tetrahydro-1,4-oxazine, see	2054	3		THIOPHENE	2414	3	
TETRAHYDROPHTHALIC ANHYDRIDES with more than 0.05% of maleic anhydride	2698	8		Thiophenol, see	2337	6.1	
1,2,3,6-TETRAHYDROPYRIDINE	2410	3		THIOPHOSGENE	2474	6.1	
TETRAHYDROTHIOPHENE	2412	3		THIOPHOSPHORYL CHLORIDE	1837	8	
Tetramethoxysilane, see	2606	6.1		THIOUREA DIOXIDE	3341	4.2	
TETRAMETHYLAMMONIUM HYDROXIDE SOLID	3423	8		Tin (IV) chloride, anhydrous, see	1827	8	
TETRAMETHYLAMMONIUM HYDROXIDE SOLUTION	1835	8		Tin (IV) chloride pentahydrate, see	2440	8	
Tetramethylene, see	2601	2		TINCTURES, MEDICINAL	1293	3	
Tetramethylene cyanide, see	2205	6.1		Tin tetrachloride, see	1827	8	
Tetramethyl lead, see	1649	6.1		TITANIUM DISULPHIDE	3174	4.2	
TETRAMETHYLSILANE	2749	3		TITANIUM HYDRIDE	1871	4.1	
TETRANITROANILINE	0207	1		TITANIUM POWDER, DRY	2546	4.2	
TETRANITROMETHANE	1510	6.1		TITANIUM POWDER, WETTED with not less than 25% water	1352	4.1	
TETRAPROPYL ORTHOTITANATE	2413	3		TITANIUM SPONGE GRANULES	2878	4.1	
TETRAZENE, WETTED with not less than 30% water, or mixture of alcohol and water, by mass, see	0114	1		TITANIUM SPONGE POWDERS	2878	4.1	
TETRAZOL-1-ACETIC ACID	0407	1		TITANIUM TETRACHLORIDE	1838	6.1	
1H-TETRAZOLE	0504	1		TITANIUM TRICHLORIDE MIXTURE	2869	8	
TETRYL, see	0208	1		TITANIUM TRICHLORIDE MIXTURE, PYROPHORIC	2441	4.2	
Textile waste, wet	1857	4.2	Not subject to ADR	TITANIUM TRICHLORIDE, PYROPHORIC	2441	4.2	
THALLIUM CHLORATE	2573	5.1		TNT, see	0209	1	
Thallium (I) chlorate, see	2573	5.1			0388	1	
THALLIUM COMPOUND, N.O.S.	1707	6.1			0389	1	
THALLIUM NITRATE	2727	6.1		TNT mixed with aluminium, see	0390	1	
Thallium (I) nitrate, see	2727	6.1		TNT, WETTED with not less than 30% water, by mass, see	1356	4.1	
				TNT, WETTED with not less than 10% water, by mass, see	3366	4.1	

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Name and description	UN No.	Class	Remarks	Name and description	UN No.	Class	Remarks
Toe puffs, nitrocellulose base, see	1353	4.1		TOXIC BY INHALATION LIQUID, 3488	6.1		
TOLUENE	1294	3		FLAMMABLE, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀			
TOLUENE DIISOCYANATE	2078	6.1					
TOLUIDINES, LIQUID	1708	6.1					
TOLUIDINES, SOLID	3451	6.1		TOXIC BY INHALATION LIQUID, 3489	6.1		
Toluol, see	1294	3		FLAMMABLE, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀			
2,4-TOLUYLENEDIAMINE, SOLID	1709	6.1					
2,4-TOLUYLENEDIAMINE, SOLUTION	3418	6.1		TOXIC BY INHALATION LIQUID, 3387	6.1		
Toluylene diisocyanate, see	2078	6.1		OXIDIZING, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀			
Tolylene diisocyanate, see	2078	6.1					
Tolyethylene, inhibited, see	2618	3					
TORPEDOES with bursting charge	0329	1		TOXIC BY INHALATION LIQUID, 3388	6.1		
	0330	1		OXIDIZING, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀			
	0451	1					
TORPEDOES, LIQUID FUELLED with inert head	0450	1					
TORPEDOES, LIQUID FUELLED with or without bursting charge	0449	1		TOXIC BY INHALATION LIQUID, 3385	6.1		
TOXIC BY INHALATION LIQUID, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	3381	6.1		WATER-REACTIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀			
TOXIC BY INHALATION LIQUID, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	3382	6.1		TOXIC BY INHALATION LIQUID, 3386	6.1		
TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	3389	6.1		WATER-REACTIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀			
TOXIC BY INHALATION LIQUID, CORROSIVE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	3390	6.1		TOXIC BY INHALATION LIQUID, 3490	6.1		
TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀	3383	6.1		WATER-REACTIVE, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀			
TOXIC BY INHALATION LIQUID, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀	3384	6.1		TOXIC BY INHALATION LIQUID, 3491	6.1		
				WATER-REACTIVE, FLAMMABLE, N.O.S. with an LC ₅₀ lower than or equal to 1000 ml/m ³ and saturated vapour concentration greater than or equal to 10 LC ₅₀			
				TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S.	3289	6.1	
				TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S.	2927	6.1	
				TOXIC LIQUID, FLAMMABLE, ORGANIC, N.O.S.	2929	6.1	
				TOXIC LIQUID, INORGANIC, N.O.S.	3287	6.1	
				TOXIC LIQUID, ORGANIC, N.O.S.	2810	6.1	
				TOXIC LIQUID, OXIDIZING, N.O.S.	3122	6.1	

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TOXIC LIQUID, WATER-REACTIVE, N.O.S.	3123	6.1		TRICHLOROISOCYANURIC ACID, DRY	2468	5.1	
TOXIC SOLID, CORROSIVE, INORGANIC, N.O.S.	3290	6.1		Trichloronitromethane, see	1580	6.1	
TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S.	2928	6.1		TRICHLOROSILANE	1295	4.3	
TOXIC SOLID, FLAMMABLE, ORGANIC, N.O.S.	2930	6.1		1,3,5-Trichloro-s-triazine-2,4,6-trione, see	2468	5.1	
TOXIC SOLID, INORGANIC, N.O.S.	3288	6.1		2,4,6-Trichloro-1,3,5- triazine, see	2670	8	
TOXIC SOLID, ORGANIC, N.O.S.	2811	6.1		TRICRESYL PHOSPHATE with more than 3% ortho isomer	2574	6.1	
TOXIC SOLID, OXIDIZING, N.O.S.	3086	6.1		TRIETHYLAMINE	1296	3	
TOXIC SOLID, SELF-HEATING, N.O.S.	3124	6.1		Triethyl borate, see	1176	3	
TOXIC SOLID, WATER-REACTIVE, N.O.S.	3125	6.1		TRIETHYLENETETRAMINE	2259	8	
TOXINS, EXTRACTED FROM LIVING SOURCES, LIQUID, N.O.S.	3172	6.1		Triethyl orthoformate, see	2524	3	
TOXINS, EXTRACTED FROM LIVING SOURCES, SOLID, N.O.S.	3462	6.1		TRIETHYL PHOSPHITE	2323	3	
TRACERS FOR AMMUNITION	0212	1		TRIFLUOROACETIC ACID	2699	8	
	0306	1		TRIFLUOROACETYL CHLORIDE	3057	2	
Tremolite, see	2590	9		Trifluorobromomethane, see	1009	2	
TRIALLYLAMINE	2610	3		Trifluorochloroethane, see	1983	2	
TRIALLYL BORATE	2609	6.1		TRIFLUOROCHLORO-ETHYLENE, STABILIZED	1082	2	
TRIAZINE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash-point less than 23 °C	2764	3		Trifluorochloromethane, see	1022	2	
TRIAZINE PESTICIDE, LIQUID, TOXIC	2998	6.1		1,1,1-TRIFLUOROETHANE	2035	2	
TRIAZINE PESTICIDE, LIQUID, TOXIC, FLAMMABLE, flash-point not less than 23 °C	2997	6.1		TRIFLUOROMETHANE	1984	2	
TRIAZINE PESTICIDE, SOLID, TOXIC	2763	6.1		TRIFLUOROMETHANE, REFRIGERATED LIQUID	3136	2	
Tribromoborane, see	2692	8		2-TRIFLUOROMETHYLANILINE	2942	6.1	
TRIBUTYLAMINE	2542	6.1		3-TRIFLUOROMETHYLANILINE	2948	6.1	
TRIBUTYLPHOSPHANE	3254	4.2		TRIISOBUTYLENE	2324	3	
Trichloroacetaldehyde, see	2075	6.1		TRIISOPROPYL BORATE	2616	3	
TRICHLOROACETIC ACID	1839	8		TRIMETHYLACETYL CHLORIDE	2438	6.1	
TRICHLOROACETIC ACID SOLUTION	2564	8		TRIMETHYLAMINE, ANHYDROUS	1083	2	
Trichloroacetaldehyde, see	2075	6.1		TRIMETHYLAMINE, AQUEOUS SOLUTION, not more than 50% trimethylamine, by mass	1297	3	
TRICHLOROACETYL CHLORIDE	2442	8		1,3,5-TRIMETHYLBENZENE	2325	3	
TRICHLOROBENZENES, LIQUID	2321	6.1		TRIMETHYL BORATE	2416	3	
TRICHLOROBUTENE	2322	6.1		TRIMETHYLCHLOROSILANE	1298	3	
1,1,1-TRICHLOROETHANE	2831	6.1		TRIMETHYLCYCLOHEXYLAMINE	2326	8	
TRICHLOROETHYLENE	1710	6.1		Trimethylene chlorobromide, see	2688	6.1	
				TRIMETHYLHEXAMETHYLENEDIAMINES	2327	8	
				TRIMETHYLHEXAMETHYLENE DIISOCYANATE	2328	6.1	
				2,4,4-Trimethylpentene-1, see	2050	3	
				2,4,4-Trimethylpentene-2, see	2050	3	

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TRIMETHYL PHOSPHITE	2329	3		TRINITROTOLUENE MIXTURE	0389	1	
TRINITROANILINE	0153	1		CONTAINING			
TRINITROANISOLE	0213	1		TRINITROBENZENE AND			
TRINITROBENZENE, dry or wetted with less than 30% water, by mass	0214	1		HEXANITROSTILBENE			
TRINITROBENZENE, WETTED with not less than 10% water, by mass	3367	4.1		TRINITROTOLUENE AND	0388	1	
TRINITROBENZENE, WETTED with not less than 30% water, by mass	1354	4.1		TRINITROBENZENE MIXTURE			
TRINITROBENZENE- SULPHONIC ACID	0386	1		TRIPROPYLAMINE	2260	3	
TRINITROBENZOIC ACID, dry or wetted with less than 30% water, by mass	0215	1		TRIPROPYLENE	2057	3	
TRINITROBENZOIC ACID, WETTED with not less than 10% water, by mass	3368	4.1		TRIS-(1-AZIRIDINYL) PHOSPHINE OXIDE SOLUTION	2501	6.1	
TRINITROBENZOIC ACID, WETTED with not less than 30% water, by mass	1355	4.1		TRITONAL	0390	1	
TRINITROCHLOROBENZENE	0155	1		Tropilidene, see	2603	3	
TRINITROCHLOROBENZENE WETTED with not less than 10% water, by mass	3365	4.1		TUNGSTEN HEXAFLUORIDE	2196	2	
TRINITRO-m-CRESOL	0216	1		TURPENTINE	1299	3	
TRINITROFLUORENONE	0387	1		TURPENTINE SUBSTITUTE	1300	3	
TRINITRONAPHTHALENE	0217	1		UNDECANE	2330	3	
TRINITROPHENETOLE	0218	1		UREA HYDROGEN PEROXIDE	1511	5.1	
TRINITROPHENOL, dry or wetted with less than 30% water, by mass	0154	1		UREA NITRATE, dry or wetted with less than 20% water, by mass	0220	1	
TRINITROPHENOL (PICRIC ACID), WETTED with not less than 30% water, by mass	1344	4.1		UREA NITRATE, WETTED with not less than 10% water, by mass	3370	4.1	
TRINITROPHENOL WETTED with not less than 10% water, by mass	3364	4.1		UREA NITRATE, WETTED with not less than 20% water, by mass	1357	4.1	
TRINITROPHENYL- METHYLNITRAMINE	0208	1		Valeral, see	2058	3	
TRINITRORESORCINOL, dry or wetted with less than 20% water, or mixture of alcohol and water, by mass	0219	1		VALERALDEHYDE	2058	3	
TRINITRORESORCINOL, WETTED with not less than 20% water, or mixture of alcohol and water, by mass	0394	1		n-Valeraldehyde, see	2058	3	
TRINITROTOLUENE (TNT), dry or wetted with less than 30% water, by mass	0209	1		Valeric aldehyde, see	2058	3	
TRINITROTOLUENE AND HEXANITROSTILBENE MIXTURE	0388	1		VALERYL CHLORIDE	2502	8	
				VANADIUM COMPOUND, N.O.S.	3285	6.1	
				Vanadium (IV) oxide sulphate, see	2931	6.1	
				Vanadium oxysulphate, see	2931	6.1	
				VANADIUM OXYTRICHLORIDE	2443	8	
				VANADIUM PENTOXIDE, non- fused form	2862	6.1	
				VANADIUM TETRACHLORIDE	2444	8	
				VANADIUM TRICHLORIDE	2475	8	
				VANADYL SULPHATE	2931	6.1	
				Varnish, see	1263	3	
					3066	8	
					3469	3	
					3470	8	
				Vehicle, flammable gas powered	3166	9	Not subject to ADR

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Vehicle, flammable liquid powered	3166	9	Not subject to ADR	WATER-REACTIVE SOLID, SELF-HEATING, N.O.S.	3135	4.3	
Vehicle, fuel cell, flammable gas powered	3166	9	Not subject to ADR	WATER-REACTIVE SOLID, TOXIC, N.O.S.	3134	4.3	
Vehicle, fuel cell, flammable liquid powered	3166	9	Not subject to ADR	White arsenic, see	1561	6.1	
Villiumite, see	1690	6.1		WHITE ASBESTOS (chrysotile, actinolite, anthophyllite, tremolite)	2590	9	
VINYL ACETATE, STABILIZED	1301	3		White spirit, see	1300	3	
Vinylbenzene, see	2055	3		WOOD PRESERVATIVES, LIQUID	1306	3	
VINYL BROMIDE, STABILIZED	1085	2		Wool waste, wet	1387	4.2	Not subject to ADR
VINYL BUTYRATE, STABILIZED	2838	3		XANTHATES	3342	4.2	
VINYL CHLORIDE, STABILIZED	1086	2		XENON	2036	2	
VINYL CHLOROACETATE	2589	6.1		XENON, REFRIGERATED LIQUID	2591	2	
VINYL ETHYL ETHER, STABILIZED	1302	3		XYLENES	1307	3	
VINYL FLUORIDE, STABILIZED	1860	2		XYLENOLS, LIQUID	3430	6.1	
VINYLDENE CHLORIDE, STABILIZED	1303	3		XYLENOLS, SOLID	2261	6.1	
VINYL ISOBUTYL ETHER, STABILIZED	1304	3		XYLIDINES, LIQUID	1711	6.1	
VINYL METHYL ETHER, STABILIZED	1087	2		XYLIDINES, SOLID	3452	6.1	
VINYLPYRIDINES, STABILIZED	3073	6.1		Xylols, see	1307	3	
VINYLTOLUENES, STABILIZED	2618	3		XYLYL BROMIDE, LIQUID	1701	6.1	
VINYLTRICHLOROSILANE	1305	3		XYLYL BROMIDE, SOLID	3417	6.1	
Warheads for guided missiles, see	0286	1		ZINC AMMONIUM NITRITE	1512	5.1	
	0287	1		ZINC ARSENATE	1712	6.1	
	0369	1		ZINC ARSENATE AND ZINC ARSENITE MIXTURE	1712	6.1	
	0370	1		ZINC ARSENITE	1712	6.1	
	0371	1		ZINC ASHES	1435	4.3	
WARHEADS, ROCKET with burster or expelling charge	0370	1		Zinc bisulphite solution, see	2693	8	
	0371	1		ZINC BROMATE	2469	5.1	
WARHEADS, ROCKET with bursting charge	0286	1		ZINC CHLORATE	1513	5.1	
	0287	1		ZINC CHLORIDE, ANHYDROUS	2331	8	
	0369	1		ZINC CHLORIDE SOLUTION	1840	8	
WARHEADS, TORPEDO with bursting charge	0221	1		ZINC CYANIDE	1713	6.1	
WATER-REACTIVE LIQUID, N.O.S.	3148	4.3		ZINC DITHIONITE	1931	9	
WATER-REACTIVE LIQUID, CORROSIVE, N.O.S.	3129	4.3		ZINC DUST	1436	4.3	
WATER-REACTIVE LIQUID, TOXIC, N.O.S.	3130	4.3		ZINC FLUROSILICATE	2855	6.1	
WATER-REACTIVE SOLID, N.O.S.	2813	4.3		Zinc hexafluorosilicate, see	2855	6.1	
WATER-REACTIVE SOLID, CORROSIVE, N.O.S.	3131	4.3		ZINC HYDROSULPHITE, see	1931	9	
WATER-REACTIVE SOLID, FLAMMABLE, N.O.S.	3132	4.3		ZINC NITRATE	1514	5.1	
WATER-REACTIVE SOLID, OXIDIZING, N.O.S.	3133	4.3	Carriage prohibited	ZINC PERMANGANATE	1515	5.1	
				ZINC PEROXIDE	1516	5.1	
				ZINC PHOSPHIDE	1714	4.3	
				ZINC POWDER	1436	4.3	

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ZINC RESINATE	2714	4.1		ZIRCONIUM PICRAMATE, WETTED with not less than 20% water, by mass	1517	4.1	
Zinc selenate, see	2630	4.1		ZIRCONIUM POWDER, DRY	2008	4.2	
Zinc selenite, see	2630	4.1		ZIRCONIUM POWDER, WETTED with not less than 25% water	1358	4.1	
Zinc silicofluoride, see	2855	6.1		ZIRCONIUM SCRAP	1932	4.2	
ZIRCONIUM, DRY, coiled wire, finished metal sheets, strip (thinner than 254 microns but not thinner than 18 microns)	2858	4.1		ZIRCONIUM SUSPENDED IN A FLAMMABLE LIQUID	1308	3	
ZIRCONIUM, DRY, finished sheets, strip or coiled wire	2009	4.2		ZIRCONIUM TETRACHLORIDE	2503	8	
ZIRCONIUM HYDRIDE	1437	4.1					
ZIRCONIUM NITRATE	2728	5.1					
ZIRCONIUM PICRAMATE, dry or wetted with less than 20% water, by mass	0236	1					

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ECE/TRANS/225 (Vol.II)

Economic Commission for Europe
Committee on Inland Transport

ADR

applicable as from 1 January 2013

European Agreement
Concerning the International Carriage
of Dangerous Goods by Road

Volume II



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United Nations Economic Commission for Europe (UNECE)

The United Nations Economic Commission for Europe (UNECE) is one of the five United Nations regional commissions, administered by the Economic and Social Council (ECOSOC). It was established in 1947 with the mandate to help rebuild post-war Europe, develop economic activity and strengthen economic relations among European countries, and between Europe and the rest of the world. During the Cold War, UNECE served as a unique forum for economic dialogue and cooperation between East and West. Despite the complexity of this period, significant achievements were made, with consensus reached on numerous harmonization and standardization agreements.

In the post-Cold War era, UNECE acquired not only many new member States, but also new functions. Since the early 1990s the organization has focused on analyses of the transition process, using its harmonization experience to facilitate the integration of central and eastern European countries into global markets.

UNECE is the forum where the countries of western, central and eastern Europe, Central Asia and North America – 56 countries in all – come together to forge the tools of their economic cooperation. That cooperation concerns economics, statistics, environment, transport, trade, sustainable energy, timber and habitat. The Commission offers a regional framework for the elaboration and harmonization of conventions, norms and standards. The Commission's experts provide technical assistance to the countries of South-East Europe and the Commonwealth of Independent States. This assistance takes the form of advisory services, training seminars and workshops where countries can share their experiences and best practices.

Transport in UNECE

The UNECE Inland Transport Committee (ITC) facilitates the international movement of persons and goods by inland transport modes. It aims to improve competitiveness, safety, energy efficiency and security in the transport sector. At the same time it focuses on reducing the adverse effects of transport activities on the environment and contributing effectively to sustainable development. The ITC is a:

- Centre for multilateral transport standards and agreements in Europe and beyond, e.g. regulations for dangerous goods transport and road vehicle construction at the global level
- Gateway for technical assistance and exchange of best practices
- Promoter of multi-country investment planning
- Substantive partner for transport and trade facilitation initiatives
- Historic centre for transport statistics.

For more than six decades, ITC has provided a platform for intergovernmental cooperation to facilitate and develop international transport while improving its safety and environmental performance. The main results of this persevering and important work are reflected in more than 50 international agreements and conventions which provide an international legal framework and technical regulations for the development of international road, rail, inland water and intermodal transport, as well as dangerous goods transport and vehicle construction. Considering the needs of the transport sector and its regulators, UNECE offers a balanced approach to and treatment of facilitation and security issues alike.

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ANNEX A

GENERAL PROVISIONS AND PROVISIONS CONCERNING DANGEROUS SUBSTANCES AND ARTICLES (cont'd)

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PART 3

Dangerous goods list, special provisions and exemptions related to limited and excepted quantities (cont'd)

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CHAPTER 3.3

SPECIAL PROVISIONS APPLICABLE TO CERTAIN ARTICLES OR SUBSTANCES

- 3.3.1 When Column (6) of Table A of Chapter 3.2 indicates that a special provision is relevant to a substance or article, the meaning and requirements of that special provision are as set forth below.
- 16 Samples of new or existing explosive substances or articles may be carried as directed by the competent authorities (see 2.2.1.1.3) for purposes including: testing, classification, research and development, quality control, or as a commercial sample. Explosive samples which are not wetted or desensitized shall be limited to 10 kg in small packages as specified by the competent authorities. Explosive samples which are wetted or desensitized shall be limited to 25 kg.
- 23 Even though this substance has a flammability hazard, it only exhibits such hazard under extreme fire conditions in confined areas.
- 32 This substance is not subject to the requirements of ADR when in any other form.
- 37 This substance is not subject to the requirements of ADR when coated.
- 38 This substance is not subject to the requirements of ADR when it contains not more than 0.1% calcium carbide.
- 39 This substance is not subject to the requirements of ADR when it contains less than 30% or not less than 90% silicon.
- 43 When offered for carriage as pesticides, these substances shall be carried under the relevant pesticide entry and in accordance with the relevant pesticide provisions (see 2.2.61.1.10 to 2.2.61.1.11.2).
- 45 Antimony sulphides and oxides which contain not more than 0.5% of arsenic calculated on the total mass are not subject to the requirements of ADR.
- 47 Ferricyanides and ferrocyanides are not subject to the requirements of ADR.
- 48 The carriage of this substance, when it contains more than 20% hydrocyanic acid, is prohibited.
- 59 These substances are not subject to the requirements of ADR when they contain not more than 50% magnesium.
- 60 If the concentration is more than 72%, the carriage of this substance is prohibited.
- 61 The technical name which shall supplement the proper shipping name shall be the ISO common name (see also ISO 1750:1981 "*Pesticides and other agrochemicals - common names*", as amended), other name listed in the WHO "*Recommended Classification of Pesticides by Hazard and Guidelines to Classification*" or the name of the active substance (see also 3.1.2.8.1 and 3.1.2.8.1.1).
- 62 This substance is not subject to the requirements of ADR when it contains not more than 4% sodium hydroxide.
- 65 Hydrogen peroxide aqueous solutions with less than 8% hydrogen peroxide are not subject to the requirements of ADR.
- 103 The carriage of ammonium nitrites and mixtures of an inorganic nitrite with an ammonium salt is prohibited.

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- 105 Nitrocellulose meeting the descriptions of UN No. 2556 or UN No. 2557 may be classified in Class 4.1.
- 113 The carriage of chemically unstable mixtures is prohibited.
- 119 Refrigerating machines include machines or other appliances which have been designed for the specific purpose of keeping food or other items at a low temperature in an internal compartment, and air conditioning units. Refrigerating machines and refrigerating machine components are not subject to the provisions of ADR if they contain less than 12 kg of gas in Class 2, group A or O according to 2.2.2.1.3, or if they contain less than 12 litres ammonia solution (UN No. 2672).
- 122 The subsidiary risks, control and emergency temperatures if any, and the UN number (generic entry) for each of the currently assigned organic peroxide formulations are given in 2.2.52.4.
- 123 *(Reserved)*
- 127 Other inert material or inert material mixture may be used, provided this inert material has identical phlegmatizing properties.
- 131 The phlegmatized substance shall be significantly less sensitive than dry PETN.
- 135 The dihydrated sodium salt of dichloroisocyanuric acid is not subject to the requirements of ADR.
- 138 p-Bromobenzyl cyanide is not subject to the requirements of ADR.
- 141 Products which have undergone sufficient heat treatment so that they present no hazard during carriage are not subject to the requirements of ADR.
- 142 Solvent extracted soya bean meal containing not more than 1.5% oil and 11% moisture, which is substantially free of flammable solvent, is not subject to the requirements of ADR.
- 144 An aqueous solution containing not more than 24% alcohol by volume is not subject to the requirements of ADR.
- 145 Alcoholic beverages of packing group III, when carried in receptacles of 250 litres or less, are not subject to the requirements of ADR.
- 152 The classification of this substance will vary with particle size and packaging, but borderlines have not been experimentally determined. Appropriate classifications shall be made in accordance with 2.2.1.
- 153 This entry applies only if it is demonstrated, on the basis of tests, that the substances when in contact with water are not combustible nor show a tendency to auto-ignition and that the mixture of gases evolved is not flammable.
- 162 *(Deleted)*
- 163 A substance mentioned by name in Table A of Chapter 3.2 shall not be carried under this entry. Substances carried under this entry may contain 20% or less nitrocellulose provided the nitrocellulose contains not more than 12.6% nitrogen (by dry mass).
- 168 Asbestos which is immersed or fixed in a natural or artificial binder (such as cement, plastics, asphalt, resins or mineral ore) in such a way that no escape of hazardous quantities of respirable asbestos fibres can occur during carriage is not subject to the requirements of ADR. Manufactured articles containing asbestos and not meeting this provision are nevertheless not subject to the requirements of ADR when packed so that no escape of hazardous quantities of respirable asbestos fibres can occur during carriage.

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- 169 Phthalic anhydride in the solid state and tetrahydrophthalic anhydrides, with not more than 0.05% maleic anhydride, are not subject to the requirements of ADR. Phthalic anhydride molten at a temperature above its flash-point, with not more than 0.05% maleic anhydride, shall be classified under UN No. 3256.
- 172 For radioactive material with a subsidiary risk:
- (a) The packages shall be labelled with a label corresponding to each subsidiary risk exhibited by the material; corresponding placards shall be affixed to vehicles or containers in accordance with the relevant provisions of 5.3.1;
 - (b) The radioactive material shall be allocated to packing groups I, II or III, as and if appropriate, by application of the grouping criteria provided in Part 2 corresponding to the nature of the predominant subsidiary risk.
- The description required in 5.4.1.2.5.1 (b) shall include a description of these subsidiary risks (e.g. "Subsidiary risk: 3, 6.1"), the name of the constituents which most predominantly contribute to this (these) subsidiary risk(s), and where applicable, the packing group. For packing, see also 4.1.9.1.5.
- 177 Barium sulphate is not subject to the requirements of ADR.
- 178 This designation shall be used only when no other appropriate designation exists in Table A of Chapter 3.2, and only with the approval of the competent authority of the country of origin (see 2.2.1.1.3).
- 181 Packages containing this type of substance shall bear a label conforming to model No. 1 (see 5.2.2.2.2) unless the competent authority of the country of origin has permitted this label to be dispensed with for the specific packaging employed because test data have proved that the substance in this packaging does not exhibit explosive behaviour (see 5.2.2.1.9).
- 182 The group of alkali metals includes lithium, sodium, potassium, rubidium and caesium.
- 183 The group of alkaline earth metals includes magnesium, calcium, strontium and barium.
- 186 In determining the ammonium nitrate content, all nitrate ions for which a molecular equivalent of ammonium ions is present in the mixture shall be calculated as ammonium nitrate.
- 188 Cells and batteries offered for carriage are not subject to other provisions of ADR if they meet the following:
- (a) For a lithium metal or lithium alloy cell, the lithium content is not more than 1 g, and for a lithium ion cell, the Watt-hour rating is not more than 20 Wh;
 - (b) For a lithium metal or lithium alloy battery the aggregate lithium content is not more than 2 g, and for a lithium ion battery, the Watt-hour rating is not more than 100 Wh. Lithium ion batteries subject to this provision shall be marked with the Watt-hour rating on the outside case, except those manufactured before 1 January 2009;
 - (c) Each cell or battery meets the provisions of 2.2.9.1.7 (a) and (e);
 - (d) Cells and batteries, except when installed in equipment, shall be packed in inner packagings that completely enclose the cell or battery. Cells and batteries shall be protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to a short circuit. The inner packagings shall be packed in strong outer packagings which conform to the provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.5;

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- (e) Cells and batteries when installed in equipment shall be protected from damage and short circuit, and the equipment shall be equipped with an effective means of preventing accidental activation. This requirement does not apply to devices which are intentionally active in carriage (radio frequency identification (RFID) transmitters, watches, sensors, etc.) and which are not capable of generating a dangerous evolution of heat. When batteries are installed in equipment, the equipment shall be packed in strong outer packagings constructed of suitable material of adequate strength and design in relation to the packaging's capacity and its intended use unless the battery is afforded equivalent protection by the equipment in which it is contained;
- (f) Except for packages containing button cell batteries installed in equipment (including circuit boards), or no more than four cells installed in equipment or no more than two batteries installed in equipment, each package shall be marked with the following:
 - (i) an indication that the package contains "lithium metal" or "lithium ion" cells or batteries, as appropriate;
 - (ii) an indication that the package shall be handled with care and that a flammability hazard exists if the package is damaged;
 - (iii) an indication that special procedures shall be followed in the event the package is damaged, to include inspection and repacking if necessary; and
 - (iv) a telephone number for additional information;
- (g) Each consignment of one or more packages marked in accordance with paragraph (f) shall be accompanied with a document including the following:
 - (i) an indication that the package contains "lithium metal" or "lithium ion" cells or batteries, as appropriate;
 - (ii) an indication that the package shall be handled with care and that a flammability hazard exists if the package is damaged;
 - (iii) an indication that special procedures shall be followed in the event the package is damaged, to include inspection and repacking if necessary; and
 - (iv) a telephone number for additional information;
- (h) Except when batteries are installed in equipment, each package shall be capable of withstanding a 1.2 m drop test in any orientation without damage to cells or batteries contained therein, without shifting of the contents so as to allow battery to battery (or cell to cell) contact and without release of contents; and
- (i) Except when batteries are installed in or packed with equipment, packages shall not exceed 30 kg gross mass.

As used above and elsewhere in ADR, "lithium content" means the mass of lithium in the anode of a lithium metal or lithium alloy cell.

Separate entries exist for lithium metal batteries and lithium ion batteries to facilitate the carriage of these batteries for specific modes of carriage and to enable the application of different emergency response actions.

- 190 Aerosol dispensers shall be provided with protection against inadvertent discharge. Aerosols with a capacity not exceeding 50 ml containing only non-toxic constituents are not subject to the requirements of ADR.

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- 191 Receptacles, small, with a capacity not exceeding 50 ml, containing only non-toxic constituents are not subject to the requirements of ADR.
- 194 The control and emergency temperatures, if any, and the UN number (generic entry) for each of the currently assigned self-reactive substances are given in 2.2.41.4.
- 196 Formulations which in laboratory testing neither detonate in the cavitated state nor deflagrate, which show no effect when heated under confinement and which exhibit no explosive power may be carried under this entry. The formulation must also be thermally stable (i.e. the SADT is 60 °C or higher for a 50 kg package). Formulations not meeting these criteria shall be carried under the provisions of Class 5.2, (see 2.2.52.4).
- 198 Nitrocellulose solutions containing not more than 20% nitrocellulose may be carried as paint, perfumery products or printing ink, as applicable (see UN Nos. 1210, 1263, 1266, 3066, 3469 and 3470).
- 199 Lead compounds which, when mixed in a ratio of 1:1000 with 0.07M hydrochloric acid and stirred for one hour at a temperature of 23 °C ± 2 °C, exhibit a solubility of 5% or less (see ISO 3711:1990 "*Lead chromate pigments and lead chromate - molybdate pigments – Specifications and methods of test*") are considered insoluble and are not subject to the requirements of ADR unless they meet the criteria for inclusion in another class.
- 201 Lighters and lighter refills shall comply with the provisions of the country in which they were filled. They shall be provided with protection against inadvertent discharge. The liquid portion of the gas shall not exceed 85% of the capacity of the receptacle at 15 °C. The receptacles, including the closures, shall be capable of withstanding an internal pressure of twice the pressure of the liquefied petroleum gas at 55 °C. The valve mechanisms and ignition devices shall be securely sealed, taped or otherwise fastened or designed to prevent operation or leakage of the contents during carriage. Lighters shall not contain more than 10 g of liquefied petroleum gas. Lighter refills shall not contain more than 65 g of liquefied petroleum gas.
- NOTE: For waste lighters collected separately see Chapter 3.3, special provision 654.*
- 203 This entry shall not be used for polychlorinated biphenyls, liquid, UN No. 2315 and polychlorinated biphenyls, solid, UN No.3432.
- 204 *(Deleted)*
- 205 This entry shall not be used for UN No. 3155 PENTACHLOROPHENOL.
- 207 Polymeric beads and plastics moulding compounds may be made from polystyrene, poly(methyl methacrylate) or other polymeric material.
- 208 The commercial grade of calcium nitrate fertilizer, when consisting mainly of a double salt (calcium nitrate and ammonium nitrate) containing not more than 10% ammonium nitrate and at least 12% water of crystallization, is not subject to the requirements of ADR.
- 210 Toxins from plant, animal or bacterial sources which contain infectious substances, or toxins that are contained in infectious substances, shall be classified in Class 6.2.
- 215 This entry only applies to the technically pure substance or to formulations derived from it having an SADT higher than 75 °C and therefore does not apply to formulations which are self-reactive substances (for self-reactive substances, see 2.2.41.4). Homogeneous mixtures containing not more than 35% by mass of azodicarbonamide and at least 65% of inert substance are not subject to the requirements of ADR unless criteria of other classes are met.

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- 216 Mixtures of solids which are not subject to the requirements of ADR and flammable liquids may be carried under this entry without first applying the classification criteria of Class 4.1, provided there is no free liquid visible at the time the substance is loaded or at the time the packaging, vehicle or container is closed. Sealed packets and articles containing less than 10 ml of a packing group II or III flammable liquid absorbed into a solid material are not subject to ADR provided there is no free liquid in the packet or article.
- 217 Mixtures of solids which are not subject to the requirements of ADR and toxic liquids may be carried under this entry without first applying the classification criteria of Class 6.1, provided there is no free liquid visible at the time the substance is loaded or at the time the packaging, vehicle or container is closed. This entry shall not be used for solids containing a packing group I liquid.
- 218 Mixtures of solids which are not subject to the requirements of ADR and corrosive liquids may be carried under this entry without first applying the classification criteria of Class 8, provided there is no free liquid visible at the time the substance is loaded or at the time the packaging, vehicle or container is closed.
- 219 Genetically modified microorganisms (GMMOs) and genetically modified organisms (GMOs) packed and marked in accordance with packing instruction P904 of 4.1.4.1 are not subject to any other requirements of ADR.
- If GMMOs or GMOs meet the criteria for inclusion in Class 6.1 or 6.2 (see 2.2.61.1 and 2.2.62.1) the requirements in ADR for the carriage of toxic substances or infectious substances apply.
- 220 Only the technical name of the flammable liquid component of this solution or mixture shall be shown in parentheses immediately following the proper shipping name.
- 221 Substances included under this entry shall not be of packing group I.
- 224 Unless it can be demonstrated by testing that the sensitivity of the substance in its frozen state is no greater than in its liquid state, the substance shall remain liquid during normal transport conditions. It shall not freeze at temperatures above -15 °C.
- 225 Fire extinguishers under this entry may include installed actuating cartridges (cartridges, power device of classification code 1.4C or 1.4S), without changing the classification of Class 2, group A or O according to 2.2.2.1.3 provided the total quantity of deflagrating (propellant) explosives does not exceed 3.2 g per extinguishing unit.
- 226 Formulations of this substance containing not less than 30% non-volatile, non-flammable phlegmatizer are not subject to the requirements of ADR.
- 227 When phlegmatized with water and inorganic inert material the content of urea nitrate may not exceed 75% by mass and the mixture shall not be capable of being detonated by the Series 1, type (a), test in the *Manual of Tests and Criteria*, Part 1.
- 228 Mixtures not meeting the criteria for flammable gases (see 2.2.2.1.5) shall be carried under UN No. 3163.
- 230 Lithium cells and batteries may be carried under this entry if they meet the provisions of 2.2.9.1.7.
- 235 This entry applies to articles which contain Class 1 explosive substances and which may also contain dangerous goods of other classes. These articles are used as life-saving vehicle air bag inflators or air bag modules or seat-belt pretensioners.

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236 Polyester resin kits consist of two components: a base material (Class 3, packing group II or III) and an activator (organic peroxide). The organic peroxide shall be type D, E or F, not requiring temperature control. Packing group shall be II or III, according to the criteria for Class 3, applied to the base material. The quantity limit referred to in Column (7a) of Table A of Chapter 3.2 applies to the base material.

237 The membrane filters, including paper separators, coating or backing materials, etc., that are present in carriage, shall not be liable to propagate a detonation as tested by one of the tests described in the *Manual of Tests and Criteria*, Part I, Test series 1 (a).

In addition the competent authority may determine, on the basis of the results of suitable burning rate tests taking account of the standard tests in the *Manual of Tests and Criteria*, Part III, sub-section 33.2.1, that nitrocellulose membrane filters in the form in which they are to be carried are not subject to the requirements applicable to flammable solids in Class 4.1.

238 (a) Batteries can be considered as non-spillable provided that they are capable of withstanding the vibration and pressure differential tests given below, without leakage of battery fluid.

Vibration test: The battery is rigidly clamped to the platform of a vibration machine and a simple harmonic motion having an amplitude of 0.8 mm (1.6 mm maximum total excursion) is applied. The frequency is varied at the rate of 1 Hz/min between the limits of 10 Hz and 55 Hz. The entire range of frequencies and return is traversed in 95 ± 5 minutes for each mounting position (direction of vibration) of the battery. The battery is tested in three mutually perpendicular positions (to include testing with fill openings and vents, if any, in an inverted position) for equal time periods.

Pressure differential test: Following the vibration test, the battery is stored for six hours at $24 \text{ °C} \pm 4 \text{ °C}$ while subjected to a pressure differential of at least 88 kPa. The battery is tested in three mutually perpendicular positions (to include testing with fill openings and vents, if any, in an inverted position) for at least six hours in each position.

(b) Non-spillable batteries are not subject to the requirements of ADR if, at a temperature of 55 °C, the electrolyte will not flow from a ruptured or cracked case and there is no free liquid to flow and if, as packaged for carriage, the terminals are protected from short circuit.

239 Batteries or cells shall not contain dangerous substances other than sodium, sulphur or sodium compounds (e.g. sodium polysulphides and sodium tetrachloroaluminate). Batteries or cells shall not be offered for carriage at a temperature such that liquid elemental sodium is present in the battery or cell unless approved and under the conditions established by the competent authority of the country of origin. If the country of origin is not a Contracting Party to ADR, the approval and conditions of carriage shall be recognized by the competent authority of the first country Contracting Party to ADR reached by the consignment.

Cells shall consist of hermetically sealed metal casings which fully enclose the dangerous substances and which are so constructed and closed as to prevent the release of the dangerous substances under normal conditions of carriage.

Batteries shall consist of cells secured within and fully enclosed by a metal casing so constructed and closed as to prevent the release of the dangerous substances under normal conditions of carriage.

240 See the last NOTE in 2.2.9.1.7.

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- 241 The formulation shall be prepared so that it remains homogeneous and does not separate during carriage. Formulations with low nitrocellulose contents and not showing dangerous properties when tested for their liability to detonate, deflagrate or explode when heated under defined confinement by tests of Test series 1 (a), 2 (b) and 2 (c) respectively in the *Manual of Tests and Criteria*, Part I and not being a flammable solid when tested in accordance with test No. 1 in the *Manual of Tests and Criteria*, Part III, sub-section 33.2.1.4 (chips, if necessary, crushed and sieved to a particle size of less than 1.25 mm) are not subject to the requirements of ADR.
- 242 Sulphur is not subject to the requirements of ADR when it has been formed to a specific shape (e.g. prills, granules, pellets, pastilles or flakes).
- 243 Gasoline, motor spirit and petrol for use in spark-ignition engines (e.g. in automobiles, stationary engines and other engines) shall be assigned to this entry regardless of variations in volatility.
- 244 This entry includes e.g. aluminium dross, aluminium skimmings, spent cathodes, spent potliner, and aluminium salt slags.
- 247 Alcoholic beverages containing more than 24% alcohol but not more than 70% by volume, when carried as part of the manufacturing process, may be carried in wooden barrels with a capacity of more than 250 litres and not more than 500 litres meeting the general requirements of 4.1.1, as appropriate, on the following conditions:
- (a) The wooden barrels shall be checked and tightened before filling;
 - (b) Sufficient ullage (not less than 3%) shall be left to allow for the expansion of the liquid;
 - (c) The wooden barrels shall be carried with the bungholes pointing upwards;
 - (d) The wooden barrels shall be carried in containers meeting the requirements of the CSC. Each wooden barrel shall be secured in custom-made cradles and be wedged by appropriate means to prevent it from being displaced in any way during carriage.
- 249 Ferrocium, stabilized against corrosion, with a minimum iron content of 10% is not subject to the requirements of ADR.
- 250 This entry may only be used for samples of chemicals taken for analysis in connection with the implementation of the Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction. The carriage of substances under this entry shall be in accordance with the chain of custody and security procedures specified by the Organisation for the Prohibition of Chemical Weapons.

The chemical sample may only be carried providing prior approval has been granted by the competent authority or the Director General of the Organisation for the Prohibition of Chemical Weapons and providing the sample complies with the following provisions:

- (a) It shall be packed according to packing instruction 623 in the ICAO Technical Instructions (see S-3-8 of the Supplement); and
- (b) During carriage, a copy of the document of approval for transport, showing the quantity limitations and the packing provisions shall be attached to the transport document.

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- 251 The entry CHEMICAL KIT or FIRST AID KIT is intended to apply to boxes, cases etc. containing small quantities of various dangerous goods which are used for example for medical, analytical or testing or repair purposes. Such kits may not contain dangerous goods for which the quantity "0" has been indicated in Column (7a) of Table A of Chapter 3.2.

Components shall not react dangerously (see "dangerous reaction" in 1.2.1). The total quantity of dangerous goods in any one kit shall not exceed either 1 l or 1 kg. The packing group assigned to the kit as a whole shall be the most stringent packing group assigned to any individual substance in the kit.

Kits which are carried on board vehicles for first-aid or operating purposes are not subject to the requirements of ADR.

Chemical kits and first aid kits containing dangerous goods in inner packagings which do not exceed the quantity limits for limited quantities applicable to individual substances as specified in Column (7a) of Table A of Chapter 3.2 may be carried in accordance with Chapter 3.4.

- 252 Provided the ammonium nitrate remains in solution under all conditions of carriage, aqueous solutions of ammonium nitrate, with not more than 0.2% combustible material, in a concentration not exceeding 80%, are not subject to the requirements of ADR.
- 266 This substance, when containing less alcohol, water or phlegmatizer than specified, shall not be carried unless specifically authorized by the competent authority (see 2.2.1.1).
- 267 Any explosives, blasting, type C containing chlorates shall be segregated from explosives containing ammonium nitrate or other ammonium salts.
- 270 Aqueous solutions of Class 5.1 inorganic solid nitrate substances are considered as not meeting the criteria of Class 5.1 if the concentration of the substances in solution at the minimum temperature encountered during carriage is not greater than 80% of the saturation limit.
- 271 Lactose or glucose or similar materials, may be used as a phlegmatizer provided that the substance contains not less than 90%, by mass, of phlegmatizer. The competent authority may authorize these mixtures to be classified in Class 4.1 on the basis of a test Series 6(c) of Section 16 of Part I of the *Manual of Tests and Criteria* on at least three packages as prepared for carriage. Mixtures containing at least 98%, by mass, of phlegmatizer are not subject to the requirements of ADR. Packages containing mixtures with not less than 90%, by mass, of phlegmatizer need not bear a label conforming to model No. 6.1.
- 272 This substance shall not be carried under the provisions of Class 4.1 unless specifically authorized by the competent authority (see UN No. 0143 or UN No. 0150 as appropriate).
- 273 Maneb and maneb preparations stabilized against self-heating need not be classified in Class 4.2 when it can be demonstrated by testing that a cubic volume of 1 m³ of substance does not self-ignite and that the temperature at the centre of the sample does not exceed 200 °C, when the sample is maintained at a temperature of not less than 75 °C ± 2 °C for a period of 24 hours.
- 274 The provisions of 3.1.2.8 apply.

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- 278 These substances shall not be classified and carried unless authorized by the competent authority on the basis of results from Series 2 tests and a Series 6(c) test of Part I of the *Manual of Tests and Criteria* on packages as prepared for carriage (see 2.2.1.1). The competent authority shall assign the packing group on the basis of 2.2.3 criteria and the package type used for the Series 6(c) test.
- 279 The substance is assigned to this classification or packing group based on human experience rather than the strict application of classification criteria set out in ADR.
- 280 This entry applies to articles which are used as life-saving vehicle air bag inflators, or air bag modules or seat-belt pretensioners and which contain dangerous goods of Class 1 or dangerous goods of other classes and when carried as component parts and when these articles as presented for carriage have been tested in accordance with Test series 6 (c) of Part I of the *Manual of Tests and Criteria*, with no explosion of the device, no fragmentation of device casing or pressure receptacle, and no projection hazard nor thermal effect which would significantly hinder fire-fighting or other emergency response efforts in the immediate vicinity.
- 282 *(Deleted)*
- 283 Articles, containing gas, intended to function as shock absorbers, including impact energy-absorbing devices, or pneumatic springs are not subject to the requirements of ADR provided:
- (a) Each article has a gas space capacity not exceeding 1.6 litres and a charge pressure not exceeding 280 bar where the product of the capacity (litres) and charge pressure (bars) does not exceed 80 (i.e. 0.5 litres gas space and 160 bar charge pressure, 1 litre gas space and 80 bar charge pressure, 1.6 litres gas space and 50 bar charge pressure, 0.28 litres gas space and 280 bar charge pressure);
 - (b) Each article has a minimum burst pressure of 4 times the charge pressure at 20 °C for products not exceeding 0.5 litres gas space capacity and 5 times charge pressure for products greater than 0.5 litres gas space capacity;
 - (c) Each article is manufactured from material which will not fragment upon rupture;
 - (d) Each article is manufactured in accordance with a quality assurance standard acceptable to the competent authority; and
 - (e) The design type has been subjected to a fire test demonstrating that the article relieves its pressure by means of a fire degradable seal or other pressure relief device, such that the article will not fragment and that the article does not rocket.
- See also 1.1.3.2 (d) for equipment used for the operation of the vehicle.
- 284 An oxygen generator, chemical, containing oxidizing substances shall meet the following conditions:
- (a) The generator when containing an explosive actuating device shall only be carried under this entry when excluded from Class 1 in accordance with the NOTE under paragraph 2.2.1.1.1 (b);
 - (b) The generator, without its packaging, shall be capable of withstanding a 1.8 m drop test onto a rigid, non-resilient, flat and horizontal surface, in the position most likely to cause damage, without loss of its contents and without actuation;
 - (c) When a generator is equipped with an actuating device, it shall have at least two positive means of preventing unintentional actuation.

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- 286 Nitrocellulose membrane filters covered by this entry, each with a mass not exceeding 0.5 g, are not subject to the requirements of ADR when contained individually in an article or a sealed packet.
- 288 These substances shall not be classified and carried unless authorized by the competent authority on the basis of results from Series 2 tests and a Series 6(c) test of Part I of the *Manual of tests and Criteria* on packages as prepared for carriage (see 2.2.1.1).
- 289 Air bag inflators, air bag modules or seat-belt pretensioners installed in vehicles, wagons, vessels or aircraft or in completed components such as steering columns, door panels, seats, etc. are not subject to the requirements of ADR.
- 290 When this radioactive material meets the definitions and criteria of other classes as defined in Part 2, it shall be classified in accordance with the following:
- (a) Where the substance meets the criteria for dangerous goods in excepted quantities as set out in Chapter 3.5, the packagings shall be in accordance with 3.5.2 and meet the testing requirements of 3.5.3. All other requirements applicable to radioactive material, excepted packages as set out in 1.7.1.5 shall apply without reference to the other class;
 - (b) Where the quantity exceeds the limits specified in 3.5.1.2 the substance shall be classified in accordance with the predominant subsidiary risk. The transport document shall describe the substance with the UN number and proper shipping name applicable to the other class supplemented with the name applicable to the radioactive excepted package according to Column (2) of Table A of Chapter 3.2, and the substance shall be carried in accordance with the provisions applicable to that UN number. An example of the information shown on the transport document is:

"UN 1993, Flammable liquid, n.o.s. (ethanol and toluene mixture), Radioactive material, excepted package – limited quantity of material, 3, PG II".

In addition, the requirements of 2.2.7.2.4.1 shall apply;
 - (c) The provisions of Chapter 3.4 for the carriage of dangerous goods packed in limited quantities shall not apply to substances classified in accordance with sub-paragraph (b);
 - (d) When the substance meets a special provision that exempts this substance from all dangerous goods provisions of the other classes it shall be classified in accordance with the applicable UN number of Class 7 and all requirements specified in 1.7.1.5 shall apply.
- 291 Flammable liquefied gases shall be contained within refrigerating machine components. These components shall be designed and tested to at least three times the working pressure of the machinery. The refrigerating machines shall be designed and constructed to contain the liquefied gas and preclude the risk of bursting or cracking of the pressure retaining components during normal conditions of carriage. Refrigerating machines and refrigerating-machine components are not subject to the requirements of ADR if they contain less than 12 kg of gas.
- 292 *(Deleted)*
- 293 The following definitions apply to matches:
- (a) Fusee matches are matches the heads of which are prepared with a friction-sensitive igniter composition and a pyrotechnic composition which burns with little or no flame, but with intense heat;

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- (b) Safety matches are matches which are combined with or attached to the box, book or card that can be ignited by friction only on a prepared surface;
 - (c) Strike anywhere matches are matches that can be ignited by friction on a solid surface;
 - (d) Wax Vesta matches are matches that can be ignited by friction either on a prepared surface or on a solid surface.
- 295 Batteries need not be individually marked and labelled if the pallet bears the appropriate mark and label.
- 296 These entries apply to life-saving appliances such as life rafts, personal flotation devices and self-inflating slides. UN No. 2990 applies to self-inflating appliances and UN No. 3072 applies to life-saving appliances that are not self-inflating. Life-saving appliances may contain:
- (a) Signal devices (Class 1) which may include smoke and illumination signal flares packed in packagings that prevent them from being inadvertently activated;
 - (b) For UN No. 2990 only, cartridges, power device of Division 1.4, compatibility group S, may be contained for purposes of the self-inflating mechanism and provided that the quantity of explosives per appliance does not exceed 3.2 g;
 - (c) Class 2 compressed or liquefied gases, group A or O, according to 2.2.2.1.3;
 - (d) Electric storage batteries (Class 8) and lithium batteries (Class 9);
 - (e) First aid kits or repair kits containing small quantities of dangerous goods (e.g.: substances of Class 3, 4.1, 5.2, 8 or 9); or
 - (f) "Strike anywhere" matches packed in packagings that prevent them from being inadvertently activated.
- Life-saving appliances packed in strong rigid outer packagings with a total maximum gross mass of 40 kg, containing no dangerous goods other than compressed or liquefied gases of Class 2, group A or group O, in receptacles with a capacity not exceeding 120 ml, installed solely for the purpose of the activation of the appliance, are not subject to the requirements of ADR.
- 298 *(Deleted)*
- 300 Fish meal, fish scrap and krill meal shall not be loaded if the temperature at the time of loading exceeds 35 °C or 5 °C above the ambient temperature whichever is higher.
- 302 Fumigated cargo transport units containing no other dangerous goods are only subject to the provisions of 5.5.2.
- 303 Receptacles shall be assigned to the classification code of the gas or mixture of gases contained therein determined in accordance with the provisions of section 2.2.2.
- 304 This entry may only be used for the transport of non-activated batteries which contain dry potassium hydroxide and which are intended to be activated prior to use by addition of an appropriate amount of water to the individual cells.
- 305 These substances are not subject to the requirements of ADR when in concentrations of not more than 50 mg/kg.
- 306 This entry may only be used for substances that do not exhibit explosive properties of Class 1 when tested in accordance to Test Series 1 and 2 of Class 1 (see *Manual of Tests and Criteria*, Part I).

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- 307 This entry may only be used for uniform mixtures containing ammonium nitrate as the main ingredient within the following composition limits:
- (a) Not less than 90% ammonium nitrate with not more than 0.2% total combustible/organic material calculated as carbon and with added matter, if any, which is inorganic and inert towards ammonium nitrate; or
 - (b) Less than 90% but more than 70% ammonium nitrate with other inorganic materials or more than 80% but less than 90% ammonium nitrate mixed with calcium carbonate and/or dolomite and/or mineral calcium sulphate and not more than 0.4% total combustible/organic material calculated as carbon; or
 - (c) Nitrogen type ammonium nitrate based fertilizers containing mixtures of ammonium nitrate and ammonium sulphate with more than 45% but less than 70% ammonium nitrate and not more than 0.4% total combustible/organic material calculated as carbon such that the sum of the percentage compositions of ammonium nitrate and ammonium sulphate exceeds 70%.
- 309 This entry applies to non sensitized emulsions, suspensions and gels consisting primarily of a mixture of ammonium nitrate and fuel, intended to produce a Type E blasting explosive only after further processing prior to use.
- The mixture for emulsions typically has the following composition: 60-85% ammonium nitrate, 5-30% water, 2-8% fuel, 0.5-4% emulsifier agent, 0-10% soluble flame suppressants, and trace additives. Other inorganic nitrate salts may replace part of the ammonium nitrate.
- The mixture for suspensions and gels typically has the following composition: 60-85% ammonium nitrate, 0-5% sodium or potassium perchlorate, 0-17% hexamine nitrate or monomethylamine nitrate, 5-30% water, 2-15% fuel, 0.5-4% thickening agent, 0-10% soluble flame suppressants, and trace additives. Other inorganic nitrate salts may replace part of the ammonium nitrate.
- Substances shall satisfactorily pass Test Series 8 of the Manual of Tests and Criteria, Part I, Section 18 and be approved by the competent authority.
- 310 The testing requirements in sub-section 38.3 of the *Manual of Tests and Criteria* do not apply to production runs consisting of not more than 100 cells and batteries, or to pre-production prototypes of cells and batteries when these prototypes are carried for testing, if:
- (a) the cells and batteries are carried in an outer packaging that is a metal, plastics or plywood drum or a metal, plastics or wooden box and that meets the criteria for packing group I; and
 - (b) each cell and battery is individually packed in an inner packaging inside an outer packaging and is surrounded by cushioning material that is non-combustible, and non-conductive.
- 311 Substances shall not be carried under this entry unless approved by the competent authority on the basis of the results of appropriate tests according to Part I of the *Manual of Tests and Criteria*. Packaging shall ensure that the percentage of diluent does not fall below that stated in the competent authority approval, at any time during carriage.
- 312 *(Reserved)*
- 313 *(Deleted)*

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- 314 (a) These substances are liable to exothermic decomposition at elevated temperatures. Decomposition can be initiated by heat or by impurities (e.g. powdered metals (iron, manganese, cobalt, magnesium) and their compounds);
- (b) During the course of carriage, these substances shall be shaded from direct sunlight and all sources of heat and be placed in adequately ventilated areas.
- 315 This entry shall not be used for Class 6.1 substances which meet the inhalation toxicity criteria for packing group I described in 2.2.61.1.8.
- 316 This entry applies only to calcium hypochlorite, dry, when carried in non friable tablet form.
- 317 "Fissile-excepted" applies only to those packages complying with 6.4.11.2.
- 318 For the purposes of documentation, the proper shipping name shall be supplemented with the technical name (see 3.1.2.8). When the infectious substances to be carried are unknown, but suspected of meeting the criteria for inclusion in Category A and assignment to UN No. 2814 or 2900, the words "suspected Category A infectious substance" shall be shown, in parentheses, following the proper shipping name on the transport document.
- 319 Substances packed and packages which are marked in accordance with packing instruction P650 are not subject to any other requirements of ADR.
- 320 *(Deleted)*
- 321 These storage systems shall always be considered as containing hydrogen.
- 322 When carried in non-friable tablet form, these goods are assigned to packing group III.
- 323 *(Reserved)*
- 324 This substance needs to be stabilized when in concentrations of not more than 99%.
- 325 In the case of non-fissile or fissile excepted uranium hexafluoride, the material shall be classified under UN No. 2978.
- 326 In the case of fissile uranium hexafluoride, the material shall be classified under UN No. 2977.
- 327 Waste aerosols consigned in accordance with 5.4.1.1.3 may be carried under this entry for the purposes of reprocessing or disposal. They need not be protected against inadvertent discharge provided that measures to prevent dangerous build up of pressure and dangerous atmospheres are addressed. Waste aerosols, other than those leaking or severely deformed, shall be packed in accordance with packing instruction P207 and special provision PP87, or packing instruction LP02 and special packing provision L2. Leaking or severely deformed aerosols shall be carried in salvage packagings provided appropriate measures are taken to ensure there is no dangerous build up of pressure.

NOTE: For maritime carriage, waste aerosols shall not be carried in closed containers.

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- 328 This entry applies to fuel cell cartridges including when contained in equipment or packed with equipment. Fuel cell cartridges installed in or integral to a fuel cell system are regarded as contained in equipment. Fuel cell cartridge means an article that stores fuel for discharge into the fuel cell through (a) valve(s) that control(s) the discharge of fuel into the fuel cell. Fuel cell cartridges, including when contained in equipment, shall be designed and constructed to prevent fuel leakage under normal conditions of carriage.

Fuel cell cartridge design types using liquids as fuels shall pass an internal pressure test at a pressure of 100 kPa (gauge) without leakage.

Except for fuel cell cartridges containing hydrogen in metal hydride which shall be in compliance with special provision 339, each fuel cell cartridge design type shall be shown to pass a 1.2 meter drop test onto an unyielding surface in the orientation most likely to result in failure of the containment system with no loss of contents.

When lithium metal or lithium ion batteries are contained in the fuel cell system, the consignment shall be consigned under this entry and under the appropriate entries for UN 3091 LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT.

329 *(Reserved)*

330 *(Deleted)*

331 *(Reserved)*

332 Magnesium nitrate hexahydrate is not subject to the requirements of ADR.

333 Ethanol and gasoline, motor spirit or petrol mixtures for use in spark-ignition engines (e.g. in automobiles, stationary engines and other engines) shall be assigned to this entry regardless of variations in volatility.

334 A fuel cell cartridge may contain an activator provided it is fitted with two independent means of preventing unintended mixing with the fuel during carriage.

335 Mixtures of solids which are not subject to the requirements of ADR and environmentally hazardous liquids or solids shall be classified as UN 3077 and may be carried under this entry provided there is no free liquid visible at the time the substance is loaded or at the time the packaging or vehicle or container is closed. Each vehicle or container shall be leakproof when used for carriage in bulk. If free liquid is visible at the time the mixture is loaded or at the time the packaging or vehicle or container is closed, the mixture shall be classified as UN 3082. Sealed packets and articles containing less than 10 ml of an environmentally hazardous liquid, absorbed into a solid material but with no free liquid in the packet or article, or containing less than 10 g of an environmentally hazardous solid, are not subject to the requirements of ADR.

336 A single package of non-combustible solid LSA-II or LSA-III material, if carried by air, shall not contain an activity greater than 3 000 A₂.

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- 337 Type B(U) and Type B(M) packages, if carried by air, shall not contain activities greater than the following:
- (a) For low dispersible radioactive material: as authorized for the package design as specified in the certificate of approval;
 - (b) For special form radioactive material: 3 000 A₁ or 100 000 A₂, whichever is the lower; or
 - (c) For all other radioactive material: 3 000 A₂.
- 338 Each fuel cell cartridge carried under this entry and designed to contain a liquefied flammable gas shall:
- (a) Be capable of withstanding, without leakage or bursting, a pressure of at least two times the equilibrium pressure of the contents at 55 °C;
 - (b) Not contain more than 200 ml liquefied flammable gas, the vapour pressure of which shall not exceed 1 000 kPa at 55 °C; and
 - (c) Pass the hot water bath test prescribed in 6.2.6.3.1.
- 339 Fuel cell cartridges containing hydrogen in a metal hydride carried under this entry shall have a water capacity less than or equal to 120 ml.

The pressure in the fuel cell cartridge shall not exceed 5 MPa at 55 °C. The design type shall withstand, without leaking or bursting, a pressure of twice the design pressure of the cartridge at 55 °C or 200 kPa more than the design pressure of the cartridge at 55 °C, whichever is greater. The pressure at which this test is conducted is referred to in the drop test and the hydrogen cycling test as the "minimum shell burst pressure".

Fuel cell cartridges shall be filled in accordance with procedures provided by the manufacturer. The manufacturer shall provide the following information with each fuel cell cartridge:

- (a) Inspection procedures to be carried out before initial filling and before refilling of the fuel cell cartridge;
- (b) Safety precautions and potential hazards to be aware of;
- (c) Method for determining when the rated capacity has been achieved;
- (d) Minimum and maximum pressure range;
- (e) Minimum and maximum temperature range; and
- (f) Any other requirements to be met for initial filling and refilling including the type of equipment to be used for initial filling and refilling.

The fuel cell cartridges shall be designed and constructed to prevent fuel leakage under normal conditions of carriage. Each cartridge design type, including cartridges integral to a fuel cell, shall be subjected to and shall pass the following tests:

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Drop test

A 1.8 metre drop test onto an unyielding surface in four different orientations:

- (a) Vertically, on the end containing the shut-off valve assembly;
- (b) Vertically, on the end opposite to the shut-off valve assembly;
- (c) Horizontally, onto a steel apex with a diameter of 38 mm, with the steel apex in the upward position; and
- (d) At a 45° angle on the end containing the shut-off valve assembly.

There shall be no leakage, determined by using a soap bubble solution or other equivalent means on all possible leak locations, when the cartridge is charged to its rated charging pressure. The fuel cell cartridge shall then be hydrostatically pressurized to destruction. The recorded burst pressure shall exceed 85% of the minimum shell burst pressure.

Fire test

A fuel cell cartridge filled to rated capacity with hydrogen shall be subjected to a fire engulfment test. The cartridge design, which may include a vent feature integral to it, is deemed to have passed the fire test if:

- (a) The internal pressure vents to zero gauge pressure without rupture of the cartridge; or
- (b) The cartridge withstands the fire for a minimum of 20 minutes without rupture.

Hydrogen cycling test

This test is intended to ensure that a fuel cell cartridge design stress limits are not exceeded during use.

The fuel cell cartridge shall be cycled from not more than 5% rated hydrogen capacity to not less than 95% rated hydrogen capacity and back to not more than 5% rated hydrogen capacity. The rated charging pressure shall be used for charging and temperatures shall be held within the operating temperature range. The cycling shall be continued for at least 100 cycles.

Following the cycling test, the fuel cell cartridge shall be charged and the water volume displaced by the cartridge shall be measured. The cartridge design is deemed to have passed the hydrogen cycling test if the water volume displaced by the cycled cartridge does not exceed the water volume displaced by an uncycled cartridge charged to 95% rated capacity and pressurized to 75% of its minimum shell burst pressure.

Production leak test

Each fuel cell cartridge shall be tested for leaks at $15\text{ °C} \pm 5\text{ °C}$, while pressurized to its rated charging pressure. There shall be no leakage, determined by using a soap bubble solution or other equivalent means on all possible leak locations.

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Each fuel cell cartridge shall be permanently marked with the following information:

- (a) The rated charging pressure in MPa;
 - (b) The manufacturer's serial number of the fuel cell cartridges or unique identification number; and
 - (c) The date of expiry based on the maximum service life (year in four digits; month in two digits).
- 340 Chemical kits, first aid kits and polyester resin kits containing dangerous substances in inner packagings which do not exceed the quantity limits for excepted quantities applicable to individual substances as specified in column (7b) of Table A of Chapter 3.2, may be carried in accordance with Chapter 3.5. Class 5.2 substances, although not individually authorized as excepted quantities in column (7b) of Table A of Chapter 3.2, are authorized in such kits and are assigned Code E2 (see 3.5.1.2).
- 341 *(Reserved)*
- 342 Glass inner receptacles (such as ampoules or capsules) intended only for use in sterilization devices, when containing less than 30 ml of ethylene oxide per inner packaging with not more than 300 ml per outer packaging, may be carried in accordance with the provisions in Chapter 3.5, irrespective of the indication of "E0" in column (7b) of Table A of Chapter 3.2 provided that:
- (a) After filling, each glass inner receptacle has been determined to be leak-tight by placing the glass inner receptacle in a hot water bath at a temperature, and for a period of time, sufficient to ensure that an internal pressure equal to the vapour pressure of ethylene oxide at 55 °C is achieved. Any glass inner receptacle showing evidence of leakage, distortion or other defect under this test shall not be carried under the terms of this special provision;
 - (b) In addition to the packaging required by 3.5.2, each glass inner receptacle is placed in a sealed plastics bag compatible with ethylene oxide and capable of containing the contents in the event of breakage or leakage of the glass inner receptacle; and
 - (c) Each glass inner receptacle is protected by a means of preventing puncture of the plastics bag (e.g. sleeves or cushioning) in the event of damage to the packaging (e.g. by crushing).
- 343 This entry applies to crude oil containing hydrogen sulphide in sufficient concentration that vapours evolved from the crude oil can present an inhalation hazard. The packing group assigned shall be determined by the flammability hazard and inhalation hazard, in accordance with the degree of danger presented.
- 344 The provisions of 6.2.6 shall be met.
- 345 This gas contained in open cryogenic receptacles with a maximum capacity of 1 litre constructed with glass double walls having the space between the inner and outer wall evacuated (vacuum insulated) is not subject to ADR provided each receptacle is carried in an outer packaging with suitable cushioning or absorbent materials to protect it from impact damage.
- 346 Open cryogenic receptacles conforming to the requirements of packing instruction P203 of 4.1.4.1 and containing no dangerous goods except for UN No. 1977 nitrogen, refrigerated liquid, which is fully absorbed in a porous material are not subject to any other requirements of ADR.

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- 347 This entry shall only be used if the results of Test series 6 (d) of Part I of the Manual of Tests and Criteria have demonstrated that any hazardous effects arising from functioning are confined within the package.
- 348 Batteries manufactured after 31 December 2011 shall be marked with the Watt-hour rating on the outside case.
- 349 Mixtures of a hypochlorite with an ammonium salt are not to be accepted for carriage. UN No. 1791 hypochlorite solution is a substance of Class 8.
- 350 Ammonium bromate and its aqueous solutions and mixtures of a bromate with an ammonium salt are not to be accepted for carriage.
- 351 Ammonium chlorate and its aqueous solutions and mixtures of a chlorate with an ammonium salt are not to be accepted for carriage.
- 352 Ammonium chlorite and its aqueous solutions and mixtures of a chlorite with an ammonium salt are not to be accepted for carriage.
- 353 Ammonium permanganate and its aqueous solutions and mixtures of a permanganate with an ammonium salt are not to be accepted for carriage.
- 354 This substance is toxic by inhalation.
- 355 Oxygen cylinders for emergency use carried under this entry may include installed actuating cartridges (cartridges, power device of Division 1.4, Compatibility Group C or S), without changing the classification in Class 2 provided the total quantity of deflagrating (propellant) explosives does not exceed 3.2 g per oxygen cylinder. The cylinders with the installed actuating cartridges as prepared for carriage shall have an effective means of preventing inadvertent activation.
- 356 Metal hydride storage systems installed in vehicles, wagons, vessels or aircraft or in completed components or intended to be installed in vehicles, wagons, vessels or aircraft shall be approved by the competent authority of the country of manufacture¹ before acceptance for carriage. The transport document shall include an indication that the package was approved by the competent authority of the country of manufacture¹ or a copy of the competent authority of the country of manufacture¹ approval shall accompany each consignment.
- 357 Petroleum crude oil containing hydrogen sulphide in sufficient concentration that vapours evolved from the crude oil can present an inhalation hazard shall be consigned under the entry UN 3494 PETROLEUM SOUR CRUDE OIL, FLAMMABLE, TOXIC.
- 358 Nitroglycerin solution in alcohol with more than 1% but not more than 5% nitroglycerin may be classified in Class 3 and assigned to UN No. 3064 provided all the requirements of packing instruction P300 of 4.1.4.1 are complied with.
- 359 Nitroglycerin solution in alcohol with more than 1% but not more than 5% nitroglycerin shall be classified in Class 1 and assigned to UN No. 0144 if not all the requirements of packing instruction P300 of 4.1.4.1 are complied with.
- 360 Vehicles only powered by lithium metal batteries or lithium ion batteries shall be classified under the entry UN 3171 battery-powered vehicle.

¹ If the country of manufacture is not a Contracting Party to ADR, the approval shall be recognized by the competent authority of a Contracting Party to ADR.

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361 This entry applies to electric double layer capacitors with an energy storage capacity greater than 0.3 Wh. Capacitors with an energy storage capacity of 0.3 Wh or less are not subject to ADR. Energy storage capacity means the energy held by a capacitor, as calculated using the nominal voltage and capacitance. All capacitors to which this entry applies, including capacitors containing an electrolyte that does not meet the classification criteria of any class of dangerous goods, shall meet the following conditions:

- (a) Capacitors not installed in equipment shall be carried in an uncharged state. Capacitors installed in equipment shall be carried either in an uncharged state or protected against short circuit;
- (b) Each capacitor shall be protected against a potential short circuit hazard in carriage as follows:
 - (i) When a capacitor's energy storage capacity is less than or equal to 10Wh or when the energy storage capacity of each capacitor in a module is less than or equal to 10 Wh , the capacitor or module shall be protected against short circuit or be fitted with a metal strap connecting the terminals; and
 - (ii) When the energy storage capacity of a capacitor or a capacitor in a module is more than 10 Wh, the capacitor or module shall be fitted with a metal strap connecting the terminals;
- (c) Capacitors containing dangerous goods shall be designed to withstand a 95 kPa pressure differential;
- (d) Capacitors shall be designed and constructed to safely relieve pressure that may build up in use, through a vent or a weak point in the capacitor casing. Any liquid which is released upon venting shall be contained by the packaging or by the equipment in which a capacitor is installed; and
- (e) Capacitors shall be marked with the energy storage capacity in Wh.

Capacitors containing an electrolyte not meeting the classification criteria of any class of dangerous goods, including when installed in equipment, are not subject to other provisions of ADR.

Capacitors containing an electrolyte meeting the classification criteria of any class of dangerous goods, with an energy storage capacity of 10 Wh or less are not subject to other provisions of ADR when they are capable of withstanding a 1.2 metre drop test unpackaged on an unyielding surface without loss of contents.

Capacitors containing an electrolyte meeting the classification criteria of any class of dangerous goods that are not installed in equipment and with an energy storage capacity of more than 10 Wh are subject to ADR.

Capacitors installed in equipment and containing an electrolyte meeting the classification criteria of any class of dangerous goods, are not subject to other provisions of ADR provided the equipment is packaged in a strong outer packaging constructed of suitable material, and of adequate strength and design in relation to the packaging's intended use and in such a manner as to prevent accidental functioning of capacitors during carriage. Large robust equipment containing capacitors may be offered for carriage unpackaged or on pallets when capacitors are afforded equivalent protection by the equipment in which they are contained.

NOTE: *Capacitors which by design maintain a terminal voltage (e.g. asymmetrical capacitors) do not belong to this entry.*

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362 *(Reserved)*

363 This entry also applies to liquid fuels, other than those exempted according to paragraphs (a) or (b) of 1.1.3.3, above the quantity specified in column (7a) of Table A of Chapter 3.2, in means of containment integral to equipment or machinery (e.g. generators, compressors, heating units, etc) as part of their original design type. They are not subject to other provisions of ADR if they meet the following:

- (a) The means of containment are in compliance with the construction requirements of the competent authority of the country of manufacture²;
- (b) Any valves or openings (e.g. venting devices) in the means of containment containing dangerous goods are closed during carriage;
- (c) The machinery or equipment is orientated to prevent inadvertent leakage of dangerous goods and secured by means capable of restraining the machinery or equipment to prevent any movement during carriage which would change the orientation or cause it to be damaged;
- (d) Where the means of containment has a capacity of more than 60 litres but not more than 450 litres, the machinery or equipment is labelled on one external side in accordance with 5.2.2 and where the capacity is greater than 450 litres but not more than 1 500 litres the machinery or equipment is labelled on all four external sides in accordance with 5.2.2; and
- (e) Where the means of containment has a capacity greater than 1500 litres, the machinery or equipment is placarded on all four external sides in accordance with 5.3.1.1.1, the requirement of 5.4.1 applies and the transport document includes the following additional statement: "Carriage in accordance with Special Provision 363".

364 This article may only be carried under the provisions of Chapter 3.4 if, as presented for carriage, the package is capable of passing the test in accordance with Test Series 6(d) of Part I of the Manual of Tests and Criteria as determined by the competent authority.

365 For manufactured instruments and articles containing mercury, see UN No. 3506.

366 Manufactured instruments and articles containing not more than 1 kg of mercury are not subject to ADR.

367-499*(Reserved)*

500 *(Deleted)*

501 For naphthalene, molten, see UN No. 2304.

502 UN No. 2006 plastics, nitrocellulose-based, self-heating, n.o.s., and 2002 celluloid scrap are substances of Class 4.2.

503 For phosphorus, white, molten, see UN No. 2447.

² For example, compliance with the relevant provisions of Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (Official Journal of the European Union No. L 157 of 9 June 2006, pp. 0024-0086).

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- 504 UN No. 1847 potassium sulphide, hydrated with not less than 30% water of crystallization, UN No. 1849 sodium sulphide, hydrated with not less than 30% water of crystallization and UN No. 2949 sodium hydrosulphide hydrated with not less than 25% water of crystallization are substances of Class 8.
- 505 UN No. 2004 magnesium diamide is a substance of Class 4.2.
- 506 Alkaline earth metals and alkaline earth metal alloys in pyrophoric form are substances of Class 4.2.
- UN No. 1869 magnesium or magnesium alloys containing more than 50% magnesium as pellets, turnings or ribbons, are substances of Class 4.1.
- 507 UN No. 3048 aluminium phosphide pesticides, with additives inhibiting the emission of toxic flammable gases are substances of Class 6.1.
- 508 UN No. 1871 titanium hydride and UN No. 1437 zirconium hydride are substances of Class 4.1. UN No. 2870 aluminium borohydride is a substance of Class 4.2.
- 509 UN No. 1908 chlorite solution is a substance of Class 8.
- 510 UN No. 1755 chromic acid solution is a substance of Class 8.
- 511 UN No. 1625 mercuric nitrate, UN No. 1627 mercurous nitrate and UN No. 2727 thallium nitrate are substances of Class 6.1. Thorium nitrate, solid, uranyl nitrate hexahydrate solution and uranyl nitrate, solid are substances of Class 7.
- 512 UN No. 1730 antimony pentachloride, liquid, UN No. 1731 antimony pentachloride solution, UN No. 1732 antimony pentafluoride and UN No. 1733 antimony trichloride are substances of Class 8.
- 513 UN No. 0224 barium azide, dry or wetted with less than 50% water, by mass, is a substance of Class 1. UN No. 1571 barium azide, wetted with not less than 50% water, by mass, is a substance of Class 4.1. UN No. 1854 barium alloys, pyrophoric, are substances of Class 4.2. UN No. 1445 barium chlorate, solid, UN No. 1446 barium nitrate, UN No. 1447 barium perchlorate, solid, UN No. 1448 barium permanganate, UN No. 1449 barium peroxide, UN No. 2719 barium bromate, UN No. 2741 barium hypochlorite with more than 22% available chlorine, UN No. 3405 barium chlorate, solution and UN No. 3406 barium perchlorate, solution, are substances of Class 5.1. UN No. 1565 barium cyanide and UN No. 1884 barium oxide are substances of Class 6.1.
- 514 UN No. 2464 beryllium nitrate is a substance of Class 5.1.
- 515 UN No. 1581 chloropicrin and methyl bromide mixture and UN No. 1582 chloropicrin and methyl chloride mixture are substances of Class 2.
- 516 UN No. 1912 methyl chloride and methylene chloride mixture is a substance of Class 2.
- 517 UN No. 1690 sodium fluoride, solid, UN No. 1812 potassium fluoride, solid, UN No. 2505 ammonium fluoride, UN No. 2674 sodium fluorosilicate, UN No. 2856 fluorosilicates, n.o.s., UN No. 3415 sodium fluoride, solution and UN No. 3422 potassium fluoride, solution, are substances of Class 6.1.
- 518 UN No. 1463 chromium trioxide, anhydrous (chromic acid, solid) is a substance of Class 5.1.

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- 519 UN No. 1048 hydrogen bromide, anhydrous, is a substance of Class 2.
- 520 UN No. 1050 hydrogen chloride, anhydrous, is a substance of Class 2.
- 521 Solid chlorites and hypochlorites are substances of Class 5.1.
- 522 UN No. 1873 perchloric acid aqueous solution with more than 50% but not more than 72% pure acid, by mass are substances of Class 5.1. Perchloric acid solutions containing more than 72% pure acid, by mass, or mixtures of perchloric acid with any liquid other than water, are not to be accepted for carriage.
- 523 UN No. 1382 anhydrous potassium sulphide and UN No. 1385 anhydrous sodium sulphide and their hydrates with less than 30% water of crystallization, and UN No. 2318 sodium hydrosulphide with less than 25% water of crystallization are substances of Class 4.2.
- 524 UN No. 2858 finished zirconium products of a thickness of 18 µm or more are substances of Class 4.1.
- 525 Solutions of inorganic cyanides with a total cyanide ion content of more than 30% shall be classified in packing group I, solutions with a total cyanide ion content of more than 3% and not more than 30% in packing group II and solutions with a cyanide ion content of more than 0.3% and not more than 3% in packing group III.
- 526 UN No. 2000 celluloid is assigned to Class 4.1.
- 528 UN No. 1353 fibres or fabrics impregnated with weakly nitrated cellulose, non-self heating are articles of Class 4.1.
- 529 UN No. 0135 mercury fulminate, wetted with not less than 20% water, or mixture of alcohol and water, by mass, is a substance of Class 1. Mercurous chloride (calomel) is a substance of Class 9 (UN No. 3077).
- 530 UN No. 3293 hydrazine, aqueous solution with not more than 37% hydrazine, by mass, is a substance of Class 6.1.
- 531 Mixtures having a flash-point below 23 °C and containing more than 55% nitrocellulose, whatever its nitrogen content or containing not more than 55% nitrocellulose with a nitrogen content above 12.6% (by dry mass), are substances of Class 1 (see UN Nos. 0340 or 0342) or of Class 4.1.
- 532 UN No. 2672 ammonia solution containing not less than 10% but not more than 35% ammonia is a substance of Class 8.
- 533 UN No. 1198 formaldehyde solutions, flammable are substances of Class 3. Formaldehyde solutions, non-flammable, with less than 25% formaldehyde are not subject to the requirements of ADR.
- 534 While in some climatic conditions, petrol (gasoline) may have a vapour pressure at 50 °C of more than 110 kPa (1.10 bar) but not more than 150 kPa (1.50 bar) it is to continue to be considered as a substance having a vapour pressure at 50 °C of not more than 110 kPa (1.10 bar).
- 535 UN No. 1469 lead nitrate, UN No. 1470 lead perchlorate, solid and UN No. 3408 lead perchlorate, solution, are substances of Class 5.1.
- 536 For naphthalene, solid, see UN No. 1334.

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- 537 UN No. 2869 titanium trichloride mixture, not pyrophoric, is a substance of Class 8.
- 538 For sulphur (in the solid state), see UN No. 1350.
- 539 Solutions of isocyanates having a flash-point of not less than 23 °C are substances of Class 6.1.
- 540 UN No. 1326 hafnium powder, wetted, UN No. 1352 titanium powder, wetted or UN No. 1358 zirconium powder, wetted, with not less than 25% water, are substances of Class 4.1.
- 541 Nitrocellulose mixtures with a water content, alcohol content or plasticizer content lower than the stated limits are substances of Class 1.
- 542 Talc containing tremolite and/or actinolite is covered by this entry.
- 543 UN No. 1005 ammonia, anhydrous, UN No. 3318 ammonia solution with more than 50% ammonia and UN No. 2073 ammonia solution, with more than 35% but not more than 50% ammonia, are substances of Class 2. Ammonia solutions with not more than 10% ammonia are not subject to the requirements of ADR.
- 544 UN No. 1032 dimethylamine, anhydrous, UN No. 1036 ethylamine, UN No. 1061 methylamine, anhydrous and UN No. 1083 trimethylamine, anhydrous, are substances of Class 2.
- 545 UN No. 0401 dipicryl sulphide, wetted with less than 10% water by mass is a substance of Class 1.
- 546 UN No. 2009 zirconium, dry, finished sheets, strip or coiled wire, in thicknesses of less than 18 µm, is a substance of Class 4.2. Zirconium, dry, finished sheets, strip or coiled wire, in thicknesses of 254 µm or more, is not subject to the requirements of ADR.
- 547 UN No. 2210 maneb or UN No. 2210 maneb preparations in self-heating form are substances of Class 4.2.
- 548 Chlorosilanes which, in contact with water, emit flammable gases, are substances of Class 4.3.
- 549 Chlorosilanes having a flash-point of less than 23 °C and which, in contact with water, do not emit flammable gases are substances of Class 3. Chlorosilanes having a flash-point equal to or greater than 23 °C and which, in contact with water, do not emit flammable gases are substances of Class 8.
- 550 UN No. 1333 cerium in slabs, rods or ingots is a substance of Class 4.1.
- 551 Solutions of these isocyanates having a flash-point below 23 °C are substances of Class 3.
- 552 Metals and metal alloys in powdered or other flammable form, liable to spontaneous combustion, are substances of Class 4.2. Metals and metal alloys in powdered or other flammable form which, in contact with water, emit flammable gases are substances of Class 4.3.

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- 553 This mixture of hydrogen peroxide and peroxyacetic acid shall, in laboratory testing (see *Manual of Tests and Criteria*, Part II, section 20), neither detonate in the cavitated state nor deflagrate at all and shall show no effect when heated under confinement nor any explosive power. The formulation shall be thermally stable (self-accelerating decomposition temperature 60 °C or higher for a 50 kg package), and a liquid compatible with peroxyacetic acid shall be used for desensitization. Formulations not meeting these criteria are to be regarded as substances of Class 5.2 (see *Manual of Tests and Criteria*, Part II, paragraph 20.4.3(g)).
- 554 Metal hydrides which, in contact with water, emit flammable gases are substances of Class 4.3. UN No. 2870 aluminium borohydride or UN No. 2870 aluminium borohydride in devices is a substance of Class 4.2.
- 555 Dust and powder of metals in non-spontaneously combustible form, non-toxic which nevertheless, in contact with water, emit flammable gases, are substances of Class 4.3.
- 556 Organometallic compounds and their solutions which ignite spontaneously are substances of Class 4.2. Flammable solutions with organometallic compounds in concentrations which, in contact with water, neither emit flammable gases in dangerous quantities nor ignite spontaneously are substances of Class 3.
- 557 Dust and powder of metals in pyrophoric form are substances of Class 4.2.
- 558 Metals and metal alloys in pyrophoric form are substances of Class 4.2. Metals and metal alloys which, in contact with water, do not emit flammable gases and are not pyrophoric or self-heating, but which are easily ignited, are substances of Class 4.1.
- 559 *(Deleted)*
- 560 An elevated temperature liquid, n.o.s. at or above 100 °C (including molten metals and molten salts) and, for a substance having a flashpoint, at a temperature below its flashpoint, is a substance of Class 9 (UN No. 3257).
- 561 Chloroformates having predominantly corrosive properties are substances of Class 8.
- 562 Spontaneously combustible organometallic compounds are substances of Class 4.2. Water-reactive organometallic compounds, flammable, are substances of Class 4.3.
- 563 UN No. 1905 selenic acid is a substance of Class 8.
- 564 UN No. 2443 vanadium oxytrichloride, UN No. 2444 vanadium tetrachloride and UN No. 2475 vanadium trichloride are substances of Class 8.
- 565 Unspecified wastes resulting from medical/veterinary treatment of humans/animals or from biological research, and which are unlikely to contain substances of Class 6.2 shall be assigned to this entry. Decontaminated clinical wastes or wastes resulting from biological research which previously contained infectious substances are not subject to the requirements of Class 6.2.
- 566 UN No. 2030 hydrazine aqueous solution, with more than 37% hydrazine, by mass, is a substance of Class 8.
- 567 *(Deleted)*
- 568 Barium azide with a water content lower than the stated limit is a substance of Class 1, UN No. 0224.

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569-579 (*Reserved*)

580 Tank-vehicles, specialized vehicles and specially equipped vehicles for carriage in bulk shall bear on both sides and at the rear the mark referred to in 5.3.3. Tank-containers, portable tanks, special containers and specially equipped containers for carriage in bulk shall bear this mark on both sides and at each end.

581 This entry covers mixtures of methylacetylene and propadiene with hydrocarbons, which as

Mixture P1, contain not more than 63% methylacetylene and propadiene by volume and not more than 24% propane and propylene by volume, the percentage of C₄-saturated hydrocarbons being not less than 14% by volume; and as

Mixture P2, contain not more than 48% methylacetylene and propadiene by volume and not more than 50% propane and propylene by volume, the percentage of C₄-saturated hydrocarbons being not less than 5% by volume,

as well as mixtures of propadiene with 1 to 4% methylacetylene.

When relevant, in order to meet the requirements for the transport document (5.4.1.1), the term "Mixture P1" or "Mixture P2" may be used as technical name.

582 This entry covers, inter alia, mixtures of gases indicated by the letter R ..., which as

Mixture F1, have a vapour pressure at 70 °C not exceeding 1.3 MPa (13 bar) and a density at 50 °C not lower than that of dichlorofluoromethane (1.30 kg/l);

Mixture F2, have a vapour pressure at 70 °C not exceeding 1.9 MPa (19 bar) and a density at 50 °C not lower than that of dichlorodifluoromethane (1.21 kg/l);

Mixture F3, have a vapour pressure at 70 °C not exceeding 3 MPa (30 bar) and a density at 50 °C not lower than that of chlorodifluoromethane (1.09 kg/l).

NOTE: *Trichlorofluoromethane (refrigerant R 11), 1,1,2-trichloro-1,2,2-trifluoroethane (refrigerant R 113), 1,1,1-trichloro-2,2,2-trifluoroethane (refrigerant R 113a), 1-chloro-1,2,2-trifluoroethane (refrigerant R 133) and 1-chloro-1,1,2-trifluoroethane (refrigerant R 133 b) are not substances of Class 2. They may, however, enter into the composition of mixtures F 1 to F 3.*

When relevant, in order to meet the requirements for the transport document (5.4.1.1), the term "Mixture F1", "Mixture F2" or "Mixture F3" may be used as technical name.

583 This entry covers, inter alia, mixtures which as

Mixture A, have a vapour pressure at 70 °C not exceeding 1.1 MPa (11 bar) and a density at 50 °C not lower than 0.525 kg/l;

Mixture A01, have a vapour pressure at 70 °C not exceeding 1.6 MPa (16 bar) and a relative density at 50 °C not lower than 0.516 kg/l;

Mixture A02, have a vapour pressure at 70 °C not exceeding 1.6 MPa (16 bar) and a relative density at 50 °C not lower than 0.505 kg/l;

Mixture A0, have a vapour pressure at 70 °C not exceeding 1.6 MPa (16 bar) and a density at 50 °C not lower than 0.495 kg/l;

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Mixture A1, have a vapour pressure at 70 °C not exceeding 2.1 MPa (21 bar) and a density at 50 °C not lower than 0.485 kg/l;

Mixture B1, have a vapour pressure at 70 °C not exceeding 2.6 MPa (26 bar) and a relative density at 50 °C not lower than 0.474 kg/l;

Mixture B2, have a vapour pressure at 70 °C not exceeding 2.6 MPa (26 bar) and a relative density at 50 °C not lower than 0.463 kg/l;

Mixture B, have a vapour pressure at 70 °C not exceeding 2.6 MPa (26 bar) and a density at 50 °C not lower than 0.450 kg/l;

Mixture C, have a vapour pressure at 70 °C not exceeding 3.1 MPa (31 bar) and a relative density at 50 °C not lower than 0.440 kg/l;

When relevant, in order to meet the requirements for the transport document (5.4.1.1), the following terms may be used as technical name:

- "Mixture A" or "Butane";
- "Mixture A01" or "Butane";
- "Mixture A02" or "Butane";
- "Mixture A0" or "Butane";
- "Mixture A1";
- "Mixture B1";
- "Mixture B2";
- "Mixture B";
- "Mixture C" or "Propane".

For carriage in tanks, the trade names "butane" or "propane" may be used only as a complement.

584 This gas is not subject to the requirements of ADR when:

- it contains not more than 0.5% air in the gaseous state;
- it is contained in metal capsules (sodors, sparklets) free from defects which may impair their strength;
- the leakproofness of the closure of the capsule is ensured;
- a capsule contains not more than 25 g of this gas;
- a capsule contains not more than 0.75 g of this gas per cm³ of capacity.

585 Cinnabar is not subject to the requirements of ADR.

586 Hafnium, titanium and zirconium powders shall contain a visible excess of water. Hafnium, titanium and zirconium powders, wetted, mechanically produced, of a particle size of 53 µm and over, or chemically produced, of a particle size of 840 µm and over, are not subject to the requirements of ADR.

587 Barium stearate and barium titanate are not subject to the requirements of ADR.

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- 588 Solid hydrated forms of aluminium bromide and aluminium chloride are not subject to the requirements of ADR.
- 589 *(Deleted)*
- 590 Ferric chloride hexahydrate is not subject to the requirements of ADR.
- 591 Lead sulphate with not more than 3% free acid is not subject to the requirements of ADR.
- 592 Uncleaned empty packagings (including empty IBCs and large packagings), empty tank-vehicles, empty demountable tanks, empty portable tanks, empty tank-containers and empty small containers which have contained this substance are not subject to the requirements of ADR.
- 593 This gas, intended for the cooling of e.g. medical or biological specimens, if contained in double wall receptacles which comply with the provisions of packing instruction P203, paragraph (6) for open cryogenic receptacles of 4.1.4.1 is not subject to the requirements of ADR except as specified in 5.5.3.
- 594 The following articles, manufactured and filled according to the regulations of the manufacturing State and packaged in strong outer packagings, are not subject to the requirements of ADR:
- UN No. 1044 fire extinguishers provided with protection against inadvertent discharge;
 - UN No. 3164 articles, pressurized pneumatic or hydraulic, designed to withstand stresses greater than the internal gas pressure by virtue of transmission of force, intrinsic strength or construction.
- 596 Cadmium pigments, such as cadmium sulphides, cadmium sulphoselenides and cadmium salts of higher fatty acids (e.g. cadmium stearate), are not subject to the requirements of ADR.
- 597 Acetic acid solutions with not more than 10% pure acid by mass, are not subject to the requirements of ADR.
- 598 The following are not subject to the requirements of ADR:
- (a) New storage batteries when:
 - they are secured in such a way that they cannot slip, fall or be damaged;
 - they are provided with carrying devices, unless they are suitably stacked, e.g. on pallets;
 - there are no dangerous traces of alkalis or acids on the outside;
 - they are protected against short circuits;
 - (b) Used storage batteries when:
 - their cases are undamaged;
 - they are secured in such a way that they cannot leak, slip, fall or be damaged, e.g. by stacking on pallets;
 - there are no dangerous traces of alkalis or acids on the outside of the articles;
 - they are protected against short circuits.

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"Used storage batteries" means storage batteries carried for recycling at the end of their normal service life.

599 *(Deleted)*

600 Vanadium pentoxide, fused and solidified, is not subject to the requirements of ADR.

601 Pharmaceutical products (medicines) ready for use, which are substances manufactured and packaged for retail sale or distribution for personal or household consumption are not subject to the requirements of ADR.

602 Phosphorus sulphides which are not free from yellow and white phosphorus are not to be accepted for carriage.

603 Anhydrous hydrogen cyanide not meeting the description for UN No. 1051 or UN No. 1614 is not to be accepted for carriage. Hydrogen cyanide (hydrocyanic acid) containing less than 3% water is stable, if the pH-value is 2.5 ± 0.5 and the liquid is clear and colourless.

604-606 *(Deleted)*

607 Mixtures of potassium nitrate and sodium nitrite with an ammonium salt are not to be accepted for carriage.

608 *(Deleted)*

609 Tetranitromethane not free from combustible impurities is not to be accepted for carriage.

610 The carriage of this substance, when it contains more than 45% hydrogen cyanide is prohibited.

611 Ammonium nitrate containing more than 0.2% combustible substances (including any organic substance calculated as carbon) is not to be accepted for carriage unless it is a constituent of a substance or article of Class 1.

612 *(Reserved)*

613 Chloric acid solution containing more than 10% chloric acid and mixtures of chloric acid with any liquid other than water is not to be accepted for carriage.

614 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) in concentrations considered highly toxic according to the criteria in 2.2.61.1 is not to be accepted for carriage.

615 *(Reserved)*

616 Substances containing more than 40% liquid nitric esters shall satisfy the exudation test specified in 2.3.1.

617 In addition to the type of explosive, the commercial name of the particular explosive shall be marked on the package.

618 In receptacles containing 1,2-butadiene, the oxygen concentration in the gaseous phase shall not exceed 50 ml/m³.

619-622 *(Reserved)*

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- 623 UN No. 1829 sulphur trioxide shall be inhibited. Sulphur trioxide, 99.95% pure or above, may be carried without inhibitor in tanks provided that its temperature is maintained at or above 32.5 °C. For the carriage of this substance without inhibitor in tanks at a minimum temperature of 32.5 °C, the specification "**Transport under minimum temperature of the product of 32.5 °C**" shall appear in the transport document.
- 625 Packages containing these articles shall be clearly marked as follows:
"**UN 1950 AEROSOLS**"
- 626-627 (*Reserved*)
- 632 Considered to be spontaneously flammable (pyrophoric).
- 633 Packages and small containers containing this substance shall bear the following marking: "**Keep away from any source of ignition**". This marking shall be in an official language of the forwarding country, and also, if that language is not English, French or German, in English, French or German, unless any agreements concluded between the countries concerned in the transport operation provide otherwise.
- 634 (*Deleted*)
- 635 Packages containing these articles need not bear a label conforming to model No. 9 unless the article is fully enclosed by packaging, crates or other means that prevent the ready identification of the article.
- 636 (a) Cells contained in equipment shall not be capable of being discharged during carriage to the extent that the open circuit voltage falls below 2 volts or two thirds of the voltage of the undischarged cell, whichever is the lower.
- (b) Up to the intermediate processing facility, used lithium cells and batteries with a gross mass of not more than 500 g each, whether or not contained in equipment, collected and handed over for carriage for disposal, together with or without other non-lithium cells or batteries, are not subject to the other provisions of ADR if they meet the following conditions:
- (i) The provisions of packing instruction P903b are complied with;
- (ii) A quality assurance system is in place to ensure that the total amount of lithium cells or batteries per transport unit does not exceed 333 kg;
- (iii) Packages shall bear the inscription: "USED LITHIUM CELLS".
- 637 Genetically modified microorganisms and genetically modified organisms are those which are not dangerous for humans and animals, but which could alter animals, plants, microbiological substances and ecosystems in such a way as cannot occur naturally. Genetically modified microorganisms and genetically modified organisms are not subject to the requirements of ADR when authorized for use by the competent authorities of the countries of origin, transit and destination³.

Live vertebrate or invertebrate animals shall not be used to carry these substances classified under this UN number unless the substance can be carried in no other way.

³ See in particular Part C of Directive 2001/18/EC of the European Parliament and of the Council on the deliberate release into the environment of genetically modified organisms and repealing Council Directive 90/220/EEC (Official Journal of the European Communities, No. L 106, of 17 April 2001, pp. 8-14), which sets out the authorization procedures for the European Community.

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For the carriage of easily perishable substances under this UN number appropriate information shall be given, e.g.: "**Cool at +2 °/+4 °C**" or "**Carry in frozen state**" or "**Do not freeze**".

638 Substances related to self-reactive substances (see 2.2.41.1.19).

639 See 2.2.2.3, classification code 2F, UN No. 1965, Note 2.

640 The physical and technical characteristics mentioned in column (2) of Table A of Chapter 3.2 determine different tank codes for the carriage of substances of the same packing group in ADR tanks.

In order to identify these physical and technical characteristics of the product carried in the tank, the following shall be added, to the particulars required in the transport document, only in case of carriage in ADR tanks:

"Special provision 640X" where "X" is the applicable capital letter appearing after the reference to special provision 640 in column (6) of Table A of Chapter 3.2.

These particulars may, however, be dispensed with in the case of carriage in the type of tank which, for substances of a specific packing group of a specific UN number, meets at least the most stringent requirements.

642 Except as authorized under 1.1.4.2, this entry of the UN Model Regulations shall not be used for the carriage of fertilizer ammoniating solutions with free ammonia.

643 Stone or aggregate asphalt mixture is not subject to the requirements for Class 9.

644 This substance is admitted for carriage provided that:

- The pH is between 5 and 7 measured in an aqueous solution of 10% of the substance carried;
- The solution does not contain more than 0.2% combustible material or chlorine compounds in quantities such that the chlorine level exceeds 0.02%.

645 The classification code as mentioned in Column (3b) of Table A of Chapter 3.2 shall be used only with the approval of the competent authority of a Contracting Party to ADR prior to carriage. The approval shall be given in writing as a classification approval certificate (see 5.4.1.2.1 (g)) and shall be provided with a unique reference. When assignment to a division is made in accordance with the procedure in 2.2.1.1.7.2, the competent authority may require the default classification to be verified on the basis of test data derived from Test Series 6 of the Manual of Tests and Criteria, Part I, Section 16.

646 Carbon made by steam activation process is not subject to the requirements of ADR.

647 The carriage of vinegar and acetic acid food grade with not more than 25% pure acid by mass is subject only to the following requirements:

- (a) Packagings, including IBCs and large packagings, and tanks shall be manufactured from stainless steel or plastic material which is permanently resistant to corrosion of vinegar/acetic acid food grade;
- (b) Packagings, including IBCs and large packagings, and tanks shall be subjected to a visual inspection by the owner at least once a year. The results of the inspections shall be recorded and the records kept for at least one year.

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Damaged packagings, including IBCs and large packagings, and tanks shall not be filled;

- (c) Packagings, including IBCs and large packagings, and tanks shall be filled in a way that no product is spilled or adheres to the outer surface;
- (d) Seals and closures shall be resistant to vinegar/acetic acid food grade. Packagings, including IBCs and large packagings, and tanks shall be hermetically sealed by the packer or the filler so that under normal conditions of carriage there will be no leakage;
- (e) Combination packagings with inner packaging made of glass or plastic (see packing instruction P001 in 4.1.4.1) which fulfil the general packing requirements of 4.1.1.1, 4.1.1.2, 4.1.1.4, 4.1.1.5, 4.1.1.6, 4.1.1.7 and 4.1.1.8 may be used;

The other provisions of ADR do not apply.

648 Articles impregnated with this pesticide, such as fibreboard plates, paper strips, cotton-wool balls, sheets of plastics material, in hermetically closed wrappings, are not subject to the provisions of ADR.

649 *(Deleted)*

650 Waste consisting of packaging residues, solidified residues and liquid residues of paint may be carried under the conditions of packing group II. In addition to the provisions of UN No. 1263 packing group II, the waste may also be packed and carried as follows:

- (a) The waste may be packed in accordance with packing instruction P002 of 4.1.4.1 or to packing instruction IBC06 of 4.1.4.2;
- (b) The waste may be packed in flexible IBCs of types 13H3, 13H4 and 13H5 in overpacks with complete walls;
- (c) Testing of packagings and IBCs indicated under (a) or (b) may be carried out in accordance with the requirements of Chapters 6.1 or 6.5, as appropriate, in relation to solids, at the packing group II performance level.

The tests shall be carried out on packagings and IBCs, filled with a representative sample of the waste, as prepared for carriage;

- (d) Carriage in bulk in sheeted vehicles, closed containers or sheeted large containers, all with complete walls is allowed. The body of vehicles or containers shall be leakproof or rendered leakproof, for example by means of a suitable and sufficiently stout inner lining;
- (e) If the waste is carried under the conditions of this special provision, the goods shall be declared in accordance with 5.4.1.1.3 in the transport document, as follows:

"UN 1263 WASTE PAINT, 3, II, (D/E)", or
"UN 1263 WASTE PAINT, 3, PG II, (D/E)".

651 Special provision V2 (1) does not apply if the net explosive mass per transport unit does not exceed 4000 kg, provided that the net explosive mass per vehicle does not exceed 3000 kg.

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- 652 Austenitic stainless steel, ferritic and austenitic steel (Duplex steel) and welded titanium receptacles which do not meet the requirements of Chapter 6.2 but have been constructed and approved in accordance with national aviation provisions for use as hot air balloon or hot air airship fuel receptacles, brought into service (date of initial inspection) before 1 July 2004, may be carried by road provided they meet the following conditions:
- (a) The general provisions of 6.2.1 shall be complied with;
 - (b) The design and construction of the receptacles shall have been approved for aviation use by a national air transport authority;
 - (c) As an exemption from 6.2.3.1.2, the calculation pressure shall be derived from a reduced maximum ambient temperature of +40° C; in this case:
 - (i) as an exemption from 6.2.5.1, cylinders may be manufactured from rolled and annealed commercially pure titanium with the minimum requirements of $R_m > 450$ MPa, $\epsilon_A > 20\%$ (ϵ_A = elongation after fracture);
 - (ii) austenitic stainless steel and ferritic and austenitic steel (Duplex steel) cylinders may be used with a stress level up to 85% of the minimum guaranteed yield strength (R_e) at a calculation pressure derived from a reduced maximum ambient temperature of +40° C;
 - (iii) the receptacles shall be equipped with a pressure relief device having a nominal set pressure of 26 bar; the test pressure of these receptacles shall be not less than 30 bar;
 - (d) When the exemptions from (c) are not applied, the receptacles shall be designed for a reference temperature of 65° C and shall be equipped with pressure relief devices with a nominal set pressure specified by the competent authority of the country of use;
 - (e) The main body of the receptacles shall be covered by an outer, water-resistant protective layer at least 25 mm thick made from structural cellular foam or similar material;
 - (f) During carriage, the receptacle shall be firmly secured in a crate or an additional safety device;
 - (g) The receptacles shall be marked with a clear, visible label stating that the receptacles are for use only in hot air balloons and hot air airships;
 - (h) The duration of service (from the date of initial inspection) shall not exceed 25 years.
- 653 The carriage of this gas in cylinders having a test pressure capacity product of maximum 15.2 MPa.litre (152 bar.litre) is not subject to the other provisions of ADR if the following conditions are met:
- The provisions for construction and testing of cylinders are observed;
 - The cylinders are contained in outer packagings which at least meet the requirements of Part 4 for combination packagings. The general provisions of packing of 4.1.1.1, 4.1.1.2 and 4.1.1.5 to 4.1.1.7 shall be observed;
 - The cylinders are not packed together with other dangerous goods;
 - The total gross mass of a package does not exceed 30 kg; and

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- Each package is clearly and durably marked with "UN 1006" for argon compressed, "UN 1013" for carbon dioxide, "UN 1046" for helium compressed or "UN 1066" for nitrogen compressed. This marking is displayed within a diamond-shaped area surrounded by a line that measures at least 100 mm by 100 mm.

- 654 Waste lighters collected separately and consigned in accordance with 5.4.1.1.3 may be carried under this entry for the purposes of disposal. They need not be protected against inadvertent discharge provided that measures are taken to prevent the dangerous build up of pressure and dangerous atmospheres.

Waste lighters, other than those leaking or severely deformed, shall be packed in accordance with packing instruction P003. In addition the following provisions shall apply:

- only rigid packagings of a maximum capacity of 60 litres shall be used;
- the packagings shall be filled with water or any other appropriate protection material to avoid any ignition;
- under normal conditions of carriage all ignition devices of the lighters shall fully be covered by the protection material;
- the packagings shall be adequately vented to prevent the creation of flammable atmosphere and the build up of pressure;
- the packages shall only be carried in ventilated or open vehicles or containers.

Leaking or severely deformed lighters shall be carried in salvage packagings, provided appropriate measures are taken to ensure there is no dangerous build up of pressure.

***NOTE:** Special provision 201 and special packing provisions PP84 and RR5 of packing instruction P002 in 4.1.4.1 do not apply to waste lighters.*

- 655 Cylinders and their closures designed, constructed, approved and marked in accordance with Directive 97/23/EC⁴ and used for breathing apparatus may be carried without conforming to Chapter 6.2, provided that they are subject to inspections and tests specified in 6.2.1.6.1 and the interval between tests specified in packing instruction P200 in 4.1.4.1 is not exceeded. The pressure used for the hydraulic pressure test is the pressure marked on the cylinder in accordance with Directive 97/23/EC⁴.

656 (Deleted)

- 657 This entry shall be used for the technically pure substance only; for mixtures of LPG components, see UN No. 1965 or see UN No. 1075 in conjunction with NOTE 2 in 2.2.2.3.

- 658 UN No. 1057 LIGHTERS complying with standard EN ISO 9994:2006 + A1:2008 "Lighters – Safety Specification" and UN No. 1057 LIGHTER REFILLS, may be carried subject only to the provisions of 3.4.1 (a) to (h), 3.4.2 (except for the total gross mass of 30 kg), 3.4.3 (except for the total gross mass of 20 kg), 3.4.11 and 3.4.12, provided the following conditions are met:

⁴ Directive 97/23/EC of the European Parliament and of the Council of 29 May 1997 on the approximation of the laws of the Member States concerning pressure equipment (PED) (Official Journal of the European Communities No. L 181 of 9 July 1997, p. 1 - 55).

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- (a) The total gross mass of each package is not more than 10 kg;
- (b) Not more than 100 kg gross mass of such packages is carried in a vehicle; and
- (c) Each outer packaging is clearly and durably marked with "UN 1057 LIGHTERS" or "UN 1057 LIGHTER REFILLS", as appropriate.

659 Substances to which PP86 or TP7 are assigned in Column (9a) and Column (11) of Table A in Chapter 3.2 and therefore require air to be eliminated from the vapour space, shall not be used for carriage under this UN number but shall be carried under their respective UN numbers as listed in Table A of Chapter 3.2.

NOTE: See also 2.2.2.1.7.

660 For the carriage of fuel gas containment systems designed to be fitted in motor vehicles containing this gas the provisions of sub-section 4.1.4.1, Chapter 5.2, Chapter 5.4 and Chapter 6.2 of ADR need not be applied, provided the following conditions are met:

- (a) The fuel gas containment systems shall meet the requirements of ECE Regulation No. 67 Revision 2⁵, ECE Regulation No. 110 Revision 1⁶ or ECE Regulation No. 115⁷ or Regulation (EC) No. 79/2009⁸ in combination with Regulation (EU) No. 406/2010⁹, as applicable.
- (b) The fuel gas containment systems shall be leakproof and shall not exhibit any signs of external damage which may affect their safety.

NOTE 1: Criteria may be found in standard ISO 11623:2002 *Transportable gas cylinders – Periodic inspection and testing of composite gas cylinders (or ISO DIS 19078 Gas cylinders – Inspection of the cylinder installation, and requalification of high pressure cylinders for the on-board storage of natural gas as a fuel for automotive vehicles)*.

NOTE 2: If the fuel gas containment systems are not leakproof or overfilled or if they exhibit damage that could affect their safety, they shall only be carried in salvage pressure receptacles in conformity with ADR.

- (c) If the fuel gas containment system is equipped with two valves or more integrated in line, two valves shall be so closed as to be gastight under normal conditions of carriage. If only one valve exists or only one valve works properly all openings with the exception of the opening of the pressure relief device shall be so closed as to be gastight under normal conditions of carriage.

⁵ ECE Regulation No. 67 (Uniform provisions concerning: I. Approval of specific equipment of motor vehicles using liquefied petroleum gases in their propulsion system; II. Approval of a vehicle fitted with specific equipment for the use of liquefied petroleum gases in its propulsion system with regard to the installation of such equipment).

⁶ ECE Regulation No. 110 (Uniform provisions concerning: I. Specific components of motor vehicles using compressed natural gas (CNG) in their propulsion system; II. vehicles with regard to the installation of specific components of an approved type for the use of compressed natural gas (CNG) in their propulsion system).

⁷ ECE Regulation No. 115 (Uniform provisions concerning the approval of: I. Specific LPG (liquefied petroleum gases) retrofit systems to be installed in motor vehicles for the use of LPG in their propulsion system; II. Specific CNG (compressed natural gas) retrofit systems to be installed in motor vehicles for the use of CNG in their propulsion system).

⁸ Regulation (EC) No 79/2009 of the European Parliament and of the Council of 14 January 2009 on type-approval of hydrogen-powered motor vehicles, and amending Directive 2007/46/EC.

⁹ Commission Regulation (EU) No 406/2010 of 26 April 2010 implementing Regulation (EC) No 79/2009 of the European Parliament and of the Council on type-approval of hydrogen-powered motor vehicles.

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- (d) Fuel gas containment systems shall be carried in such a way as to prevent obstruction of the pressure relief device or any damage to the valves and any other pressurised part of the fuel gas containment systems and unintentional release of the gas under normal conditions of carriage. The fuel gas containment system shall be secured so as to prevent slipping, rolling or vertical movement.
- (e) Fuel gas containment systems shall satisfy the provisions of 4.1.6.8 (a), (b), (c), (d) or (e).
- (f) The marking and labelling provisions of Chapter 5.2 shall be met, unless fuel gas containment systems are consigned in a handling device. If so, the markings and danger labels shall be affixed to the handling device.
- (g) Documentation
 - (i) Every consignment that is carried in accordance with this special provision shall be accompanied by a transport document, containing at least the following information:
 - (ii) The UN number of the gas contained in the fuel gas containment systems, preceded by the letters "UN";
 - (iii) The proper shipping name of the gas;
 - (iv) The label model number;
 - (v) The number of fuel gas containment systems;
 - (vi) In the case of liquefied gases the net mass in kg of the gas of each fuel gas containment system and in the case of compressed gases the nominal capacity in litres of each fuel gas containment system followed by the nominal working pressure;
 - (vii) The names and the addresses of the consignor and the consignee.

(i) to (v) shall appear according to one of the following examples:

Example 1: UN 1971 natural gas, compressed, 2.1, 1 fuel gas containment system of 50 l in total, 200 bar.

Example 2: UN 1965 hydrocarbon gas mixture, liquefied, n.o.s., 2.1, 3 fuel gas containment systems, each of 15 kg net mass of gas.

NOTE: All other provisions of ADR shall be applied.

- 661 Carriage of damaged lithium batteries if not collected and presented for carriage for disposal according to special provision 636 is permitted only under additional conditions defined by the competent authority of any Contracting Party to ADR who may also recognise an approval granted by the competent authority of a country which is not a Contracting Party to ADR, provided that this approval has been granted in accordance with the procedures applicable according to ADR or RID.

Only packing methods which are approved for these goods by the competent authority may be used.

The competent authority may define a more restrictive transport category or tunnel restriction code, which shall be included in the competent authority approval.

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A copy of the competent authority approval shall accompany each consignment or the transport document shall include a reference to the competent authority approval.

The competent authority of the Contracting Party to ADR granting an approval in accordance with this special provision shall notify the secretariat of the UNECE for the purpose of circulation of this information through its website.

NOTE: *Any recommendations made by the United Nations for technical requirements for the carriage of damaged lithium batteries shall be considered when granting the approval.*

Damaged lithium batteries means in particular:

- Batteries identified by the manufacturer as being defective for safety reasons;
- Batteries with damaged or considerably deformed cases;
- Leaking or venting batteries; or
- Batteries with faults that cannot be diagnosed prior to carriage to a place of analysis.

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CHAPTER 3.4

DANGEROUS GOODS PACKED IN LIMITED QUANTITIES

3.4.1 This Chapter provides the provisions applicable to the carriage of dangerous goods of certain classes packed in limited quantities. The applicable quantity limit for the inner packaging or article is specified for each substance in Column (7a) of Table A of Chapter 3.2. In addition, the quantity "0" has been indicated in this column for each entry not permitted to be carried in accordance with this Chapter.

Limited quantities of dangerous goods packed in such limited quantities, meeting the provisions of this Chapter are not subject to any other provisions of ADR except the relevant provisions of:

- (a) Part 1, Chapters 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.8, 1.9;
- (b) Part 2;
- (c) Part 3, Chapters 3.1, 3.2, 3.3 (except special provisions 61, 178, 181, 220, 274, 625, 633 and 650 (e));
- (d) Part 4, paragraphs 4.1.1.1, 4.1.1.2, 4.1.1.4 to 4.1.1.8;
- (e) Part 5, 5.1.2.1(a) (i) and (b), 5.1.2.2, 5.1.2.3, 5.2.1.9, 5.4.2;
- (f) Part 6, construction requirements of 6.1.4 and paragraphs 6.2.5.1 and 6.2.6.1 to 6.2.6.3;
- (g) Part 7, Chapter 7.1 and 7.2.1, 7.2.2, 7.5.1 (except 7.5.1.4), 7.5.2.4, 7.5.7, 7.5.8 and 7.5.9;
- (h) 8.6.3.3 and 8.6.4.

3.4.2 Dangerous goods shall be packed only in inner packagings placed in suitable outer packagings. Intermediate packagings may be used. In addition, for articles of Division 1.4, Compatibility Group S, the provisions of section 4.1.5 shall be fully complied with. The use of inner packagings is not necessary for the carriage of articles such as aerosols or "receptacles, small, containing gas". The total gross mass of the package shall not exceed 30 kg.

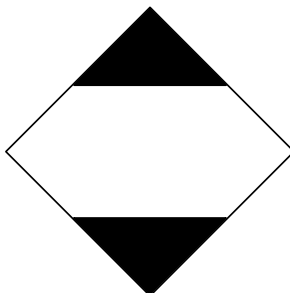
3.4.3 Except for articles of Division 1.4, Compatibility Group S, shrink-wrapped or stretch-wrapped trays meeting the conditions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8 are acceptable as outer packagings for articles or inner packagings containing dangerous goods carried in accordance with this Chapter. Inner packagings that are liable to break or be easily punctured, such as those made of glass, porcelain, stoneware or certain plastics, shall be placed in suitable intermediate packagings meeting the provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8, and be so designed that they meet the construction requirements of 6.1.4. The total gross mass of the package shall not exceed 20 kg.

3.4.4 Liquid goods of Class 8, packing group II in glass, porcelain or stoneware inner packagings shall be enclosed in a compatible and rigid intermediate packaging.

3.4.5 and 3.4.6 (*Reserved*)

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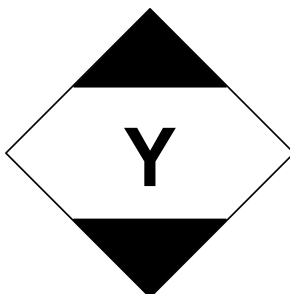
- 3.4.7 Except for air transport, packages containing dangerous goods in limited quantities shall bear the marking shown below.



The marking shall be readily visible, legible and able to withstand open weather exposure without a substantial reduction in effectiveness.

The top and bottom portions and the surrounding line shall be black. The centre area shall be white or a suitable contrasting background. The minimum dimensions shall be 100 mm × 100 mm and the minimum width of line forming the diamond shall be 2 mm. If the size of the package so requires, the dimension may be reduced, to be not less than 50 mm × 50 mm provided the marking remains clearly visible.

- 3.4.8 Packages containing dangerous goods consigned for air transport in conformity with the provisions of Part 3, Chapter 4 of the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air shall bear the marking shown below.



The marking shall be readily visible, legible and able to withstand open weather exposure without a substantial reduction in effectiveness. The top and bottom portions and the surrounding line shall be black. The centre area shall be white or a suitable contrasting background. The minimum dimensions shall be 100 mm × 100 mm. The minimum width of line forming diamond shall be 2 mm. The symbol "Y" shall be placed in the centre of the mark and shall be clearly visible. If the size of the package so requires, the dimension may be reduced, to be not less than 50 mm × 50 mm provided the marking remains clearly visible.

- 3.4.9 Packages containing dangerous goods bearing the marking shown in 3.4.8 shall be deemed to meet the provisions of sections 3.4.1 to 3.4.4 of this Chapter and need not bear the marking shown in 3.4.7.

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- 3.4.10 *(Reserved)*
- 3.4.11 When packages containing dangerous goods packed in limited quantities are placed in an overpack, the provisions of 5.1.2 shall apply. In addition the overpack shall be marked with the markings required by this Chapter unless the markings representative of all dangerous goods in the overpack are visible. The provisions of 5.1.2.1 (a) (ii) and 5.1.2.4 apply only if other dangerous goods which are not packed in limited quantities are contained, and only in relation to these other dangerous goods.
- 3.4.12 In advance of carriage, consignors of dangerous goods packed in limited quantities shall inform the carrier in a traceable form of the total gross mass of such goods to be consigned.
- 3.4.13 (a) Transport units with a maximum mass exceeding 12 tonnes carrying dangerous goods packed in limited quantities shall be marked in accordance with 3.4.15 at the front and at the rear except when the transport unit contains other dangerous goods for which orange-coloured plate marking in accordance with 5.3.2 is required. In this latter case, the transport unit may display the required orange-coloured plate marking only, or both the orange-coloured plate marking in accordance with 5.3.2 and the marking in accordance with 3.4.15.
- (b) Containers carrying dangerous goods packed in limited quantities, on transport units with a maximum mass exceeding 12 tonnes, shall be marked in accordance with 3.4.15 on all four sides except when the container contains other dangerous goods for which placarding in accordance with 5.3.1 is required. In this latter case, the container may display the required placards only, or both the placards in accordance with 5.3.1 and the marking in accordance with 3.4.15.
- 3.4.14 Markings specified in 3.4.13 may be dispensed with, if the total gross mass of the packages containing dangerous goods packed in limited quantities carried does not exceed 8 tonnes per transport unit.
- 3.4.15 The marking shall be that required in 3.4.7, except that the minimum dimensions shall be 250 mm × 250 mm.

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CHAPTER 3.5**DANGEROUS GOODS
PACKED IN EXCEPTED QUANTITIES****3.5.1 Excepted quantities**

3.5.1.1 Excepted quantities of dangerous goods of certain classes, other than articles, meeting the provisions of this Chapter are not subject to any other provisions of ADR except for:

- (a) The training requirements in Chapter 1.3;
- (b) The classification procedures and packing group criteria in Part 2;
- (c) The packaging requirements of 4.1.1.1, 4.1.1.2, 4.1.1.4 and 4.1.1.6.

NOTE: In the case of radioactive material, the requirements for radioactive material in excepted packages in 1.7.1.5 apply.

3.5.1.2 Dangerous goods which may be carried as excepted quantities in accordance with the provisions of this Chapter are shown in column (7b) of Table A of Chapter 3.2 list by means of an alphanumeric code as follows:

Code	Maximum net quantity per inner packaging (in grams for solids and ml for liquids and gases)	Maximum net quantity per outer packaging (in grams for solids and ml for liquids and gases, or sum of grams and ml in the case of mixed packing)
E0	Not permitted as Excepted Quantity	
E1	30	1000
E2	30	500
E3	30	300
E4	1	500
E5	1	300

For gases, the volume indicated for inner packagings refers to the water capacity of the inner receptacle and the volume indicated for outer packagings refers to the combined water capacity of all inner packagings within a single outer packaging.

3.5.1.3 Where dangerous goods in excepted quantities for which different codes are assigned are packaged together the total quantity per outer packaging shall be limited to that corresponding to the most restrictive code.

3.5.1.4 Excepted quantities of dangerous goods assigned to codes E1, E2, E4 and E5 with a maximum net quantity of dangerous goods per inner packaging limited to 1 ml for liquids and gases and 1 g for solids and a maximum net quantity of dangerous goods per outer packaging which does not exceed 100 g for solids or 100 ml for liquids and gases are only subject to:

- (a) The provisions of 3.5.2, except that an intermediate packaging is not required if the inner packagings are securely packed in an outer packaging with cushioning material in such a way that, under normal conditions of carriage, they cannot break, be punctured, or leak their contents; and for liquids, the outer packaging contains sufficient absorbent material to absorb the entire contents of the inner packagings; and
- (b) The provisions of 3.5.3.

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3.5.2 Packagings

Packagings used for the carriage of dangerous goods in excepted quantities shall be in compliance with the following:

- (a) There shall be an inner packaging and each inner packaging shall be constructed of plastic (with a minimum thickness of 0.2 mm when used for liquids), or of glass, porcelain, stoneware, earthenware or metal (see also 4.1.1.2) and the closure of each inner packaging shall be held securely in place with wire, tape or other positive means; any receptacle having a neck with moulded screw threads shall have a leak proof threaded type cap. The closure shall be resistant to the contents;
- (b) Each inner packaging shall be securely packed in an intermediate packaging with cushioning material in such a way that, under normal conditions of carriage, they cannot break, be punctured or leak their contents. The intermediate packaging shall completely contain the contents in case of breakage or leakage, regardless of package orientation. For liquids, the intermediate packaging shall contain sufficient absorbent material to absorb the entire contents of the inner packaging. In such cases, the absorbent material may be the cushioning material. Dangerous goods shall not react dangerously with cushioning, absorbent material and packaging material or reduce the integrity or function of the materials;
- (c) The intermediate packaging shall be securely packed in a strong, rigid outer packaging (wooden, fibreboard or other equally strong material);
- (d) Each package type shall be in compliance with the provisions in 3.5.3;
- (e) Each package shall be of such a size that there is adequate space to apply all necessary markings; and
- (f) Overpacks may be used and may also contain packages of dangerous goods or goods not subject to the requirements of ADR.

3.5.3 Tests for packages

3.5.3.1

The complete package as prepared for carriage, with inner packagings filled to not less than 95% of their capacity for solids or 98% for liquids, shall be capable of withstanding, as demonstrated by testing which is appropriately documented, without breakage or leakage of any inner packaging and without significant reduction in effectiveness:

- (a) Drops onto a rigid, non-resilient flat and horizontal surface from a height of 1.8 m:
 - (i) Where the sample is in the shape of a box, it shall be dropped in each of the following orientations:
 - flat on the base;
 - flat on the top;
 - flat on the longest side;
 - flat on the shortest side;
 - on a corner;
 - (ii) Where the sample is in the shape of a drum, it shall be dropped in each of the following orientations:

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- diagonally on the top chime, with the centre of gravity directly above the point of impact;
- diagonally on the base chime;
- flat on the side;

NOTE: Each of the above drops may be performed on different but identical packages.

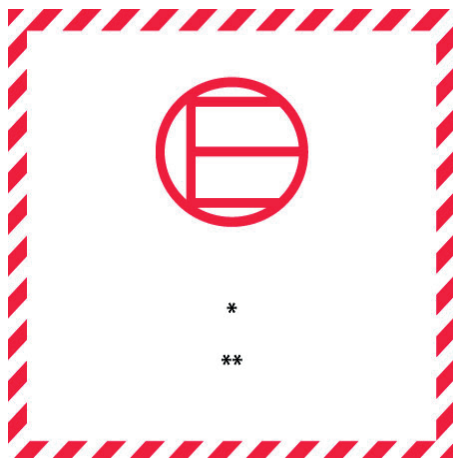
- (b) A force applied to the top surface for a duration of 24 hours, equivalent to the total weight of identical packages if stacked to a height of 3 m (including the sample).

3.5.3.2 For the purposes of testing, the substances to be carried in the packaging may be replaced by other substances except where this would invalidate the results of the tests. For solids, when another substance is used, it must have the same physical characteristics (mass, grain size, etc.) as the substance to be carried. In the drop tests for liquids, when another substance is used, its relative density (specific gravity) and viscosity should be similar to those of the substance to be carried.

3.5.4 Marking of packages

3.5.4.1 Packages containing excepted quantities of dangerous goods prepared in accordance with this Chapter shall be durably and legibly marked with the mark shown in 3.5.4.2. The first or only label number indicated in column (5) of Table A of Chapter 3.2 for each of the dangerous goods contained in the package shall be shown in the mark. Where the name of the consignor or consignee is not shown elsewhere on the package this information shall be included within the mark.

3.5.4.2 The dimensions of the mark shall be a minimum of 100 mm × 100 mm.



Excepted quantities mark
Hatching and symbol of the same colour, black or red,
on white or suitable contrasting background

- * The first or only label number indicated in column (5) of Table A of Chapter 3.2 shall be shown in this location.
- ** The name of the consignor or of the consignee shall be shown in this location if not shown elsewhere on the package.

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3.5.4.3 An overpack containing dangerous goods in excepted quantities shall display the markings required by 3.5.4.1, unless such markings on packages within the overpack are clearly visible.

3.5.5 Maximum number of packages in any vehicle or container

The number of packages in any vehicle or container shall not exceed 1 000.

3.5.6 Documentation

If a document or documents (such as a bill of lading, air waybill or CMR/CIM consignment note) accompanies(y) dangerous goods in excepted quantities, at least one of these documents shall include the statement "Dangerous Goods in Excepted Quantities" and indicate the number of packages.

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PART 4

Packing and tank provisions

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CHAPTER 4.1

USE OF PACKAGINGS, INCLUDING INTERMEDIATE BULK CONTAINERS (IBCs) AND LARGE PACKAGINGS

4.1.1 General provisions for the packing of dangerous goods in packagings, including IBCs and large packagings

NOTE: For the packing of goods of Classes 2, 6.2 and 7, the general provisions of this section only apply as indicated in 4.1.8.2 (Class 6.2), 4.1.9.1.5 (Class 7) and in the applicable packing instructions of 4.1.4 (P201 and LP02 for Class 2 and P620, P621, IBC620 and LP621 for Class 6.2).

4.1.1.1 Dangerous goods shall be packed in good quality packagings, including IBCs and large packagings, which shall be strong enough to withstand the shocks and loadings normally encountered during carriage, including trans-shipment between transport units and between transport units and warehouses as well as any removal from a pallet or overpack for subsequent manual or mechanical handling. Packagings, including IBCs and large packagings, shall be constructed and closed so as to prevent any loss of contents when prepared for transport which might be caused under normal conditions of transport, by vibration, or by changes in temperature, humidity or pressure (resulting from altitude, for example). Packagings, including IBCs and large packagings, shall be closed in accordance with the information provided by the manufacturer. No dangerous residue shall adhere to the outside of packagings, IBCs and large packagings during carriage. These provisions apply, as appropriate, to new, reused, reconditioned or remanufactured packagings and to new, reused, repaired or remanufactured IBCs, and to new, reused or remanufactured large packagings.

4.1.1.2 Parts of packagings, including IBCs and large packagings, which are in direct contact with dangerous goods:

- (a) shall not be affected or significantly weakened by those dangerous goods;
- (b) shall not cause a dangerous effect e.g. catalysing a reaction or reacting with the dangerous goods; and
- (c) shall not allow permeation of the dangerous goods that could constitute a danger under normal conditions of carriage.

Where necessary, they shall be provided with a suitable inner coating or treatment.

NOTE: For chemical compatibility of plastics packagings, including IBCs, made from polyethylene see 4.1.1.21.

4.1.1.3 Unless otherwise provided elsewhere in ADR, each packaging, including IBCs and large packagings, except inner packagings, shall conform to a design type successfully tested in accordance with the requirements of 6.1.5, 6.3.5, 6.5.6 or 6.6.5, as applicable. The packagings for which the test is not required are mentioned under 6.1.1.3.

4.1.1.4 When filling packagings, including IBCs and large packagings, with liquids, sufficient ullage (outage) shall be left to ensure that neither leakage nor permanent distortion of the packaging occurs as a result of an expansion of the liquid caused by temperatures likely to occur during transport. Unless specific requirements are prescribed, liquids shall not completely fill a packaging at a temperature of 55 °C. However, sufficient ullage shall be left in an IBC to ensure that at the mean bulk temperature of 50 °C it is not filled to more than

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98% of its water capacity. For a filling temperature of 15 °C, the maximum degree of filling shall be determined as follows, unless otherwise provided, either:

(a)	Boiling point (initial boiling point) of the substance in °C	< 60	≥ 60 < 100	≥ 100 < 200	≥ 200 < 300	≥ 300
	Degree of filling as a percentage of the capacity of the packaging	90	92	94	96	98

or

$$(b) \quad \text{degree of filling} = \frac{98}{1 + \alpha (50 - t_f)} \% \text{ of the capacity of the packaging.}$$

In this formula α represents the mean coefficient of cubic expansion of the liquid substance between 15 °C and 50 °C; that is to say, for a maximum rise in temperature of 35 °C,

$$\alpha \text{ is calculated according to the formula: } \alpha = \frac{d_{15} - d_{50}}{35 \times d_{50}}$$

d_{15} and d_{50} being the relative densities¹ of the liquid at 15 °C and 50 °C and t_f the mean temperature of the liquid at the time of filling.

4.1.1.5 Inner packagings shall be packed in an outer packaging in such a way that, under normal conditions of carriage, they cannot break, be punctured or leak their contents into the outer packaging. Inner packagings containing liquids shall be packed with their closures upward and placed within outer packagings consistent with the orientation markings prescribed in 5.2.1.9. Inner packagings that are liable to break or be punctured easily, such as those made of glass, porcelain or stoneware or of certain plastics materials, etc., shall be secured in outer packagings with suitable cushioning material. Any leakage of the contents shall not substantially impair the protective properties of the cushioning material or of the outer packaging.

4.1.1.5.1 Where an outer packaging of a combination packaging or a large packaging has been successfully tested with different types of inner packagings, a variety of such different inner packagings may also be assembled in this outer packaging or large packaging. In addition, provided an equivalent level of performance is maintained, the following variations in inner packagings are allowed without further testing of the package:

- (a) Inner packagings of equivalent or smaller size may be used provided:
- (i) the inner packagings are of similar design to the tested inner packagings (e.g. shape - round, rectangular, etc.);
 - (ii) the material of construction of the inner packagings (glass, plastics, metal, etc.) offers resistance to impact and stacking forces equal to or greater than that of the originally tested inner packaging;
 - (iii) the inner packagings have the same or smaller openings and the closure is of similar design (e.g. screw cap, friction lid, etc.);
 - (iv) sufficient additional cushioning material is used to take up void spaces and to prevent significant movement of the inner packagings; and

¹ Relative density (d) is considered to be synonymous with specific gravity (SG) and will be used throughout this Chapter.

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(v) inner packagings are oriented within the outer packaging in the same manner as in the tested package.

(b) A lesser number of the tested inner packagings, or of the alternative types of inner packagings identified in (a) above, may be used provided sufficient cushioning is added to fill the void space(s) and to prevent significant movement of the inner packagings.

4.1.1.6 Dangerous goods shall not be packed together in the same outer packaging or in large packagings, with dangerous or other goods if they react dangerously with each other and cause:

- (a) combustion or evolution of considerable heat;
- (b) evolution of flammable, asphyxiant, oxidizing or toxic gases;
- (c) the formation of corrosive substances; or
- (d) the formation of unstable substances.

NOTE: For mixed packing special provisions, see 4.1.10.

4.1.1.7 The closures of packagings containing wetted or diluted substances shall be such that the percentage of liquid (water, solvent or phlegmatizer) does not fall below the prescribed limits during transport.

4.1.1.7.1 Where two or more closure systems are fitted in series on an IBC, that nearest to the substance being carried shall be closed first.

4.1.1.8 Where pressure may develop in a package by the emission of gas from the contents (as a result of temperature increase or other causes), the packaging or IBC may be fitted with a vent provided that the gas emitted will not cause danger on account of its toxicity, its flammability or the quantity released, for example.

A venting device shall be fitted if dangerous overpressure may develop due to normal decomposition of substances. The vent shall be so designed that, when the packaging or IBC is in the attitude in which it is intended to be carried, leakages of liquid and the penetration of foreign substances are prevented under normal conditions of carriage.

NOTE: Venting of the package is not permitted for air carriage.

4.1.1.8.1 Liquids may only be filled into inner packagings which have an appropriate resistance to internal pressure that may be developed under normal conditions of carriage.

4.1.1.9 New, remanufactured or reused packagings, including IBCs and large packagings, or reconditioned packagings and repaired or routinely maintained IBCs shall be capable of passing the tests prescribed in 6.1.5, 6.3.5, 6.5.6 or 6.6.5, as applicable. Before being filled and handed over for carriage, every packaging, including IBCs and large packagings, shall be inspected to ensure that it is free from corrosion, contamination or other damage and every IBC shall be inspected with regard to the proper functioning of any service equipment. Any packaging which shows signs of reduced strength as compared with the approved design type shall no longer be used or shall be so reconditioned, that it is able to withstand the design type tests. Any IBC which shows signs of reduced strength as compared with the tested design type shall no longer be used or shall be so repaired or routinely maintained that it is able to withstand the design type tests.

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4.1.1.10 Liquids shall be filled only into packagings, including IBCs, which have an appropriate resistance to the internal pressure that may develop under normal conditions of carriage. Packagings and IBCs marked with the hydraulic test pressure prescribed in 6.1.3.1 (d) and 6.5.2.2.1, respectively shall be filled only with a liquid having a vapour pressure:

- (a) such that the total gauge pressure in the packaging or IBC (i.e. the vapour pressure of the filling substance plus the partial pressure of air or other inert gases, less 100 kPa) at 55 °C, determined on the basis of a maximum degree of filling in accordance with 4.1.1.4 and a filling temperature of 15 °C, will not exceed two-thirds of the marked test pressure; or
- (b) at 50 °C less than four-sevenths of the sum of the marked test pressure plus 100 kPa; or
- (c) at 55 °C less than two-thirds of the sum of the marked test pressure plus 100 kPa.

IBCs intended for the carriage of liquids shall not be used to carry liquids having a vapour pressure of more than 110kPa (1.1 bar) at 50 °C or 130kPa (1.3 bar) at 55 °C.

Examples of required marked test pressures for packagings, including IBCs, calculated as in 4.1.1.10 (c)

UN No	Name	Class	Packing group	V_{p55} (kPa)	$V_{p55} \times 1.5$ (kPa)	$(V_{p55} \times 1.5)$ minus 100 (kPa)	Required minimum test pressure gauge under 6.1.5.5.4(c) (kPa)	Minimum test pressure (gauge) to be marked on the packaging (kPa)
2056	Tetrahydrofuran	3	II	70	105	5	100	100
2247	n-Decane	3	III	1.4	2.1	-97.9	100	100
1593	Dichloromethane	6.1	III	164	246	146	146	150
1155	Diethyl ether	3	I	199	299	199	199	250

NOTE 1: For pure liquids the vapour pressure at 55 °C (V_{p55}) can often be obtained from scientific tables.

NOTE 2: The table refers to the use of 4.1.1.10 (c) only, which means that the marked test pressure shall exceed 1.5 times the vapour pressure at 55 °C less 100 kPa. When, for example, the test pressure for n-decane is determined according to 6.1.5.5.4 (a), the minimum marked test pressure may be lower.

NOTE 3: For diethyl ether the required minimum test pressure under 6.1.5.5.5 is 250 kPa.

4.1.1.11 Empty packagings, including IBCs and large packagings, that have contained a dangerous substance are subject to the same requirements as those for a filled packaging, unless adequate measures have been taken to nullify any hazard.

4.1.1.12 Every packagings as specified in Chapter 6.1 intended to contain liquids shall successfully undergo a suitable leakproofness test, and be capable of meeting the appropriate test level indicated in 6.1.5.4.3:

- (a) before it is first used for carriage;
- (b) after remanufacturing or reconditioning of any packaging, before it is re-used for carriage.

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For this test the packaging need not have its closures fitted. The inner receptacle of a composite packaging may be tested without the outer packaging, provided the test results are not affected. This test is not required for:

- inner packagings of combination packagings or large packagings;
- inner receptacles of composite packagings (glass, porcelain or stoneware) marked with the symbol "RID/ADR" in accordance with 6.1.3.1 (a) (ii);
- light gauge metal packagings marked with the symbol "RID/ADR" in accordance with 6.1.3.1 (a) (ii).

4.1.1.13 Packagings, including IBCs, used for solids which may become liquid at temperatures likely to be encountered during carriage shall also be capable of containing the substance in the liquid state.

4.1.1.14 Packagings, including IBCs, used for powdery or granular substances shall be sift-proof or shall be provided with a liner.

4.1.1.15 For plastics drums and jerricans, rigid plastics IBCs and composite IBCs with plastics inner receptacles, unless otherwise approved by the competent authority, the period of use permitted for the carriage of dangerous substances shall be five years from the date of manufacture of the receptacles, except where a shorter period of use is prescribed because of the nature of the substance to be carried.

4.1.1.16 Where ice is used as a coolant it shall not affect the integrity of the packaging.

4.1.1.17 Packagings, including IBCs and large packagings, marked in accordance with 6.1.3, 6.2.2.7, 6.2.2.8, 6.3.1, 6.5.2 or 6.6.3 but which were approved in a State which is not a Contracting Party to ADR may nevertheless be used for carriage under ADR.

4.1.1.18 *Explosives, self-reactive substances and organic peroxides*

Unless specific provision to the contrary is made in ADR, the packagings, including IBCs and large packagings, used for goods of Class 1, self-reactive substances of Class 4.1 and organic peroxides of Class 5.2 shall comply with the provisions for the medium danger group (packing group II).

4.1.1.19 *Use of salvage packagings*

4.1.1.19.1 Damaged, defective, leaking or non-conforming packages, or dangerous goods that have spilled or leaked may be carried in salvage packagings mentioned in 6.1.5.1.11. This does not prevent the use of a bigger size packaging of appropriate type and performance level under the conditions of 4.1.1.19.2 and 4.1.1.19.3.

4.1.1.19.2 Appropriate measures shall be taken to prevent excessive movement of the damaged or leaking packages within a salvage packaging. When the salvage packaging contains liquids, sufficient inert absorbent material shall be added to eliminate the presence of free liquid.

4.1.1.19.3 Appropriate measures shall be taken to ensure that there is no dangerous build up of pressure.

4.1.1.20 *Use of salvage pressure receptacles*

4.1.1.20.1 In the case of damaged, defective, leaking or non-conforming pressure receptacles, salvage pressure receptacles according to 6.2.3.11 may be used.

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NOTE: *A salvage pressure receptacle may be used as an overpack in accordance with 5.1.2. When used as an overpack, markings shall be in accordance with 5.1.2.1 instead of 5.2.1.3.*

- 4.1.1.20.2 Pressure receptacles shall be placed in salvage pressure receptacles of suitable size. More than one pressure receptacle may be placed in the same salvage pressure receptacle only if the contents are known and do not react dangerously with each other (see 4.1.1.6). Appropriate measures shall be taken to prevent movement of the pressure receptacles within the salvage pressure receptacle e.g. by partitioning, securing or cushioning.
- 4.1.1.20.3 A pressure receptacle may only be placed in a salvage pressure receptacle if:
- (a) The salvage pressure receptacle is in accordance with 6.2.3.11 and a copy of the approval certificate is available;
 - (b) Parts of the salvage pressure receptacle which are, or are likely to be in direct contact with the dangerous goods will not be affected or weakened by those dangerous goods and will not cause a dangerous effect (e.g. catalyzing reaction or reacting with the dangerous goods); and
 - (c) The contents of the contained pressure receptacle(s) are limited in pressure and volume so that if totally discharged into the salvage pressure receptacle, the pressure in the salvage pressure receptacle at 65 °C will not exceed the test pressure of the salvage pressure receptacle (for gases, see packing instruction in P200 (3) in 4.1.4.1). The reduction of the useable water capacity of the salvage pressure receptacle, e.g. by any contained equipment and cushioning, shall be taken into account.
- 4.1.1.20.4 The proper shipping name, the UN number preceded by the letters "UN" and label(s) as required for packages in Chapter 5.2 applicable to the dangerous goods inside the contained pressure receptacle(s) shall be applied to the salvage pressure receptacle for carriage.
- 4.1.1.20.5 Salvage pressure receptacles shall be cleaned, purged and visually inspected internally and externally after each use. They shall be periodically inspected and tested in accordance with 6.2.3.5 at least once every five years.
- 4.1.1.21** ***Verification of the chemical compatibility of plastics packagings, including IBCs, by assimilation of filling substances to standard liquids***
- 4.1.1.21.1 *Scope*
- For polyethylene packagings as specified in 6.1.5.2.6, and for polyethylene IBCs as specified in 6.5.6.3.5, the chemical compatibility with filling substances may be verified by assimilation to standard liquids following the procedures, as set out in 4.1.1.21.3 to 4.1.1.21.5 and using the list in table 4.1.1.21.6, provided that the particular design types have been tested with these standard liquids in accordance with 6.1.5 or 6.5.6, taking into account 6.1.6 and that the conditions in 4.1.1.21.2 are met. When assimilation in accordance with this sub-section is not possible, the chemical compatibility needs to be verified by design type testing in accordance with 6.1.5.2.5 or by laboratory tests in accordance with 6.1.5.2.7 for packagings, and in accordance with 6.5.6.3.3 or 6.5.6.3.6 for IBCs, respectively.
- NOTE:** *Irrespective of the provisions of this sub-section, the use of packagings, including IBCs, for a specific filling substance is subject to the limitations of Table A of Chapter 3.2, and the packing instructions in Chapter 4.1.*
- 4.1.1.21.2 *Conditions*
- The relative densities of the filling substances shall not exceed that used to determine the height for the drop test performed successfully according to 6.1.5.3.5 or 6.5.6.9.4 and the

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mass for the stacking test performed successfully according to 6.1.5.6 or where necessary according to 6.5.6.6 with the assimilated standard liquid(s). The vapour pressures of the filling substances at 50 °C or 55 °C shall not exceed that used to determine the pressure for the internal pressure (hydraulic) test performed successfully according to 6.1.5.5.4 or 6.5.6.8.4.2 with the assimilated standard liquid(s). In case that filling substances are assimilated to a combination of standard liquids, the corresponding values of the filling substances shall not exceed the minimum values derived from the applied drop heights, stacking masses and internal test pressures.

Example: UN 1736 Benzoyl chloride is assimilated to the combination of standard liquids "Mixture of hydrocarbons and wetting solution". It has a vapour pressure of 0.34 kPa at 50 °C and a relative density of approximately 1.2. Design type tests for plastics drums and jerricans were frequently performed at minimum required test levels. In practice this means that the stacking test is commonly performed with stacking loads considering only a relative density of 1.0 for the "Mixture of hydrocarbons" and a relative density of 1.2 for the "Wetting solution" (see definition of standard liquids in 6.1.6). As a consequence chemical compatibility of such tested design types would not be verified for benzoyl chloride by reason of the inadequate test level of the design type with the standard liquid "mixture of hydrocarbons". (Due to the fact that in the majority of cases the applied internal hydraulic test pressure is not less than 100 kPa, the vapour pressure of benzoyl chloride would be covered by such test level according to 4.1.1.10).

All components of a filling substance, which may be a solution, mixture or preparation, such as wetting agents in detergents and disinfectants, irrespective whether dangerous or non-dangerous, shall be included in the assimilation procedure.

4.1.1.21.3 Assimilation procedure

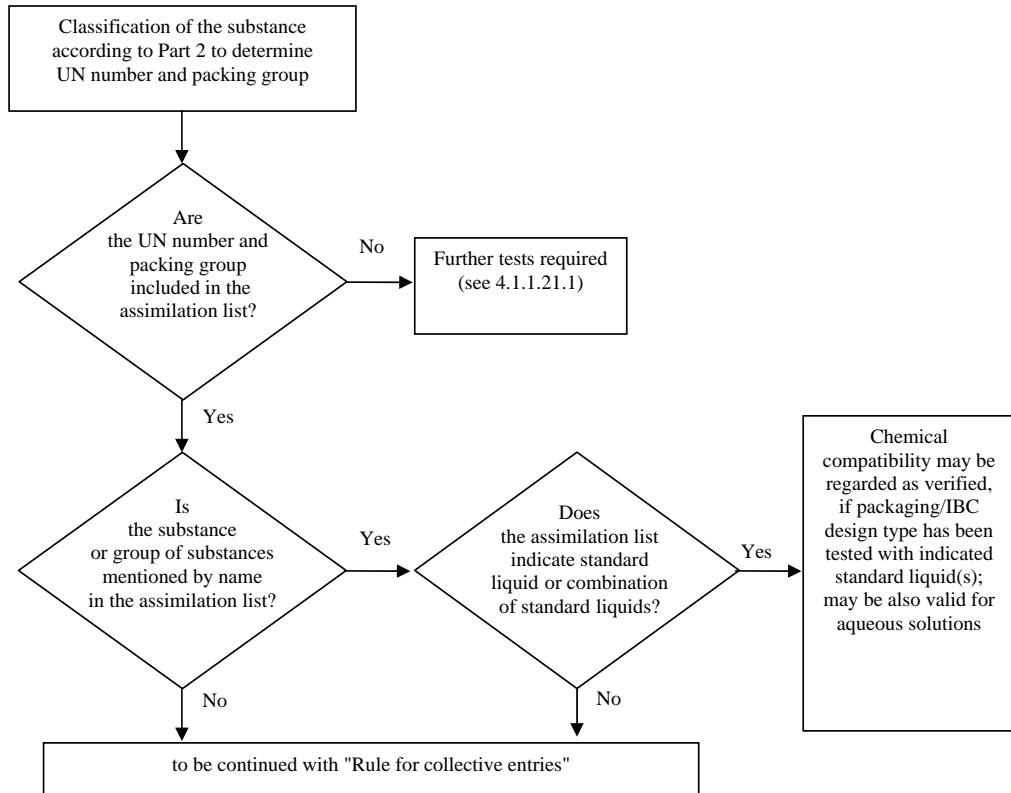
The following steps shall be taken to assign filling substances to listed substances or groups of substances in table 4.1.1.21.6 (see also scheme in Figure 4.1.1.21.1):

- (a) Classify the filling substance in accordance with the procedures and criteria of Part 2 (determination of the UN number and packing group);
- (b) If it is included there, go to the UN number in column (1) of table 4.1.1.21.6;
- (c) Select the line that corresponds in terms of packing group, concentration, flashpoint, the presence of non-dangerous components etc. by means of the information given in columns (2a), (2b) and (4), if there is more than one entry for this UN number.

If this is not possible, the chemical compatibility shall be verified in accordance with 6.1.5.2.5 or 6.1.5.2.7 for packagings, and in accordance with 6.5.6.3.3 or 6.5.6.3.6 for IBCs (however, in the case of aqueous solutions, see 4.1.1.21.4);

- (d) If the UN number and packing group of the filling substance determined in accordance with (a) is not included in the assimilation list, the chemical compatibility shall be proved in accordance with 6.1.5.2.5 or 6.1.5.2.7 for packagings, and in accordance with 6.5.6.3.3 or 6.5.6.3.6 for IBCs;
- (e) Apply the "Rule for collective entries", as described in 4.1.1.21.5, if this is indicated in column (5) of the selected line;
- (f) The chemical compatibility of the filling substance may be regarded as verified taking into account 4.1.1.21.1 and 4.1.1.21.2, if a standard liquid or a combination of standard liquids is assimilated in column (5) and the design type is approved for that/those standard liquid(s).

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Figure 4.1.1.21.1: Scheme for the assimilation of filling substances to standard liquids

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4.1.1.21.4 *Aqueous solutions*

Aqueous solutions of substances and groups of substances assimilated to specific standard liquid(s) in accordance with 4.1.1.21.3 may also be assimilated to that (those) standard liquid(s) provided the following conditions are met:

- (a) the aqueous solution can be assigned to the same UN number as the listed substance in accordance with the criteria of 2.1.3.3, and
- (b) the aqueous solution is not specifically mentioned by name otherwise in the assimilation list in 4.1.1.21.6, and
- (c) no chemical reaction is taking place between the dangerous substance and the solvent water.

Example: Aqueous solutions of UN 1120 tert-Butanol:

- *Pure tert-Butanol itself is assigned to the standard liquid "acetic acid" in the assimilation list.*
- *Aqueous solutions of tert-Butanol can be classified under the entry UN 1120 BUTANOLS in accordance with 2.1.3.3, because the aqueous solution of tert-Butanol does not differ from the entries of the pure substances relating to the class, the packing group(s) and the physical state. Furthermore, the entry "1120 BUTANOLS" is not explicitly limited to the pure substances, and aqueous solutions of these substances are not specifically mentioned by name otherwise in Table A of chapter 3.2 as well as in the assimilation list.*
- *UN 1120 BUTANOLS do not react with water under normal conditions of carriage.*

As a consequence, aqueous solutions of UN 1120 tert-Butanol may be assigned to the standard liquid "acetic acid".

4.1.1.21.5 *Rule for collective entries*

For the assimilation of filling substances for which "Rule for collective entries" is indicated in column (5), the following steps shall be taken and conditions be met (see also scheme in Figure 4.1.1.21.2):

- (a) Perform the assimilation procedure for each dangerous component of the solution, mixture or preparation in accordance with 4.1.1.21.3 taking into account the conditions in 4.1.1.21.2. In the case of generic entries, components may be neglected, that are known to have no damaging effect on high density polyethylene (e.g. solid pigments in UN 1263 PAINT or PAINT RELATED MATERIAL);
- (b) A solution, mixture or preparation cannot be assimilated to a standard liquid, if:
 - (i) the UN number and packing group of one or more of the dangerous components does not appear in the assimilation list; or
 - (ii) "Rule for collective entries" is indicated in column (5) of the assimilation list for one or more of the components; or
 - (iii) (with the exception of UN 2059 NITROCELLULOSE SOLUTION, FLAMMABLE) the classification code of one or more of its dangerous components differs from that of the solution, mixture or preparation.

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- (c) If all dangerous components are listed in the assimilation list, and its classification codes are in accordance with the classification code of the solution, mixture or preparation itself, and all dangerous components are assimilated to the same standard liquid or combination of standard liquids in column (5), the chemical compatibility of the solution, mixture or preparation may be regarded as verified taking into account 4.1.1.21.1 and 4.1.1.21.2;
- (d) If all dangerous components are listed in the assimilation list and its classification codes are in accordance with the classification code of the solution, mixture or preparation itself, but different standard liquids are indicated in column (5), the chemical compatibility may only be regarded as verified for the following combinations of standard liquids taking into account 4.1.1.21.1 and 4.1.1.21.2:
- (i) water/nitric acid 55%; with the exception of inorganic acids with the classification code C1, which are assigned to standard liquid "water";
 - (ii) water/wetting solution;
 - (iii) water/acetic acid;
 - (iv) water/mixture of hydrocarbons;
 - (v) water/n-butyl acetate – n-butyl acetate-saturated wetting solution;
- (e) In the scope of this rule, chemical compatibility is not regarded as verified for other combinations of standard liquids than those specified in (d) and for all cases specified in (b). In such cases the chemical compatibility shall be verified by other means (see 4.1.1.21.3 (d)).

Example 1: Mixture of UN 1940 THIOGLYCOLIC ACID (50%) and UN 2531 METHACRYLIC ACID, STABILIZED (50%); classification of the mixture: UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.

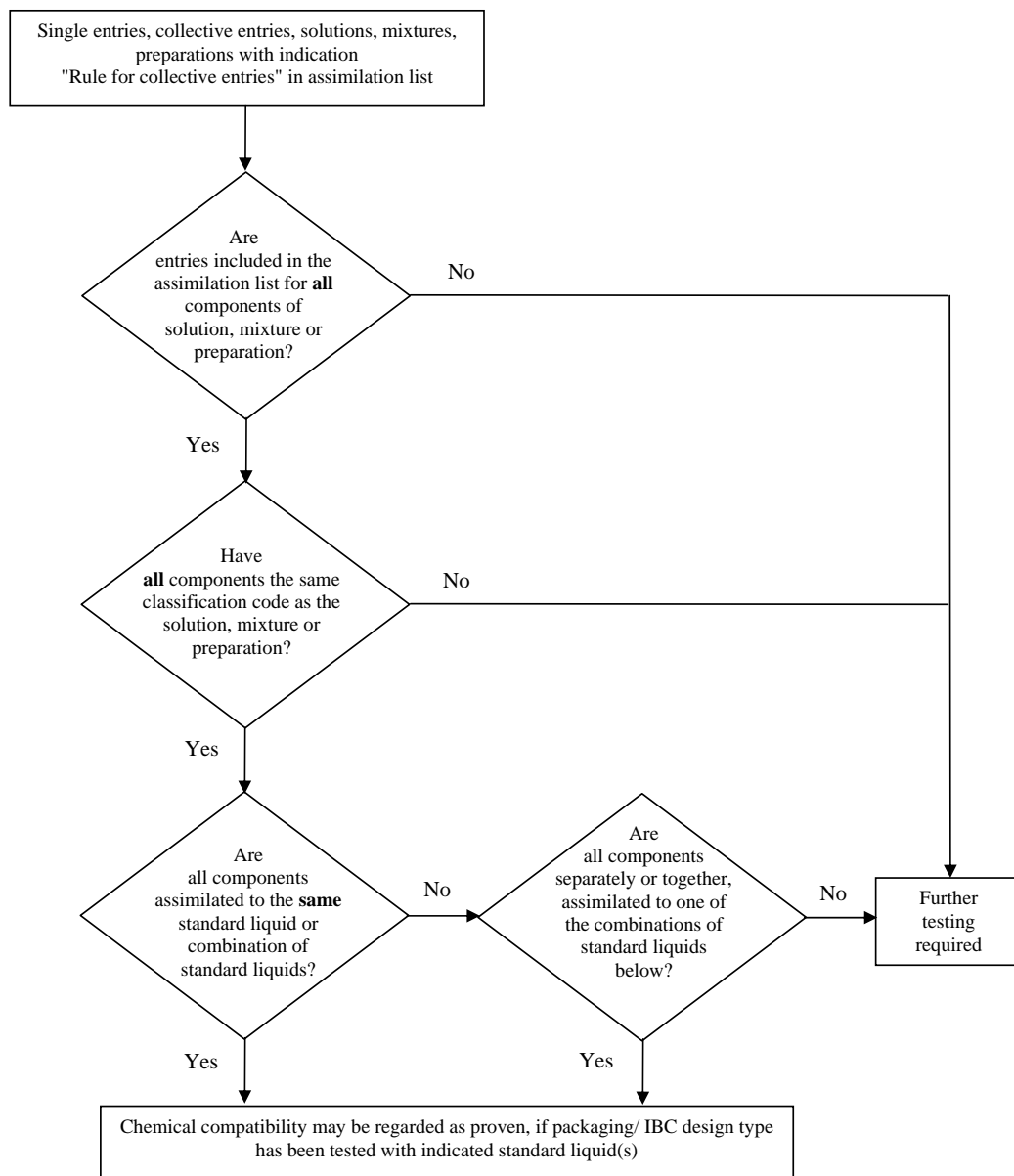
- *Both the UN numbers of the components and the UN number of the mixture are included in the assimilation list;*
- *Both the components and the mixture have the same classification code: C3;*
- *UN 1940 THIOGLYCOLIC ACID is assimilated to standard liquid "acetic acid", and UN 2531 METHACRYLIC ACID, STABILIZED is assimilated to standard liquid "n-butyl acetate/n-butyl acetate-saturated wetting solution". According to paragraph (d) this is not an acceptable combination of standard liquids. The chemical compatibility of the mixture has to be verified by other means.*

Example 2: Mixture of UN 1793 ISOPROPYL ACID PHOSPHATE (50%) and UN 1803 PHENOLSULPHONIC ACID, LIQUID (50%); classification of the mixture: UN 3265 CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.

- *Both the UN numbers of the components and the UN number of the mixture are included in the assimilation list;*
- *Both the components and the mixture have the same classification code: C3;*
- *UN 1793 ISOPROPYL ACID PHOSPHATE is assimilated to standard liquid "wetting solution", and UN 1803 PHENOLSULPHONIC ACID, LIQUID is assimilated to standard liquid "water". According to paragraph (d) this is one of the acceptable combinations of standard liquids. As a consequence the chemical compatibility may be regarded as verified for this mixture, provided the packaging design type is approved for the standard liquids "wetting solution" and "water".*

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Figure 4.1.1.21.2: Scheme "Rules for collective entries"



Acceptable combinations of standard liquids:

- water/nitric acid (55%), with the exception of inorganic acids of classification code C1 which are assigned to standard liquid "water";
- water/wetting solution;
- water/acetic acid;
- water/mixture of hydrocarbons;
- water/n-butyl acetate – n-butyl acetate saturated wetting solution

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4.1.1.21.6 *Assimilation list*

In the following table (assimilation list) dangerous substances are listed in the numerical order of their UN numbers. As a rule, each line deals with a dangerous substance, single entry or collective entry covered by a specific UN number. However, several consecutive lines may be used for the same UN number, if substances belonging to the same UN number have different names (e.g. individual isomers of a group of substances), different chemical properties, different physical properties and/or different transport conditions. In such cases the single entry or collective entry within the particular packing group is the last one of such consecutive lines.

Columns (1) to (4) of table 4.1.1.21.6, following a structure similar to that of Table A of Chapter 3.2, are used to identify the substance for the purpose of this sub-section. The last column indicates the standard liquid(s) to which the substance can be assimilated.

Explanatory notes for each column:

Column (1) UN No.

Contains the UN number:

- of the dangerous substance, if the substance has been assigned its own specific UN number, or
- of the collective entry to which dangerous substances not listed by name have been assigned in accordance with the criteria ("decision trees") of Part 2.

Column (2a) Proper shipping name or technical name

Contains the name of the substance, the name of the single entry, which may cover various isomers, or the name of the collective entry itself.

The indicated name can deviate from the applicable proper shipping name.

Column (2b) Description

Contains a descriptive text to clarify the scope of the entry in those cases when the classification, the transport conditions and/or the chemical compatibility of the substance may be variable.

Column (3a) Class

Contains the number of the class, whose heading covers the dangerous substance. This class number is assigned in accordance with the procedures and criteria of Part 2.

Column (3b) Classification code

Contains the classification code of the dangerous substance in accordance with the procedures and criteria of Part 2.

Column (4) Packing group

Contains the packing group number(s) (I, II or III) assigned to the dangerous substance in accordance with the procedures and criteria of Part 2. Certain substances are not assigned to packing groups.

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Column (5) Standard liquid

This column indicates, as definite information, either a standard liquid or a combination of standard liquids to which the substance can be assimilated, or a reference to the rule for collective entries in 4.1.1.21.5.

Table 4.1.1.21.6: Assimilation list

UN No.	Proper shipping name or technical name 3.1.2	Description 3.1.2	Class 2.2	Classification Code 2.2	Packing group 2.1.1.3	Standard liquid
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
1090	Acetone		3	F1	II	Mixture of hydrocarbons Remark: applicable only, if it is proved that the permeability of the substance out of the package intended for carriage has an acceptable level
1093	Acrylonitrile, stabilized		3	FT1	I	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1104	Amyl acetates	pure isomers and isomeric mixture	3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1105	Pentanol s	pure isomers and isomeric mixture	3	F1	II/III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1106	Amylamines	pure isomers and isomeric mixture	3	FC	II/III	Mixture of hydrocarbons and wetting solution
1109	Amyl formates	pure isomers and isomeric mixture	3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1120	Butanol s	pure isomers and isomeric mixture	3	F1	II/III	Acetic acid
1123	Butyl acetates	pure isomers and isomeric mixture	3	F1	II/III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1125	n-Butylamine		3	FC	II	Mixture of hydrocarbons and wetting solution
1128	n-Butyl formate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1129	Butyraldehyde		3	F1	II	Mixture of hydrocarbons
1133	Adhesives	containing flammable liquid	3	F1	I/II/III	Rule for collective entries
1139	Coating solution	includes surface treatments or coatings used for industrial or other purposes such as vehicle under coating, drum or barrel lining	3	F1	I/II/III	Rule for collective entries
1145	Cyclohexane		3	F1	II	Mixture of hydrocarbons
1146	Cyclopentane		3	F1	II	Mixture of hydrocarbons
1153	Ethylene glycol diethyl ether		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution and mixture of hydrocarbons

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UN No.	Proper shipping name or technical name	Description	Class	Classification Code	Packing group	Standard liquid
(1)	3.1.2 (2a)	3.1.2 (2b)	2.2 (3a)	2.2 (3b)	2.1.1.3 (4)	(5)
1154	Diethylamine		3	FC	II	Mixture of hydrocarbons and wetting solution
1158	Diisopropylamine		3	FC	II	Mixture of hydrocarbons and wetting solution
1160	Dimethylamine aqueous solution		3	FC	II	Mixture of hydrocarbons and wetting solution
1165	Dioxane		3	F1	II	Mixture of hydrocarbons
1169	Extracts, aromatic, liquid		3	F1	II/III	Rule for collective entries
1170	Ethanol or Ethanol solution	aqueous solution	3	F1	II/III	Acetic acid
1171	Ethylene glycol monoethyl ether		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution and mixture of hydrocarbons
1172	Ethylene glycol monoethyl ether acetate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution and mixture of hydrocarbons
1173	Ethyl acetate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1177	2-Ethylbutyl acetate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1178	2-Ethylbutyraldehyde		3	F1	II	Mixture of hydrocarbons
1180	Ethyl butyrate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1188	Ethylene glycol monomethyl ether		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution and mixture of hydrocarbons
1189	Ethylene glycol monomethyl ether acetate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution and mixture of hydrocarbons
1190	Ethyl formate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1191	Octyl aldehydes	pure isomers and isomeric mixture	3	F1	III	Mixture of hydrocarbons
1192	Ethyl lactate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1195	Ethyl propionate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1197	Extracts, flavouring, liquid		3	F1	II/III	Rule for collective entries
1198	Formaldehyde solution, flammable	aqueous solution, flashpoint between 23 °C and 60 °C	3	FC	III	Acetic acid

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UN No.	Proper shipping name or technical name	Description	Class	Classification Code	Packing group	Standard liquid
(1)	3.1.2 (2a)	3.1.2 (2b)	2.2 (3a)	2.2 (3b)	2.1.1.3 (4)	(5)
1202	Diesel fuel	complying with EN 590:2004 or with a flashpoint not more than 100 °C	3	F1	III	Mixture of hydrocarbons
1202	Gas oil	flashpoint not more than 100 °C	3	F1	III	Mixture of hydrocarbons
1202	Heating oil, light	extra light	3	F1	III	Mixture of hydrocarbons
1202	Heating oil, light	complying with EN 590:2004 or with a flashpoint not more than 100 °C	3	F1	III	Mixture of hydrocarbons
1203	Motor spirit, or gasoline, or petrol		3	F1	II	Mixture of hydrocarbons
1206	Heptanes	pure isomers and isomeric mixture	3	F1	II	Mixture of hydrocarbons
1207	Hexaldehyde	n-Hexaldehyde	3	F1	III	Mixture of hydrocarbons
1208	Hexanes	pure isomers and isomeric mixture	3	F1	II	Mixture of hydrocarbons
1210	Printing ink or Printing ink related material	flammable, including printing ink thinning or reducing compound	3	F1	I/II/III	Rule for collective entries
1212	Isobutanol		3	F1	III	Acetic acid
1213	Isobutyl acetate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1214	Isobutylamine		3	FC	II	Mixture of hydrocarbons and wetting solution
1216	Isooctenes	pure isomers and isomeric mixture	3	F1	II	Mixture of hydrocarbons
1219	Isopropanol		3	F1	II	Acetic acid
1220	Isopropyl acetate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1221	Isopropylamine		3	FC	I	Mixture of hydrocarbons and wetting solution
1223	Kerosene		3	F1	III	Mixture of hydrocarbons
1224	3,3-Dimethyl-2-butanone		3	F1	II	Mixture of hydrocarbons
1224	Ketones, liquid, n.o.s.		3	F1	II/III	Rule for collective entries
1230	Methanol		3	FT1	II	Acetic acid
1231	Methyl acetate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1233	Methylamyl acetate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1235	Methylamine, aqueous solution		3	FC	II	Mixture of hydrocarbons and wetting solution
1237	Methyl butyrate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution

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UN No.	Proper shipping name or technical name	Description	Class	Classification Code	Packing group	Standard liquid
(1)	3.1.2 (2a)	3.1.2 (2b)	2.2 (3a)	2.2 (3b)	2.1.1.3 (4)	(5)
1247	Methyl methacrylate monomer, stabilized		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1248	Methyl propionate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1262	Octanes	pure isomers and isomeric mixture	3	F1	II	Mixture of hydrocarbons
1263	Paint or Paint related material	including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base or including paint thinning and reducing compound	3	F1	I/II/III	Rule for collective entries
1265	Pentanes	n-Pentane	3	F1	II	Mixture of hydrocarbons
1266	Perfumery products	with flammable solvents	3	F1	II/III	Rule for collective entries
1268	Coal tar naphtha	vapour pressure at 50 °C not more than 110 kPa	3	F1	II	Mixture of hydrocarbons
1268	Petroleum distillates, n.o.s. or Petroleum products, n.o.s.		3	F1	I/II/III	Rule for collective entries
1274	n-Propanol		3	F1	II/III	Acetic acid
1275	Propionaldehyde		3	F1	II	Mixture of hydrocarbons
1276	n-Propyl acetate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1277	Propylamine	n-Propylamine	3	FC	II	Mixture of hydrocarbons and wetting solution
1281	Propyl formates	pure isomers and isomeric mixture	3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1282	Pyridine		3	F1	II	Mixture of hydrocarbons
1286	Rosin oil		3	F1	II/III	Rule for collective entries
1287	Rubber solution		3	F1	II/III	Rule for collective entries
1296	Triethylamine		3	FC	II	Mixture of hydrocarbons and wetting solution
1297	Trimethylamine, aqueous solution	not more than 50% trimethylamine, by mass	3	FC	I/II/III	Mixture of hydrocarbons and wetting solution
1301	Vinyl acetate, stabilized		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1306	Wood preservatives, liquid		3	F1	II/III	Rule for collective entries
1547	Aniline		6.1	T1	II	Acetic acid
1590	Dichloroanilines, liquid	pure isomers and isomeric mixture	6.1	T1	II	Acetic acid
1602	Dye, liquid, toxic, n.o.s. or Dye intermediate, liquid, toxic, n.o.s.		6.1	T1	I/II/III	Rule for collective entries

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UN No.	Proper shipping name or technical name	Description	Class	Classification Code	Packing group	Standard liquid
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
1604	Ethylenediamine		8	CF1	II	Mixture of hydrocarbons and wetting solution
1715	Acetic anhydride		8	CF1	II	Acetic acid
1717	Acetyl chloride		3	FC	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1718	Butyl acid phosphate		8	C3	III	Wetting solution
1719	Hydrogen sulphide	aqueous solution	8	C5	III	Acetic acid
1719	Caustic alkali liquid, n.o.s.	inorganic	8	C5	II/III	Rule for collective entries
1730	Antimony pentachloride, liquid	pure	8	C1	II	Water
1736	Benzoyl chloride		8	C3	II	Mixture of hydrocarbons and wetting solution
1750	Chloroacetic acid solution	aqueous solution	6.1	TC1	II	Acetic acid
1750	Chloroacetic acid solution	mixtures of mono- and dichloroacetic acid	6.1	TC1	II	Acetic acid
1752	Chloroacetyl chloride		6.1	TC1	I	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1755	Chromic acid solution	aqueous solution with not more than 30% chromic acid	8	C1	II/III	Nitric acid
1760	Cyanamide	aqueous solution with not more than 50% cyanamide	8	C9	II	Water
1760	O,O-Diethyl-dithiophosphoric acid		8	C9	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1760	O,O-Diisopropyl-dithiophosphoric acid		8	C9	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1760	O,O-Di-n-propyl-dithiophosphoric acid		8	C9	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1760	Corrosive liquid, n.o.s.	flashpoint more than 60 °C	8	C9	I/II/III	Rule for collective entries
1761	Cupriethylenediamine solution	aqueous solution	8	CT1	II/III	Mixture of hydrocarbons and wetting solution
1764	Dichloroacetic acid		8	C3	II	Acetic acid
1775	Fluoroboric acid	aqueous solution with not more than 50% fluoroboric acid	8	C1	II	Water
1778	Fluorosilicic acid		8	C1	II	Water
1779	Formic acid	with more than 85% acid by mass	8	C3	II	Acetic acid
1783	Hexamethylenediamine solution	aqueous solution	8	C7	II/III	Mixture of hydrocarbons and wetting solution
1787	Hydriodic acid	aqueous solution	8	C1	II/III	Water
1788	Hydrobromic acid	aqueous solution	8	C1	II/III	Water
1789	Hydrochloric acid	not more than 38% aqueous solution	8	C1	II/III	Water
1790	Hydrofluoric acid	with not more than 60% hydrofluoric acid	8	CT1	II	Water the permissible period of use: not more than 2 years

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UN No.	Proper shipping name or technical name	Description	Class	Classification Code	Packing group	Standard liquid
	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
1791	Hypochlorite solution	aqueous solution, containing wetting agents as customary in trade	8	C9	II/III	Nitric acid and wetting solution *
1791	Hypochlorite solution	aqueous solution	8	C9	II/III	Nitric acid *
* For UN 1791: Test to be carried out only with vent. If the test is carried out with nitric acid as the standard liquid, an acid-resistant vent and gasket shall be used. If the test is carried out with hypochlorite solutions themselves, vents and gaskets of the same design type, resistant to hypochlorite (e.g. of silicone rubber) but not resistant to nitric acid, are also permitted.						
1793	Isopropyl acid phosphate		8	C3	III	Wetting solution
1802	Perchloric acid	aqueous solution with not more than 50% acid, by mass	8	CO1	II	Water
1803	Phenolsulphonic acid, liquid	isomeric mixture	8	C3	II	Water
1805	Phosphoric acid, solution		8	C1	III	Water
1814	Potassium hydroxide solution	aqueous solution	8	C5	II/III	Water
1824	Sodium hydroxide solution	aqueous solution	8	C5	II/III	Water
1830	Sulphuric acid	with more than 51% pure acid	8	C1	II	Water
1832	Sulphuric acid, spent	chemical stable	8	C1	II	Water
1833	Sulphurous acid		8	C1	II	Water
1835	Tetramethylammonium hydroxide, solution	aqueous solution, flashpoint more than 60 °C	8	C7	II	Water
1840	Zinc chloride solution	aqueous solution	8	C1	III	Water
1848	Propionic acid	with not less than 10% and less than 90% acid by mass	8	C3	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1862	Ethyl crotonate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1863	Fuel, aviation, turbine engine		3	F1	I/II/III	Mixture of hydrocarbons
1866	Resin solution	flammable	3	F1	I/II/III	Rule for collective entries
1902	Diisooctyl acid phosphate		8	C3	III	Wetting solution
1906	Sludge acid		8	C1	II	Nitric acid
1908	Chlorite solution	aqueous solution	8	C9	II/III	Acetic acid
1914	Butyl propionates		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1915	Cyclohexanone		3	F1	III	Mixture of hydrocarbons
1917	Ethyl acrylate, stabilized		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1919	Methyl acrylate, stabilized		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1920	Nonanes	pure isomers and isomeric mixture, flashpoint between 23 °C and 60 °C	3	F1	III	Mixture of hydrocarbons
1935	Cyanide solution, n.o.s.	inorganic	6.1	T4	I/II/III	Water
1940	Thioglycolic acid		8	C3	II	Acetic acid
1986	Alcohols, flammable, toxic, n.o.s.		3	FT1	I/II/III	Rule for collective entries
1987	Cyclohexanol	technical pure	3	F1	III	Acetic acid
1987	Alcohols, n.o.s.		3	F1	II/III	Rule for collective entries

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UN No.	Proper shipping name or technical name	Description	Class	Classification Code	Packing group	Standard liquid
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
1988	Aldehydes, flammable, toxic, n.o.s.		3	FT1	I/II/III	Rule for collective entries
1989	Aldehydes, n.o.s.		3	F1	I/II/III	Rule for collective entries
1992	2,6-cis-Dimethyl-morpholine		3	FT1	III	Mixture of hydrocarbons
1992	Flammable liquid, toxic, n.o.s.		3	FT1	I/II/III	Rule for collective entries
1993	Propionic acid vinyl ester		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1993	(1-Methoxy-2-propyl) acetate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
1993	Flammable liquid, n.o.s.		3	F1	I/II/III	Rule for collective entries
2014	Hydrogen peroxide, aqueous solution	with not less than 20% but not more than 60% hydrogen peroxide, stabilized as necessary	5.1	OC1	II	Nitric acid
2022	Cresylic acid	liquid mixture containing cresols, xyenols and methyl phenols	6.1	TC1	II	Acetic acid
2030	Hydrazine aqueous solution	with not less than 37% but not more than 64% hydrazine, by mass	8	CT1	II	Water
2030	Hydrazine hydrate	aqueous solution with 64% hydrazine	8	CT1	II	Water
2031	Nitric acid	other than red fuming, with not more than 55% pure acid	8	CO1	II	Nitric acid
2045	Isobutyraldehyde		3	F1	II	Mixture of hydrocarbons
2050	Diisobutylene isomeric compounds		3	F1	II	Mixture of hydrocarbons
2053	Methyl isobutyl carbinol		3	F1	III	Acetic acid
2054	Morpholine		8	CF1	I	Mixture of hydrocarbons
2057	Tripropylene		3	F1	II/III	Mixture of hydrocarbons
2058	Valeraldehyde	pure isomers and isomeric mixture	3	F1	II	Mixture of hydrocarbons
2059	Nitrocellulose solution, flammable		3	D	I/II/III	Rule for collective entries: Deviating from the general procedure this rule may be applied to solvents of classification code F1
2075	Chloral, anhydrous, stabilized		6.1	T1	II	Wetting solution
2076	Cresols, liquid	pure isomers and isomeric mixture	6.1	TC1	II	Acetic acid
2078	Toluene diisocyanate	liquid	6.1	T1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2079	Diethylenetriamine		8	C7	II	Mixture of hydrocarbons
2209	Formaldehyde solution	aqueous solution with 37% Form-aldehyde, methanol content: 8-10%	8	C9	III	Acetic acid
2209	Formaldehyde solution	aqueous solution, with not less than 25% formaldehyde	8	C9	III	Water

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UN No.	Proper shipping name or technical name	Description	Class	Classification Code	Packing group	Standard liquid
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
2218	Acrylic acid, stabilized		8	CF1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2227	n-Butyl methacrylate, stabilized		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2235	Chlorobenzyl chlorides, liquid	para-Chlorobenzyl chloride	6.1	T2	III	Mixture of hydrocarbons
2241	Cycloheptane		3	F1	II	Mixture of hydrocarbons
2242	Cycloheptene		3	F1	II	Mixture of hydrocarbons
2243	Cyclohexyl acetate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2244	Cyclopentanol		3	F1	III	Acetic acid
2245	Cyclopentanone		3	F1	III	Mixture of hydrocarbons
2247	n-Decane		3	F1	III	Mixture of hydrocarbons
2248	Di-n-butylamine		8	CF1	II	Mixture of hydrocarbons
2258	1,2-Propylenediamine		8	CF1	II	Mixture of hydrocarbons and wetting solution
2259	Triethylenetetramine		8	C7	II	Water
2260	Tripropylamine		3	FC	III	Mixture of hydrocarbons and wetting solution
2263	Dimethylcyclohexanes	pure isomers and isomeric mixture	3	F1	II	Mixture of hydrocarbons
2264	N,N-Dimethyl-cyclohexylamine		8	CF1	II	Mixture of hydrocarbons and wetting solution
2265	N,N-Dimethyl-formamide		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2266	Dimethyl-N-propylamine		3	FC	II	Mixture of hydrocarbons and wetting solution
2269	3,3'-Imino-dipropylamine		8	C7	III	Mixture of hydrocarbons and wetting solution
2270	Ethylamine, aqueous solution	with not less than 50% but not more than 70% ethylamine, flashpoint below 23 °C, corrosive or slightly corrosive	3	FC	II	Mixture of hydrocarbons and wetting solution
2275	2-Ethylbutanol		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2276	2-Ethylhexylamine		3	FC	III	Mixture of hydrocarbons and wetting solution
2277	Ethyl methacrylate, stabilized		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2278	n-Heptene		3	F1	II	Mixture of hydrocarbons
2282	Hexanols	pure isomers and isomeric mixture	3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution

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UN No.	Proper shipping name or technical name	Description	Class	Classification Code	Packing group	Standard liquid
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
2283	Isobutyl methacrylate, stabilized		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2286	Pentamethylheptane		3	F1	III	Mixture of hydrocarbons
2287	Isoheptenes		3	F1	II	Mixture of hydrocarbons
2288	Isohexenes		3	F1	II	Mixture of hydrocarbons
2289	Isophoronediamine		8	C7	III	Mixture of hydrocarbons and wetting solution
2293	4-Methoxy-4-methyl-pentan-2-one		3	F1	III	Mixture of hydrocarbons
2296	Methylcyclohexane		3	F1	II	Mixture of hydrocarbons
2297	Methylcyclohexanone	pure isomers and isomeric mixture	3	F1	III	Mixture of hydrocarbons
2298	Methylcyclopentane		3	F1	II	Mixture of hydrocarbons
2302	5-Methylhexan-2-one		3	F1	III	Mixture of hydrocarbons
2308	Nitrosylsulphuric acid, liquid		8	C1	II	Water
2309	Octadienes		3	F1	II	Mixture of hydrocarbons
2313	Picolines	pure isomers and isomeric mixture	3	F1	III	Mixture of hydrocarbons
2317	Sodium cuprocyanide solution	aqueous solution	6.1	T4	I	Water
2320	Tetraethylenepentamine		8	C7	III	Mixture of hydrocarbons and wetting solution
2324	Triisobutylene	mixture of C12-mono-olefines, flashpoint between 23 °C and 60 °C	3	F1	III	Mixture of hydrocarbons
2326	Trimethyl-cyclohexylamine		8	C7	III	Mixture of hydrocarbons and wetting solution
2327	Trimethylhexamethylene-diamines	pure isomers and isomeric mixture	8	C7	III	Mixture of hydrocarbons and wetting solution
2330	Undecane		3	F1	III	Mixture of hydrocarbons
2336	Allyl formate		3	FT1	I	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2348	Butyl acrylates, stabilized	pure isomers and isomeric mixture	3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2357	Cyclohexylamine	flashpoint between 23 °C and 60 °C	8	CF1	II	Mixture of hydrocarbons and wetting solution
2361	Diisobutylamine		3	FC	III	Mixture of hydrocarbons and wetting solution
2366	Diethyl carbonate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2367	alpha-Methyl-valeraldehyde		3	F1	II	Mixture of hydrocarbons
2370	1-Hexene		3	F1	II	Mixture of hydrocarbons

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UN No.	Proper shipping name or technical name	Description	Class	Classification Code	Packing group	Standard liquid
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
2372	1,2-Di-(dimethylamino)-ethane		3	F1	II	Mixture of hydrocarbons and wetting solution
2379	1,3-Dimethylbutylamine		3	FC	II	Mixture of hydrocarbons and wetting solution
2383	Dipropylamine		3	FC	II	Mixture of hydrocarbons and wetting solution
2385	Ethyl isobutyrate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2393	Isobutyl formate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2394	Isobutyl propionate	flashpoint between 23 °C and 60 °C	3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2396	Methacrylaldehyde, stabilized		3	FT1	II	Mixture of hydrocarbons
2400	Methyl isovalerate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2401	Piperidine		8	CF1	I	Mixture of hydrocarbons and wetting solution
2403	Isopropenyl acetate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2405	Isopropyl butyrate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2406	Isopropyl isobutyrate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2409	Isopropyl propionate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2410	1,2,3,6-Tetrahydropyridine		3	F1	II	Mixture of hydrocarbons
2427	Potassium chlorate, aqueous solution		5.1	O1	II/III	Water
2428	Sodium chlorate, aqueous solution		5.1	O1	II/III	Water
2429	Calcium chlorate, aqueous solution		5.1	O1	II/III	Water
2436	Thioacetic acid		3	F1	II	Acetic acid
2457	2,3-Dimethylbutane		3	F1	II	Mixture of hydrocarbons
2491	Ethanolamine		8	C7	III	Wetting solution
2491	Ethanolamine solution	aqueous solution	8	C7	III	Wetting solution
2496	Propionic anhydride		8	C3	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2524	Ethyl orthoformate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution

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UN No.	Proper shipping name or technical name	Description	Class	Classification Code	Packing group	Standard liquid
(1)	3.1.2 (2a)	3.1.2 (2b)	2.2 (3a)	2.2 (3b)	2.1.1.3 (4)	(5)
2526	Furfurylamine		3	FC	III	Mixture of hydrocarbons and wetting solution
2527	Isobutyl acrylate, stabilized		3	F1	III	n-Butyl acetate/n-butyl acetate-saturated wetting solution
2528	Isobutyl isobutyrate		3	F1	III	n-Butyl acetate/n-butyl acetate-saturated wetting solution
2529	Isobutyric acid		3	FC	III	n-Butyl acetate/n-butyl acetate-saturated wetting solution
2531	Methacrylic acid, stabilized		8	C3	II	n-Butyl acetate/n-butyl acetate-saturated wetting solution
2542	Tributylamine		6.1	T1	II	Mixture of hydrocarbons
2560	2-Methylpentan-2-ol		3	F1	III	n-Butyl acetate/n-butyl acetate-saturated wetting solution
2564	Trichloroacetic acid solution	aqueous solution	8	C3	II/III	Acetic acid
2565	Dicyclohexylamine		8	C7	III	Mixture of hydrocarbons and wetting solution
2571	Ethylsulphuric acid		8	C3	II	n-Butyl acetate/n-butyl acetate-saturated wetting solution
2571	Alkylsulphuric acids		8	C3	II	Rule for collective entries
2580	Aluminium bromide solution	aqueous solution	8	C1	III	Water
2581	Aluminium chloride solution	aqueous solution	8	C1	III	Water
2582	Ferric chloride solution	aqueous solution	8	C1	III	Water
2584	Methane sulphonic acid	with more than 5% free sulphuric acid	8	C1	II	Water
2584	Alkylsulphonic acids, liquid	with more than 5% free sulphuric acid	8	C1	II	n-Butyl acetate/n-butyl acetate-saturated wetting solution
2584	Benzene sulphonic acid	with more than 5% free sulphuric acid	8	C1	II	Water
2584	Toluene sulphonic acids	with more than 5% free sulphuric acid	8	C1	II	Water
2584	Arylsulphonic acids, liquid	with more than 5% free sulphuric acid	8	C1	II	n-Butyl acetate/n-butyl acetate-saturated wetting solution
2586	Methane sulfonic acid	with not more than 5% free sulphuric acid	8	C1	III	Water
2586	Alkylsulphonic acids, liquid	with not more than 5% free sulphuric acid	8	C1	III	n-Butyl acetate/n-butyl acetate-saturated wetting solution
2586	Benzene sulphonic acid	with not more than 5% free sulphuric acid	8	C1	III	Water
2586	Toluene sulphonic acids	with not more than 5% free sulphuric acid	8	C1	III	Water
2586	Arylsulphonic acids, liquid	with not more than 5% free sulphuric acid	8	C1	III	n-Butyl acetate/n-butyl acetate-saturated wetting solution

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UN No.	Proper shipping name or technical name	Description	Class	Classification Code	Packing group	Standard liquid
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
2610	Triallylamine		3	FC	III	Mixture of hydrocarbons and wetting solution
2614	Methallyl alcohol		3	F1	III	Acetic acid
2617	Methylecyclohexanols	pure isomers and isomeric mixture, flashpoint between 23 °C and 60 °C	3	F1	III	Acetic acid
2619	Benzyl dimethylamine		8	CF1	II	Mixture of hydrocarbons and wetting solution
2620	Amyl butyrates	pure isomers and isomeric mixture, flashpoint between 23 °C and 60 °C	3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2622	Glycidaldehyde	flashpoint below 23 °C	3	FT1	II	Mixture of hydrocarbons
2626	Chloric acid, aqueous solution	with not more than 10% chloric acid	5.1	O1	II	Nitric acid
2656	Quinoline	flashpoint more than 60 °C	6.1	T1	III	Water
2672	Ammonia solution	relative density between 0.880 and 0.957 at 15 °C in water, with more than 10% but not more than 35% ammonia	8	C5	III	Water
2683	Ammonium sulphide solution	aqueous solution, flashpoint between 23 °C and 60 °C	8	CFT	II	Acetic acid
2684	3-Diethylamino-propylamine		3	FC	III	Mixture of hydrocarbons and wetting solution
2685	N,N-Diethylethylenediamine		8	CF1	II	Mixture of hydrocarbons and wetting solution
2693	Bisulphites, aqueous solution, n.o.s.	inorganic	8	C1	III	Water
2707	Dimethyldioxanes	pure isomers and isomeric mixture	3	F1	II/III	Mixture of hydrocarbons
2733	Amines, flammable, corrosive, n.o.s. or Polyamines, flammable, corrosive, n.o.s.		3	FC	I/II/III	Mixture of hydrocarbons and wetting solution
2734	Di-sec-butylamine		8	CF1	II	Mixture of hydrocarbons
2734	Amines, liquid, corrosive, flammable, n.o.s. or Polyamines, liquid, corrosive, flammable, n.o.s.		8	CF1	I/II	Mixture of hydrocarbons and wetting solution
2735	Amines, liquid, corrosive, n.o.s. or Polyamines, liquid, corrosive, n.o.s.		8	C7	I/II/III	Mixture of hydrocarbons and wetting solution
2739	Butyric anhydride		8	C3	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2789	Acetic acid, glacial or Acetic acid solution	aqueous solution, more than 80% acid, by mass	8	CF1	II	Acetic acid

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(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
2790	Acetic acid solution	aqueous solution, more than 10% but not more than 80% acid, by mass	8	C3	II/III	Acetic acid
2796	Sulphuric acid	with not more than 51% pure acid	8	C1	II	Water
2797	Battery fluid, alkali	Potassium/Sodium hydroxide, aqueous solution	8	C5	II	Water
2810	2-Chloro-6-fluorobenzyl chloride	stabilized	6.1	T1	III	Mixture of hydrocarbons
2810	2-Phenylethanol		6.1	T1	III	Acetic acid
2810	Ethylene glycol monoethyl ether		6.1	T1	III	Acetic acid
2810	Toxic liquid, organic, n.o.s.		6.1	T1	I/II/III	Rule for collective entries
2815	N-Aminoethylpiperazine		8	C7	III	Mixture of hydrocarbons and wetting solution
2818	Ammonium polysulphide solution	aqueous solution	8	CT1	II/III	Acetic acid
2819	Amyl acid phosphate		8	C3	III	Wetting solution
2820	Butyric acid	n-Butyric acid	8	C3	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2821	Phenol solution	aqueous solution, toxic, non-alkaline	6.1	T1	II/III	Acetic acid
2829	Caproic acid	n-Caproic acid	8	C3	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2837	Bisulphates, aqueous solution		8	C1	II/III	Water
2838	Vinyl butyrate, stabilized		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2841	Di-n-amylamine		3	FT1	III	Mixture of hydrocarbons and wetting solution
2850	Propylene tetramer	mixture of C12-monoolefines, flashpoint between 23 °C and 60 °C	3	F1	III	Mixture of hydrocarbons
2873	Dibutylaminoethanol	N,N-Di-n-butylaminoethanol	6.1	T1	III	Acetic acid
2874	Furfuryl alcohol		6.1	T1	III	Acetic acid
2920	O,O-Diethyl-dithiophosphoric acid	flashpoint between 23 °C and 60 °C	8	CF1	II	n-Butylacetate/ n-Butylacetate-saturated wetting solution
2920	O,O-Dimethyl-dithiophosphoric acid	flashpoint between 23 °C and 60 °C	8	CF1	II	Wetting solution
2920	Hydrogen bromide	33% solution in glacial acetic acid	8	CF1	II	Wetting solution
2920	Tetramethylammonium hydroxide	aqueous solution, flashpoint between 23 °C and 60 °C	8	CF1	II	Water
2920	Corrosive liquid, flammable, n.o.s.		8	CF1	I/II	Rule for collective entries
2922	Ammonium sulphide	aqueous solution, flashpoint more than 60 °C	8	CT1	II	Water

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(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
2922	Cresols	aqueous alkaline solution, mixture of sodium and potassium cresolate,	8	CT1	II	Acetic acid
2922	Phenol	aqueous alkaline solution, mixture of sodium and potassium phenolate	8	CT1	II	Acetic acid
2922	Sodium hydrogen difluoride	aqueous solution	8	CT1	III	Water
2922	Corrosive liquid, toxic, n.o.s.		8	CT1	I/II/III	Rule for collective entries
2924	Flammable liquid, corrosive, n.o.s.	slightly corrosive	3	FC	I/II/III	Rule for collective entries
2927	Toxic liquid, corrosive, organic, n.o.s.		6.1	TC1	I/II	Rule for collective entries
2933	Methyl 2-chloropropionate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2934	Isopropyl 2-chloropropionate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2935	Ethyl 2-chloropropionate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2936	Thiolactic acid		6.1	T1	II	Acetic acid
2941	Fluoroanilines	pure isomers and isomeric mixture	6.1	T1	III	Acetic acid
2943	Tetrahydrofurfurylamine		3	F1	III	Mixture of hydrocarbons
2945	N-Methylbutylamine		3	FC	II	Mixture of hydrocarbons and wetting solution
2946	2-Amino-5-diethylaminopentane		6.1	T1	III	Mixture of hydrocarbons and wetting solution
2947	Isopropyl chloroacetate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
2984	Hydrogen peroxide, aqueous solution	with not less than 8% but less than 20% hydrogen peroxide, stabilized as necessary	5.1	O1	III	Nitric acid
3056	n-Heptaldehyde		3	F1	III	Mixture of hydrocarbons
3065	Alcoholic beverages	with more than 24% alcohol by volume	3	F1	II/III	Acetic acid
3066	Paint or Paint related material	including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base or including paint thinning and reducing compound	8	C9	II/III	Rule for collective entries
3079	Methacrylonitrile, stabilized		6.1	TF1	I	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3082	sec-Alcohol C ₆ -C ₁₇ poly (3-6) ethoxylate		9	M6	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution and mixture of hydrocarbons

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(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
3082	Alcohol C ₁₂ -C ₁₅ poly (1-3) ethoxylate		9	M6	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution and mixture of hydrocarbons
3082	Alcohol C ₁₃ -C ₁₅ poly (1-6) ethoxylate		9	M6	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution and mixture of hydrocarbons
3082	Aviation turbine fuel JP-5	flashpoint more than 60 °C	9	M6	III	Mixture of hydrocarbons
3082	Aviation turbine fuel JP-7	flashpoint more than 60 °C	9	M6	III	Mixture of hydrocarbons
3082	Coal tar	flashpoint more than 60 °C	9	M6	III	Mixture of hydrocarbons
3082	Coal tar naphtha	flashpoint more than 60 °C	9	M6	III	Mixture of hydrocarbons
3082	Creosote produced of coal tar	flashpoint more than 60 °C	9	M6	III	Mixture of hydrocarbons
3082	Creosote produced of wood tar	flashpoint more than 60 °C	9	M6	III	Mixture of hydrocarbons
3082	Cresyl diphenyl phosphate		9	M6	III	Wetting solution
3082	Decyl acrylate		9	M6	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution and mixture of hydrocarbons
3082	Diisobutyl phthalate		9	M6	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution and mixture of hydrocarbons
3082	Di-n-butyl phthalate		9	M6	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution and mixture of hydrocarbons
3082	Hydrocarbons	liquid, flashpoint more than 60 °C, environmentally hazardous	9	M6	III	Rule for collective entries
3082	Isodecyl diphenyl phosphate		9	M6	III	Wetting solution
3082	Methylnaphthalenes	isomeric mixture, liquid	9	M6	III	Mixture of hydrocarbons
3082	Triaryl phosphates	n.o.s.	9	M6	III	Wetting solution
3082	Tricresyl phosphate	with not more than 3% ortho-isomer	9	M6	III	Wetting solution
3082	Trixylenyl phosphate		9	M6	III	Wetting solution
3082	Zinc alkyl dithiophosphate	C3-C14	9	M6	III	Wetting solution
3082	Zinc aryl dithiophosphate	C7-C16	9	M6	III	Wetting solution
3082	Environmentally hazardous substance, liquid, n.o.s.		9	M6	III	Rule for collective entries
3099	oxic, n.o.s.		5.1	OT1	I/II/III	Rule for collective entries

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(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
3101 3103 3105 3107 3109 3111 3113 3115 3117 3119	Organic Peroxide, Type B, C, D, E or F, liquid or Organic Peroxide, Type B, C, D, E or F, liquid, temperature controlled		5.2	P1		n-Butyl acetate/ n-butyl acetate-saturated wetting solution and mixture of hydrocarbons and nitric acid**
** For UN Nos. 3101, 3103, 3105, 3107, 3109, 3111, 3113, 3115, 3117, 3119 (tert-butyl hydroperoxide with more than 40% peroxide content and peroxyacetic acids are excluded): All organic peroxides in a technically pure form or in solution in solvents which, as far as their compatibility is concerned, are covered by the standard liquid "mixture of hydrocarbons" in this list. Compatibility of vents and gaskets with organic peroxides may be verified, also independently of the design type test, by laboratory tests with nitric acid.						
3145	Butylphenols	liquid, n.o.s.	8	C3	I/II/III	Acetic acid
3145	Alkylphenols, liquid, n.o.s.	including C2 to C12 homologues	8	C3	I/II/III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3149	Hydrogen peroxide and peroxyacetic acid mixture, stabilized	with UN 2790 acetic acid, UN 2796 sulphuric acid and/or UN 1805 phosphoric acid, water and not more than 5% peroxyacetic acid	5.1	OC1	II	Wetting solution and nitric acid
3210	Chlorates, inorganic, aqueous solution, n.o.s.		5.1	O1	II/III	Water
3211	Perchlorates, inorganic, aqueous solution, n.o.s.		5.1	O1	II/III	Water
3213	Bromates, inorganic, aqueous solution, n.o.s.		5.1	O1	II/III	Water
3214	Permanganates, inorganic, aqueous solution, n.o.s.		5.1	O1	II	Water
3216	Persulphates, inorganic, aqueous solution, n.o.s.		5.1	O1	III	Wetting solution
3218	Nitrates, inorganic, aqueous solution, n.o.s.		5.1	O1	II/III	Water
3219	Nitrites, inorganic, aqueous solution, n.o.s.		5.1	O1	II/III	Water
3264	Cupric chloride	aqueous solution, slightly corrosive	8	C1	III	Water
3264	Hydroxylamine sulphate	25% aqueous solution	8	C1	III	Water
3264	Phosphorous acid	aqueous solution	8	C1	III	Water
3264	Corrosive liquid, acidic, inorganic, n.o.s.	flashpoint more than 60 °C	8	C1	I/II/III	Rule for collective entries; not applicable to mixtures having components of UN Nos.: 1830, 1832, 1906 and 2308
3265	Methoxyacetic acid		8	C3	I	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3265	Allyl succinic acid anhydride		8	C3	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3265	Dithioglycolic acid		8	C3	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution

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UN No.	Proper shipping name or technical name	Description	Class	Classification Code	Packing group	Standard liquid
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
3265	Butyl phosphate	mixture of mono- and di-butyl phosphate	8	C3	III	Wetting solution
3265	Caprylic acid		8	C3	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3265	Isovaleric acid		8	C3	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3265	Pelargonic acid		8	C3	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3265	Pyruvic acid		8	C3	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3265	Valeric acid		8	C3	III	Acetic acid
3265	Corrosive liquid, acidic, organic, n.o.s.	flashpoint more than 60 °C	8	C3	I/II/III	Rule for collective entries
3266	Sodium hydrosulphide	aqueous solution	8	C5	II	Acetic acid
3266	Sodium sulphide	aqueous solution, slightly corrosive	8	C5	III	Acetic acid
3266	Corrosive liquid, basic, inorganic, n.o.s.	flashpoint more than 60 °C	8	C5	I/II/III	Rule for collective entries
3267	2,2'-(Butylimino)-bisethanol		8	C7	II	Mixture of hydrocarbons and wetting solution
3267	Corrosive liquid, basic, organic, n.o.s.	flashpoint more than 60 °C	8	C7	I/II/III	Rule for collective entries
3271	Ethylene glycol monobutyl ether	flashpoint 60 °C	3	F1	III	Acetic acid
3271	Ether, n.o.s.		3	F1	II/III	Rule for collective entries
3272	Acrylic acid tert-butyl ester		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3272	Isobutyl propionate	flashpoint below 23 °C	3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3272	Methyl valerate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3272	Trimethyl ortho-formate		3	F1	II	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3272	Ethyl valerate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3272	Isobutyl isovalerate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3272	n-Amyl propionate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3272	n-Butylbutyrate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3272	Methyl lactate		3	F1	III	n-Butyl acetate/ n-butyl acetate-saturated wetting solution
3272	Ester, n.o.s.		3	F1	II/III	Rule for collective entries

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UN No.	Proper shipping name or technical name	Description	Class	Classification Code	Packing group	Standard liquid
(1)	3.1.2 (2a)	3.1.2 (2b)	2.2 (3a)	2.2 (3b)	2.1.1.3 (4)	(5)
3287	Sodium nitrite	40% aqueous solution	6.1	T4	III	Water
3287	Toxic liquid, inorganic, n.o.s.		6.1	T4	I/II/III	Rule for collective entries
3291	Clinical waste, unspecified, n.o.s.	liquid	6.2	I3	II	Water
3293	Hydrazine, aqueous solution	with not more than 37% hydrazine, by mass	6.1	T4	III	Water
3295	Heptenes	n.o.s	3	F1	II	Mixture of hydrocarbons
3295	Nonanes	flashpoint below 23 °C	3	F1	II	Mixture of hydrocarbons
3295	Decanes	n.o.s	3	F1	III	Mixture of hydrocarbons
3295	1,2,3-Trimethylbenzene		3	F1	III	Mixture of hydrocarbons
3295	Hydrocarbons, liquid, n.o.s.		3	F1	I/II/III	Rule for collective entries
3405	Barium chlorate, solution	aqueous solution	5.1	OT1	II/III	Water
3406	Barium perchlorate, solution	aqueous solution	5.1	OT1	II/III	Water
3408	Lead perchlorate, solution	aqueous solution	5.1	OT1	II/III	Water
3413	Potassium cyanide, solution	aqueous solution	6.1	T4	I/II/III	Water
3414	Sodium cyanide, solution	aqueous solution	6.1	T4	I/II/III	Water
3415	Sodium fluoride, solution	aqueous solution	6.1	T4	III	Water
3422	Potassium fluoride, solution	aqueous solution	6.1	T4	III	Water

4.1.2 Additional general provisions for the use of IBCs

4.1.2.1 When IBCs are used for the carriage of liquids with a flash-point of 60 °C (closed cup) or lower, or of powders liable to dust explosion, measures shall be taken to prevent a dangerous electrostatic discharge.

4.1.2.2 Every metal, rigid plastics and composite IBC, shall be inspected and tested, as relevant, in accordance with 6.5.4.4 or 6.5.4.5:

- before it is put into service;
- thereafter at intervals not exceeding two and a half and five years, as appropriate;
- after the repair or remanufacture, before it is re-used for carriage.

An IBC shall not be filled and offered for carriage after the date of expiry of the last periodic test or inspection. However, an IBC filled prior to the date of expiry of the last periodic test or inspection may be carried for a period not to exceed three months beyond the date of expiry of the last periodic test or inspection. In addition, an IBC may be carried after the date of expiry of the last periodic test or inspection:

- (a) after emptying but before cleaning, for purposes of performing the required test or inspection prior to refilling; and
- (b) unless otherwise approved by the competent authority, for a period not to exceed six months beyond the date of expiry of the last periodic test or inspection in order to allow the return of dangerous goods or residues for proper disposal or recycling.

NOTE: For the particulars in the transport document, see 5.4.1.1.11.

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4.1.2.3 IBCs of type 31HZ2 shall be filled to at least 80% of the volume of the outer casing.

4.1.2.4 Except for routine maintenance of metal, rigid plastics, composite and flexible IBCs performed by the owner of the IBC, whose State and name or authorized symbol is durably marked on the IBC, the party performing routine maintenance shall durably mark the IBC near the manufacturer's UN design type marking to show:

- (a) The State in which the routine maintenance was carried out; and
- (b) The name or authorized symbol of the party performing the routine maintenance.

4.1.3 General provisions concerning packing instructions

4.1.3.1 Packing instructions applicable to dangerous goods of Classes 1 to 9 are specified in Section 4.1.4. They are subdivided in three sub-sections depending on the type of packagings to which they apply:

Sub-section 4.1.4.1 for packagings other than IBCs and large packagings; these packing instructions are designated by an alphanumeric code starting with the letter "P" or "R" for packagings specific to RID and ADR;

Sub-section 4.1.4.2 for IBCs; these are designated by an alphanumeric code starting with the letters "IBCs";

Sub-section 4.1.4.3 for large packagings; these are designated by an alphanumeric code starting with the letters "LP".

Generally, packing instructions specify that the general provisions of 4.1.1, 4.1.2 or 4.1.3, as appropriate, are applicable. They may also require compliance with the special provisions of Sections 4.1.5, 4.1.6, 4.1.7, 4.1.8 or 4.1.9 when appropriate. Special packing provisions may also be specified in the packing instruction for individual substances or articles. They are also designated by an alphanumeric code comprising the letters:

"PP" for packagings other than IBCs and large packagings, or "RR" for special provisions specific to RID and ADR;

"B" for IBCs or "BB" for special packing provisions specific to RID and ADR;

"L" for large packagings.

Unless otherwise specified, each packaging shall conform to the applicable requirements of Part 6. Generally packing instructions do not provide guidance on compatibility and the user shall not select a packaging without checking that the substance is compatible with the packaging material selected (e.g. glass receptacles are unsuitable for most fluorides). Where glass receptacles are permitted in the packing instructions porcelain, earthenware and stoneware packagings are also allowed.

4.1.3.2 Column (8) of Table A of Chapter 3.2 shows for each article or substance the packing instruction(s) that shall be used. Columns (9a) and (9b) indicate the special packing provisions and the mixed packing provisions (see 4.1.10) applicable to specific substances or articles.

4.1.3.3 Each packing instruction shows, where applicable, the acceptable single and combination packagings. For combination packagings, the acceptable outer packagings, inner packagings and when applicable the maximum quantity permitted in each inner or outer packaging, are shown. Maximum net mass and maximum capacity are as defined in 1.2.1.

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4.1.3.4 The following packagings shall not be used when the substances being carried are liable to become liquid during carriage:

Packagings

Drums:	1D and 1G
Boxes:	4A, 4B, 4C1, 4C2, 4D, 4F, 4G, 4H1 and 4H2
Bags:	5L1, 5L2, 5L3, 5H1, 5H2, 5H3, 5H4, 5M1 and 5M2
Composite packagings:	6HC, 6HD2, 6HG1, 6HG2, 6HD1, 6PC, 6PD1, 6PD2, 6PG1, 6PG2 and 6PH1

Large packagings

Flexible plastics:	51H (outer packaging)
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IBCs

For substances of packing group I: All types of IBC

For substances of packing groups II and III:

Wooden:	11C, 11D and 11F
Fibreboard:	11G
Flexible:	13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 and 13M2
Composite:	11HZ2 and 21HZ2

For the purposes of this paragraph, substances and mixtures of substances having a melting point equal to or less than 45 °C shall be treated as solids liable to become liquid during carriage.

4.1.3.5 Where the packing instructions in this Chapter authorize the use of a particular type of packaging (e.g. 4G; 1A2), packagings bearing the same packaging identification code followed by the letters "V", "U" or "W" marked in accordance with the requirements of Part 6 (e.g. 4GV, 4GU or 4GW; 1A2V, 1A2U or 1A2W) may also be used under the same conditions and limitations applicable to the use of that type of packaging according to the relevant packing instructions. For example, a combination packaging marked with the packaging code "4GV" may be used whenever a combination packaging marked "4G" is authorized, provided the requirements in the relevant packing instruction regarding types of inner packagings and quantity limitations are respected.

4.1.3.6 *Pressure receptacles for liquids and solids*

4.1.3.6.1 Unless otherwise indicated in ADR, pressure receptacles conforming to:

- (a) the applicable requirements of Chapter 6.2; or
- (b) the national or international standards on the design, construction, testing, manufacturing and inspection, as applied by the country in which the pressure receptacles are manufactured, provided that the provisions of 4.1.3.6 are met, and that, for metallic cylinders, tubes, pressure drums, bundles of cylinders and salvage pressure receptacles, the construction is such that the minimum burst ratio (burst pressure divided by test pressure) is:
 - (i) 1.50 for refillable pressure receptacles;
 - (ii) 2.00 for non-refillable pressure receptacles,

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are authorized for the carriage of any liquid or solid substance other than explosives, thermally unstable substances, organic peroxides, self-reactive substances, substances where significant pressure may develop by evolution of chemical reaction and radioactive material (unless permitted in 4.1.9).

This sub-section is not applicable to the substances mentioned in 4.1.4.1, packing instruction P200, table 3.

4.1.3.6.2 Every design type of pressure receptacle shall be approved by the competent authority of the country of manufacture or as indicated in Chapter 6.2.

4.1.3.6.3 Unless otherwise indicated, pressure receptacles having a minimum test pressure of 0.6 MPa shall be used.

4.1.3.6.4 Unless otherwise indicated, pressure receptacles may be provided with an emergency pressure relief device designed to avoid bursting in case of overfill or fire accidents.

Pressure receptacle valves shall be designed and constructed in such a way that they are inherently able to withstand damage without release of the contents or shall be protected from damage which could cause inadvertent release of the contents of the pressure receptacle, by one of the methods as given in 4.1.6.8 (a) to (e).

4.1.3.6.5 The level of filling shall not exceed 95% of the capacity of the pressure receptacle at 50 °C. Sufficient ullage (outage) shall be left to ensure that the pressure receptacle will not be liquid full at a temperature of 55 °C.

4.1.3.6.6 Unless otherwise indicated pressure receptacles shall be subjected to a periodic inspection and test every 5 years. The periodic inspection shall include an external examination, an internal examination or alternative method as approved by the competent authority, a pressure test or equivalent effective non-destructive testing with the agreement of the competent authority including an inspection of all accessories (e.g. tightness of valves, emergency relief valves or fusible elements). Pressure receptacles shall not be filled after they become due for periodic inspection and test but may be carried after the expiry of the time limit. Pressure receptacle repairs shall meet the requirements of 4.1.6.11.

4.1.3.6.7 Prior to filling, the packer shall perform an inspection of the pressure receptacle and ensure that the pressure receptacle is authorized for the substances to be carried and that the requirements of ADR have been met. Shut-off valves shall be closed after filling and remain closed during carriage. The consignor shall verify that the closures and equipment are not leaking.

4.1.3.6.8 Refillable pressure receptacles shall not be filled with a substance different from that previously contained unless the necessary operations for change of service have been performed.

4.1.3.6.9 Marking of pressure receptacles for liquids and solids according to 4.1.3.6 (not conforming to the requirements of Chapter 6.2) shall be in accordance with the requirements of the competent authority of the country of manufacturing.

4.1.3.7 Packagings or IBCs not specifically authorized in the applicable packing instruction shall not be used for the carriage of a substance or article unless specifically allowed under a temporary derogation agreed between Contracting Parties in accordance with 1.5.1.

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4.1.3.8 *Unpackaged articles other than Class 1 articles*

4.1.3.8.1 Where large and robust articles cannot be packaged in accordance with the requirements of Chapters 6.1 or 6.6 and they have to be carried empty, uncleaned and unpackaged, the competent authority of the country of origin² may approve such carriage. In doing so the competent authority shall take into account that:

- (a) Large and robust articles shall be strong enough to withstand the shocks and loadings normally encountered during carriage including trans-shipment between transport units and between transport units and warehouses, as well as any removal from a pallet for subsequent manual or mechanical handling;
- (b) All closures and openings shall be sealed so that there can be no loss of contents which might be caused under normal conditions of carriage, by vibration, or by changes in temperature, humidity or pressure (resulting from altitude, for example). No dangerous residue shall adhere to the outside of the large and robust articles;
- (c) Parts of large and robust articles, which are in direct contact with dangerous goods:
 - (i) shall not be affected or significantly weakened by those dangerous goods; and
 - (ii) shall not cause a dangerous effect e.g. catalysing a reaction or reacting with the dangerous goods;
- (d) Large and robust articles containing liquids shall be stowed and secured to ensure that neither leakage nor permanent distortion of the article occurs during carriage;
- (e) They shall be fixed in cradles or crates or other handling devices or to the transport unit or container in such a way that they will not become loose during normal conditions of carriage.

4.1.3.8.2 Unpackaged articles approved by the competent authority in accordance with the provisions of 4.1.3.8.1 shall be subject to the consignment procedures of Part 5. In addition the consignor of such articles shall ensure that a copy of any such approval is attached to the transport document.

NOTE: *A large and robust article may include flexible fuel containment systems, military equipment, machinery or equipment containing dangerous goods above the limited quantities according to 3.4.1.*

4.1.4 **List of packing instructions**

NOTE: *Although the following packing instructions use the same numbering system as used in the IMDG Code and the UN Model Regulations, readers should be aware that some of the details may be different in the case of ADR.*

² *If the country of origin is not a contracting party to ADR, the competent authority of the first country contracting party to the ADR reached by the consignment.*

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4.1.4.1 *Packing instructions concerning the use of packagings (except IBCs and large packagings)*

P001		PACKING INSTRUCTION (LIQUIDS)			P001
The following packagings are authorized provided the general provisions of 4.1.1 and 4.1.3 are met:					
Combination packagings:		Maximum capacity/Net mass (see 4.1.3.3)			
Inner packagings	Outer packagings	Packing group I	Packing group II	Packing group III	
	Drums				
Glass 10 l	steel (1A1, 1A2)	250 kg	400 kg	400 kg	
Plastics 30 l	aluminium (1B1, 1B2)	250 kg	400 kg	400 kg	
Metal 40 l	other metal (1N1, 1N2)	250 kg	400 kg	400 kg	
	plastics (1H1, 1H2)	250 kg	400 kg	400 kg	
	plywood (1D)	150 kg	400 kg	400 kg	
	fibre (1G)	75 kg	400 kg	400 kg	
	Boxes				
	steel (4A)	250 kg	400 kg	400 kg	
	aluminium (4B)	250 kg	400 kg	400 kg	
	other metal (4N)	250 kg	400 kg	400 kg	
	natural wood (4C1, 4C2)	150 kg	400 kg	400 kg	
	plywood (4D)	150 kg	400 kg	400 kg	
	reconstituted wood (4F)	75 kg	400 kg	400 kg	
	fibreboard (4G)	75 kg	400 kg	400 kg	
	expanded plastics (4H1)	60 kg	60 kg	60 kg	
	solid plastics (4H2)	150 kg	400 kg	400 kg	
	Jerricans				
	steel (3A1, 3A2)	120 kg	120 kg	120 kg	
	aluminium (3B1, 3B2)	120 kg	120 kg	120 kg	
	plastics (3H1, 3H2)	120 kg	120 kg	120 kg	
Single packagings:					
Drums					
	steel, non-removable head (1A1)	250 l	450 l	450 l	
	steel, removable head (1A2)	250 l ^a	450 l	450 l	
	aluminium, non-removable head (1B1)	250 l	450 l	450 l	
	aluminium, removable head (1B2)	250 l ^a	450 l	450 l	
	metal other than steel or aluminium, non-removable head (1N1)	250 l	450 l	450 l	
	metal other than steel or aluminium, removable head (1N2)	250 l ^a	450 l	450 l	
	plastics, non-removable head (1H1)	250 l	450 l	450 l	
	plastics, removable head (1H2)	250 l ^a	450 l	450 l	
Jerricans					
	steel, non-removable head (3A1)	60 l	60 l	60 l	
	steel, removable head (3A2)	60 l ^a	60 l	60 l	
	aluminium, non-removable head (3B1)	60 l	60 l	60 l	
	aluminium, removable head (3B2)	60 l ^a	60 l	60 l	
	plastics, non-removable head (3H1)	60 l	60 l	60 l	
	plastics, removable head (3H2)	60 l ^a	60 l	60 l	

^a Only substances with a viscosity of more than 2 680 mm²/s are authorized.

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P001	PACKING INSTRUCTION (LIQUIDS) (cont'd)			P001
Single packagings (cont'd)	Maximum capacity/Net mass (see 4.1.3.3)			
Composite packagings	Packing group I	Packing group II	Packing group III	
plastics receptacle with outer steel or aluminium drum (6HA1, 6HB1)	250 l	250 l	250 l	
plastics receptacle with outer fibre, plastics or plywood drum (6HG1, 6HH1, 6HD1)	120 l	250 l	250 l	
plastics receptacle with outer steel or aluminium crate or box or plastics receptacle with outer wooden, plywood, fibreboard or solid plastics box (6HA2, 6HB2, 6HC, 6HD2, 6HG2 or 6HH2)	60 l	60 l	60 l	
glass receptacle with outer steel, aluminium, fibreboard, plywood, solid plastics or expanded plastics drum (6PA1, 6PB1, 6PG1, 6PD1, 6PH1 or 6PH2) or with outer steel or aluminium crate or box or with outer wooden or fibreboard box or with outer wickerwork hamper (6PA2, 6PB2, 6PC, 6PG2 or 6PD2)	60 l	60 l	60 l	
Pressure receptacles , provided that the general provisions of 4.1.3.6 are met.				
Additional requirement: For substances of Class 3, packing group III, which give off small quantities of carbon dioxide or nitrogen, the packagings shall be vented.				
Special packing provisions:				
PP1 For UN Nos. 1133, 1210, 1263 and 1866 and for adhesives, printing inks, printing ink related materials, paints, paint related materials and resin solutions which are assigned to UN 3082, metal or plastics packagings for substances of packing groups II and III in quantities of 5 litres or less per packaging are not required to meet the performance tests in Chapter 6.1 when carried: (a) in palletized loads, a pallet box or unit load device, e.g. individual packagings placed or stacked and secured by strapping, shrink or stretch-wrapping or other suitable means to a pallet; or (b) as inner packagings of combination packagings with a maximum net mass of 40 kg.				
PP2 For UN 3065, wooden barrels with a maximum capacity of 250 litres and which do not meet the provisions of Chapter 6.1 may be used.				
PP4 For UN No. 1774, packagings shall meet the packing group II performance level.				
PP5 For UN No. 1204, packagings shall be so constructed that explosion is not possible by reason of increased internal pressure. Cylinders, tubes and pressure drums shall not be used for these substances.				
PP6 (Deleted)				
PP10 For UN No. 1791, packing group II, the packaging shall be vented.				
PP31 For UN No. 1131, packagings shall be hermetically sealed.				
PP33 For UN No. 1308, packing groups I and II, only combination packagings with a maximum gross mass of 75 kg allowed.				
PP81 For UN No. 1790 with more than 60% but not more than 85% hydrogen fluoride and UN No. 2031 with more than 55% nitric acid, the permitted use of plastics drums and jerricans as single packagings shall be two years from their date of manufacture.				
Special packing provisions specific to RID and ADR:				
RR2 For UN No. 1261, removable head packagings are not permitted.				

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P002		PACKING INSTRUCTION (SOLIDS)			P002
The following packagings are authorized provided the general provisions of 4.1.1 and 4.1.3 are met:					
Combination packagings:		Maximum net mass (see 4.1.3.3)			
Inner packagings	Outer packagings	Packing group I	Packing group II	Packing group III	
	Drums				
Glass 10 kg	steel (1A1, 1A2)	400 kg	400 kg	400 kg	
Plastics ^a 50 kg	aluminium (1B1, 1B2)	400 kg	400 kg	400 kg	
Metal 50 kg	other metal (1N1, 1N2)	400 kg	400 kg	400 kg	
Paper ^{a, b, c} 50 kg	plastics (1H1, 1H2)	400 kg	400 kg	400 kg	
Fibre ^{a, b, c} 50 kg	plywood (1D)	400 kg	400 kg	400 kg	
	fibre (1G)	400 kg	400 kg	400 kg	
	Boxes				
	steel (4A)	400 kg	400 kg	400 kg	
	aluminium (4B)	400 kg	400 kg	400 kg	
	other metal (4N)	400 kg	400 kg	400 kg	
	natural wood (4C1)	250 kg	400 kg	400 kg	
	natural wood with sift proof walls (4C2)	250 kg	400 kg	400 kg	
	plywood (4D)	250 kg	400 kg	400 kg	
	reconstituted wood (4F)	125 kg	400 kg	400 kg	
	fibreboard (4G)	125 kg	400 kg	400 kg	
	expanded plastics (4H1)	60 kg	60 kg	60 kg	
	solid plastics (4H2)	250 kg	400 kg	400 kg	
	Jerricans				
	steel (3A1, 3A2)	120 kg	120 kg	120 kg	
	aluminium (3B1, 3B2)	120 kg	120 kg	120 kg	
	plastics (3H1, 3H2)	120 kg	120 kg	120 kg	
Single packagings:					
Drums					
steel (1A1 or 1A2 ^d)		400 kg	400 kg	400 kg	
aluminium (1B1 or 1B2 ^d)		400 kg	400 kg	400 kg	
metal, other than steel or aluminium (1N1 or 1N2 ^d)		400 kg	400 kg	400 kg	
plastics (1H1 or 1H2 ^d)		400 kg	400 kg	400 kg	
fibre (1G) ^e		400 kg	400 kg	400 kg	
plywood (1D) ^e		400 kg	400 kg	400 kg	
Jerricans					
steel (3A1 or 3A2 ^d)		120 kg	120 kg	120 kg	
aluminium (3B1 or 3B2 ^d)		120 kg	120 kg	120 kg	
plastics (3H1 or 3H2 ^d)		120 kg	120 kg	120 kg	
^a	These inner packagings shall be sift-proof.				
^b	These inner packagings shall not be used when the substances being carried may become liquid during carriage (see 4.1.3.4).				
^c	These inner packagings shall not be used for substances of packing group I.				
^d	These packagings shall not be used for substances of packing group I that may become liquid during carriage (see 4.1.3.4).				
^e	These packagings shall not be used when substances being carried may become liquid during carriage (see 4.1.3.4).				

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P002	PACKING INSTRUCTION (SOLIDS) (cont'd)			P002
Maximum net mass (see 4.1.3.3)				
Single packagings (cont'd):	Packing group I	Packing group II	Packing group III	
Boxes				
steel (4A) ^e	Not allowed	400 kg	400 kg	
aluminium (4B) ^e	Not allowed	400 kg	400 kg	
other metal (4N) ^e	Not allowed	400 kg	400 kg	
natural wood (4C1) ^e	Not allowed	400 kg	400 kg	
plywood (4D) ^e	Not allowed	400 kg	400 kg	
reconstituted wood (4F) ^e	Not allowed	400 kg	400 kg	
natural wood with sift-proof walls (4C2) ^e	Not allowed	400 kg	400 kg	
fibreboard (4G) ^e	Not allowed	400 kg	400 kg	
solid plastics (4H2) ^e	Not allowed	400 kg	400 kg	
Bags				
bags (5H3, 5H4, 5L3, 5M2) ^e	Not allowed	50 kg	50 kg	
Composite packagings				
plastics receptacle with outer steel, aluminium, plywood, fibre or plastics drum (6HA1, 6HB1, 6HG1 ^e , 6HD1 ^e , or 6HH1)	400 kg	400 kg	400 kg	
plastics receptacle with outer steel or aluminium crate or box, wooden box, plywood box, fibreboard box or solid plastics box (6HA2, 6HB2, 6HC, 6HD2 ^e , 6HG2 ^e or 6HH2)	75 kg	75 kg	75 kg	
glass receptacle with outer steel, aluminium plywood or fibre drum (6PA1, 6PB1, 6PD1 ^e or 6PG1 ^e) or with outer steel or aluminium crate or box or with outer wooden, or fibreboard box or with outer wickerwork hamper (6PA2, 6PB2, 6PC, 6PD2 ^e , or 6PG2 ^e) or with outer solid plastics or expanded plastics packaging (6PH2 or 6PH1 ^e)	75 kg	75 kg	75 kg	
Pressure receptacles , provided that the general provisions of 4.1.3.6 are met.				
^e <i>These packagings shall not be used when the substances being carried may become liquid during carriage (see 4.1.3.4).</i>				

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P002	PACKING INSTRUCTION (SOLIDS) (cont'd)	P002
Special packing provisions:		
PP6 (Deleted)		
PP7	For UN No. 2000, celluloid may also be transported unpacked on pallets, wrapped in plastic film and secured by appropriate means, such as steel bands as a full load in closed vehicles or containers. Each pallet shall not exceed 1 000 kg.	
PP8	For UN No. 2002, packagings shall be so constructed that explosion is not possible by reason of increased internal pressure. Cylinders, tubes and pressure drums shall not be used for these substances.	
PP9	For UN Nos. 3175, 3243 and 3244, packagings shall conform to a design type that has passed a leakproofness test at the packing group II performance level. For UN No. 3175, the leakproofness test is not required when the liquids are fully absorbed in solid material contained in sealed bags.	
PP11	For UN No. 1309, packing group III, and UN No. 1362, 5H1, 5L1 and 5M1 bags are allowed if they are overpacked in plastic bags and are wrapped in shrink or stretch wrap on pallets.	
PP12	For UN Nos. 1361, 2213 and UN No. 3077, 5H1, 5L1 and 5M1 bags are allowed when carried in closed vehicles or containers.	
PP13	For articles classified under UN No. 2870, only combination packagings meeting the packing group I performance level are authorized.	
PP14	For UN Nos. 2211, 2698 and 3314, packagings are not required to meet the performance tests in Chapter 6.1.	
PP15	For UN Nos. 1324 and 2623, packagings shall meet the packing group III performance level.	
PP20	For UN No. 2217, any sift-proof, tearproof receptacle may be used.	
PP30	For UN No. 2471, paper or fibre inner packagings are not permitted.	
PP34	For UN No. 2969 (as whole beans), 5H1, 5L1 and 5M1 bags are permitted.	
PP37	For UN Nos. 2590 and 2212, 5M1 bags are permitted. All bags of any type shall be carried in closed vehicles or containers or be placed in closed rigid overpacks.	
PP38	For UN No. 1309, packing group II, bags are permitted only in closed vehicles or containers.	
PP84	For UN No. 1057, rigid outer packagings meeting the packing group II performance level shall be used. The packagings shall be designed and constructed and arranged to prevent movement, inadvertent ignition of the devices or inadvertent release of flammable gas or liquid. <i>NOTE: For waste lighters collected separately see Chapter 3.3, special provision 654.</i>	
Special packing provision specific to RID and ADR:		
RR5	Notwithstanding special packing provision PP84, only the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.5 to 4.1.1.7 need be complied with if the gross mass of the package is not more than 10 kg. <i>NOTE: For waste lighters collected separately see Chapter 3.3, special provision 654.</i>	

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P003	PACKING INSTRUCTION	P003
<p>Dangerous goods shall be placed in suitable outer packagings. The packagings shall meet the provisions of 4.1.1.1, 4.1.1.2, 4.1.1.4, 4.1.1.8 and 4.1.3 and be so designed that they meet the construction requirements of 6.1.4. Outer packagings constructed of suitable material, and of adequate strength and design in relation to the packaging capacity and its intended use, shall be used. Where this packing instruction is used for the transport of articles or inner packagings of combination packagings, the packaging shall be designed and constructed to prevent inadvertent discharge of articles during normal conditions of carriage.</p>		
Special packing provisions:		
PP16	For UN No. 2800, batteries shall be protected from short circuits and shall be securely packed in strong outer packagings.	
	<p><i>NOTE 1: Non-spillable batteries which are an integral part of, and necessary for, the operation of mechanical or electronic equipment shall be securely fastened in the battery holder on the equipment and protected in such a manner as to prevent damage and short circuits.</i></p> <p><i>NOTE 2: For used batteries (UN 2800), see P801a.</i></p>	
PP17	For UN No. 2037, packages shall not exceed 55 kg net mass for fibreboard packagings or 125 kg net mass for other packagings.	
PP19	For UN Nos. 1364 and 1365, carriage as bales is authorized.	
PP20	For UN Nos. 1363, 1386, 1408 and 2793 any sift-proof, tearproof receptacle may be used.	
PP32	UN Nos. 2857 and 3358 may be carried unpackaged, in crates or in appropriate overpacks.	
PP87	<i>(Deleted)</i>	
PP88	<i>(Deleted)</i>	
PP90	For UN No. 3506, sealed inner liners or bags of strong leakproof and puncture resistant material impervious to mercury which will prevent escape of the substance from the package irrespective of the position or the orientation of the package shall be used.	
Special packing provision specific to RID and ADR:		
RR6	For UN No. 2037 in the case of carriage by full load, metal articles may also be packed as follows: the articles shall be grouped together in units on trays and held in position with an appropriate plastics cover; these units shall be stacked and suitably secured on pallets.	

P004	PACKING INSTRUCTION	P004
This instruction applies to UN Nos. 3473, 3476, 3477, 3478 and 3479.		
The following packagings are authorized:		
(1)	For fuel cell cartridges, provided that the general provisions of 4.1.1.1, 4.1.1.2, 4.1.1.3, 4.1.1.6 and 4.1.3 are met: Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G); Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Jerricans (3A2, 3B2, 3H2). Packagings shall conform to the packing group II performance level.	
(2)	For fuel cell cartridges packed with equipment: strong outer packagings which meet the general provisions of 4.1.1.1, 4.1.1.2, 4.1.1.6 and 4.1.3 . When fuel cell cartridges are packed with equipment, they shall be packed in inner packagings or placed in the outer packaging with cushioning material or divider(s) so that the fuel cell cartridges are protected against damage that may be caused by the movement or placement of the contents within the outer packaging. The equipment shall be secured against movement within the outer packaging. For the purpose of this packing instruction, "equipment" means apparatus requiring the fuel cell cartridges with which it is packed for its operation.	
(3)	For fuel cell cartridges contained in equipment: strong outer packagings which meet the general provisions of 4.1.1.1, 4.1.1.2, 4.1.1.6 and 4.1.3 . Large robust equipment (see 4.1.3.8) containing fuel cell cartridges may be carried unpackaged. For fuel cell cartridges contained in equipment, the entire system shall be protected against short circuit and inadvertent operation.	

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P010		PACKING INSTRUCTION		P010
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:				
Combination packagings				
Inner packagings	Outer packagings	Maximum net mass (see 4.1.3.3)		
Glass 1 l Steel 40 l	Drums steel (1A1, 1A2) plastics (1H1, 1H2) plywood (1D) fibre (1G) Boxes steel (4A) natural wood (4C1, 4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) expanded plastics (4H1) solid plastics (4H2)			400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 60 kg 400 kg
Single packagings		Maximum capacity (see 4.1.3.3)		
Drums steel, non-removable head (1A1)		450 l		
Jerricans steel, non-removable head (3A1)		60 l		
Composite packagings plastics receptacle in steel drums (6HA1)		250 l		
Steel pressure receptacles , provided that the general provisions of 4.1.3.6 are met.				

P099	PACKING INSTRUCTION	P099
Only packagings which are approved for these goods by the competent authority may be used. A copy of the competent authority approval shall accompany each consignment or the transport document shall include an indication that the packaging was approved by the competent authority.		

P101	PACKING INSTRUCTION	P101
Only packagings which are approved by the competent authority of the country of origin may be used. If the country of origin is not a Contracting Party to the ADR, the packaging shall be approved by the competent authority of the first country Contracting Party to ADR reached by the consignment. The State's distinguishing sign for motor vehicles in international traffic of the country for which the authority acts, shall be marked on the transport documents as follows:		
"Packaging approved by the competent authority of..." (see 5.4.1.2.1 (e))		

P110(a)	PACKING INSTRUCTION	P110(a)
<i>(Reserved)</i>		
NOTE: This packing instruction in the UN Model Regulations is not admitted for carriage under ADR.		

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P110(b) PACKING INSTRUCTION P110(b)		
The following packagings are authorized, provided the general packing provisions of 4.1.1, 4.1.3 and special packing provisions of 4.1.5 are met:		
Inner packagings Receptacles metal wood rubber, conductive plastics, conductive Bags rubber, conductive plastics, conductive	Intermediate packagings Dividing partitions metal wood plastics fibreboard	Outer packagings Boxes natural wood, sift-proof wall (4C2) plywood (4D) reconstituted wood (4F)
Special packing provision: PP42 For UN Nos. 0074, 0113, 0114, 0129, 0130, 0135 and 0224, the following conditions shall be met: (a) Inner packagings shall not contain more than 50 g of explosive substance (quantity corresponding to dry substance); (b) Compartments between dividing partitions shall not contain more than one inner packaging, firmly fitted; and (c) The outer packaging may be partitioned into up to 25 compartments.		

P111 PACKING INSTRUCTION P111		
The following packagings are authorized, provided the general packing provisions of 4.1.1, 4.1.3 and special packing provisions of 4.1.5 are met:		
Inner packagings Bags paper, waterproofed plastics textile, rubberized Receptacles wood Sheets plastics textile, rubberized	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, expanded (4H1) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)
Special packing provision: PP43 For UN 0159, inner packagings are not required when metal (1A1, 1A2, 1B1, 1B2, 1N1 or 1N2) or plastics (1H1 or 1H2) drums are used as outer packagings.		

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P112(a)	PACKING INSTRUCTION (Solid wetted, 1.1D)		P112(a)
The following packagings are authorized, provided the general packing provisions of 4.1.1, 4.1.3 and special packing provisions of 4.1.5 are met:			
Inner packagings Bags paper, multiwall, water resistant plastics textile textile, rubberized woven plastics Receptacles metal plastics wood	Intermediate packagings Bags plastics textile, plastic coated or lined Receptacles metal plastics wood	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, expanded (4H1) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)	
Additional requirement:			
Intermediate packagings are not required if leakproof removable head drums are used as the outer packaging.			
Special packing provisions:			
PP26 For UN Nos. 0004, 0076, 0078, 0154, 0219 and 0394, packagings shall be lead free.			
PP45 For UN Nos. 0072 and 0226, intermediate packagings are not required.			

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P112(b)	PACKING INSTRUCTION (Solid dry, other than powder 1.1D)		P112(b)
The following packagings are authorized, provided the general packing provisions of 4.1.1, 4.1.3 and special packing provisions of 4.1.5 are met:			
Inner packagings Bags paper, kraft paper, multiwall, water resistant plastics textile textile, rubberized woven plastics	Intermediate packagings Bags (for UN No. 0150 only) plastics textile, plastic coated or lined	Outer packagings Bags woven plastics, sift-proof (5H2) woven plastics, water-resistant (5H3) plastics, film (5H4) textile, sift-proof (5L2) textile, water resistant (5L3) paper, multiwall, water resistant (5M2) Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, expanded (4H1) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)	
Special packing provisions:			
PP26 For UN Nos. 0004, 0076, 0078, 0154, 0216, 0219 and 0386, packagings shall be lead free.			
PP46 For UN Nos. 0209, bags, sift-proof (5H2) are recommended for flake or prilled TNT in the dry state and a maximum net mass of 30 kg.			
PP47 For UN No. 0222, inner packagings are not required when the outer packaging is a bag.			

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P112(c)	PACKING INSTRUCTION (Solid dry powder 1.1D)		P112(c)
The following packagings are authorized, provided the general packing provisions of 4.1.1 , 4.1.3 and special packing provisions of 4.1.5 are met:			
Inner packagings Bags paper, multiwall, water resistant plastics woven plastics Receptacles fibreboard metal plastics wood	Intermediate packagings Bags paper, multiwall, water resistant with inner lining plastics Receptacles metal plastics wood	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)	
Additional requirements:			
1. Inner packagings are not required if drums are used as the outer packaging. 2. The packaging shall be sift-proof.			
Special packing provisions:			
PP26 For UN Nos. 0004, 0076, 0078, 0154, 0216, 0219 and 0386, packagings shall be lead free.			
PP46 For UN No. 0209, bags, sift-proof (5H2) are recommended for flake or prilled TNT in the dry state and a maximum net mass of 30 kg.			
PP48 For UN No. 0504, metal packagings shall not be used.			

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P113		PACKING INSTRUCTION	P113
The following packagings are authorized, provided the general packing provisions of 4.1.1 , 4.1.3 and special packing provisions of 4.1.5 are met:			
Inner packagings Bags paper plastics textile, rubberized Receptacles fibreboard metal plastics wood	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)	
Additional requirement:			
The packaging shall be sift-proof.			
Special packing provisions:			
PP49 For UN Nos. 0094 and 0305, no more than 50 g of substance shall be packed in an inner packaging.			
PP50 For UN No. 0027, inner packagings are not necessary when drums are used as outer packagings.			
PP51 For UN No. 0028, paper kraft or waxed paper sheets may be used as inner packagings.			

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P114(a)	PACKING INSTRUCTION (Solid wetted)		P114(a)
The following packagings are authorized, provided the general packing provisions of 4.1.1, 4.1.3 and special packing provisions of 4.1.5 are met:			
Inner packagings Bags plastics textile woven plastics Receptacles metal plastics wood	Intermediate packagings Bags plastics textile, plastic coated or lined Receptacles metal plastics Dividing partitions wood	Outer packagings Boxes steel (4A) metal, other than steel or aluminium (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) fibre (1G) plastics (1H1, 1H2)	
Additional requirement:			
Intermediate packagings are not required if leakproof removable head drums are used as outer packagings.			
Special packing provisions:			
PP26 For UN Nos. 0077, 0132, 0234, 0235 and 0236, packagings shall be lead free.			
PP43 For UN 0342, inner packagings are not required when metal (1A1, 1A2, 1B1, 1B2, 1N1 or 1N2) or plastics (1H1 or 1H2) drums are used as outer packagings.			

P114(b)	PACKING INSTRUCTION (Solid dry)		P114(b)
The following packagings are authorized, provided the general packing provisions of 4.1.1, 4.1.3 and special packing provisions of 4.1.5 are met:			
Inner packagings Bags paper, kraft plastics textile, sift-proof woven plastics, sift-proof Receptacles fibreboard metal paper plastics woven plastics, sift-proof wood	Intermediate packagings Not necessary	Outer packagings Boxes natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)	
Special packing provisions:			
PP26 For UN Nos. 0077, 0132, 0234, 0235 and 0236, packagings shall be lead free.			
PP48 For UN Nos. 0508 and 0509, metal packagings shall not be used.			
PP50 For UN Nos. 0160, 0161 and 0508, inner packagings are not necessary if drums are used as outer packagings.			
PP52 For UN Nos. 0160 and 0161, when metal drums (1A1, 1A2, 1B1, 1B2, 1N1 or 1N2) are used as outer packagings, metal packagings shall be so constructed that the risk of explosion, by reason of increased internal pressure from internal or external causes is prevented.			

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P115		PACKING INSTRUCTION	P115
The following packagings are authorized, provided the general packing provisions of 4.1.1, 4.1.3 and special packing provisions of 4.1.5 are met:			
Inner packagings Receptacles plastics wood	Intermediate packagings Bags plastics in metal receptacles Drums metal Receptacles wood	Outer packagings Boxes natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)	
Special packing provisions:			
PP45 For UN No. 0144, intermediate packagings are not required.			
PP53 For UN Nos. 0075, 0143, 0495 and 0497, when boxes are used as outer packagings, inner packagings shall have taped screw cap closures and be not more than 5 litres capacity each. Inner packagings shall be surrounded with non-combustible absorbent cushioning materials. The amount of absorbent cushioning material shall be sufficient to absorb the liquid contents. Metal receptacles shall be cushioned from each other. Net mass of propellant is limited to 30 kg for each package when outer packagings are boxes.			
PP54 For UN Nos. 0075, 0143, 0495 and 0497, when drums are used as outer packagings and when intermediate packagings are drums, they shall be surrounded with non-combustible cushioning material in a quantity sufficient to absorb the liquid contents. A composite packaging consisting of a plastics receptacle in a metal drum may be used instead of the inner and intermediate packagings. The net volume of propellant in each package shall not exceed 120 litres.			
PP55 For UN No. 0144, absorbent cushioning material shall be inserted.			
PP56 For UN No. 0144, metal receptacles may be used as inner packagings.			
PP57 For UN Nos. 0075, 0143, 0495 and 0497, bags shall be used as intermediate packagings when boxes are used as outer packagings.			
PP58 For UN Nos. 0075, 0143, 0495 and 0497, drums shall be used as intermediate packagings when drums are used as outer packagings.			
PP59 For UN No. 0144, fibreboard boxes (4G) may be used as outer packagings.			
PP60 For UN No. 0144, aluminium drums (1B1 and 1B2) and metal, other than steel or aluminium, drums (1N1 and 1N2) shall not be used.			

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P116	PACKING INSTRUCTION		P116
The following packagings are authorized, provided the general packing provisions of 4.1.1, 4.1.3 and special packing provisions of 4.1.5 are met:			
<p>Inner packagings</p> <p>Bags paper, water and oil resistant plastics textile, plastic coated or lined woven plastics, sift-proof</p> <p>Receptacles fibreboard, water resistant metal plastics wood, sift-proof</p> <p>Sheets paper, water resistant paper, waxed plastics</p>	<p>Intermediate packagings</p> <p>Not necessary</p>	<p>Outer packagings</p> <p>Bags woven plastics (5H1) paper, multiwall, water resistant (5M2) plastics, film (5H4) textile, sift-proof (5L2) textile, water resistant (5L3)</p> <p>Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, solid (4H2)</p> <p>Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)</p> <p>Jerricans steel (3A1, 3A2) plastics (3H1, 3H2)</p>	
Special packing provisions:			
PP61 For UN Nos. 0082, 0241, 0331 and 0332, inner packagings are not required if leakproof removable head drums are used as outer packagings.			
PP62 For UN Nos. 0082, 0241, 0331 and 0332, inner packagings are not required when the explosive is contained in a material impervious to liquid.			
PP63 For UN No. 0081, inner packagings are not required when contained in rigid plastic which is impervious to nitric esters.			
PP64 For UN No. 0331, inner packagings are not required when bags (5H2), (5H3) or (5H4) are used as outer packagings.			
PP65 For UN Nos. 0082, 0241, 0331 and 0332, bags (5H2 or 5H3) may be used as outer packagings.			
PP66 For UN No. 0081, bags shall not be used as outer packagings.			

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P130		PACKING INSTRUCTION	P130
The following packagings are authorized, provided the general packing provisions of 4.1.1 , 4.1.3 and special packing provisions of 4.1.5 are met:			
Inner packagings	Intermediate packagings	Outer packagings	
Not necessary	Not necessary	<p>Boxes</p> <ul style="list-style-type: none"> steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, expanded (4H1) plastics, solid (4H2) <p>Drums</p> <ul style="list-style-type: none"> steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2) 	
Special packing provision:			
<p>PP67 The following applies to UN Nos. 0006, 0009, 0010, 0015, 0016, 0018, 0019, 0034, 0035, 0038, 0039, 0048, 0056, 0137, 0138, 0168, 0169, 0171, 0181, 0182, 0183, 0186, 0221, 0243, 0244, 0245, 0246, 0254, 0280, 0281, 0286, 0287, 0297, 0299, 0300, 0301, 0303, 0321, 0328, 0329, 0344, 0345, 0346, 0347, 0362, 0363, 0370, 0412, 0424, 0425, 0434, 0435, 0436, 0437, 0438, 0451, 0488 and 0502:</p> <p>Large and robust explosives articles, normally intended for military use, without their means of initiation or with their means of initiation containing at least two effective protective features, may be carried unpackaged. When such articles have propelling charges or are self-propelled, their ignition systems shall be protected against stimuli encountered during normal conditions of carriage. A negative result in Test Series 4 on an unpackaged article indicates that the article can be considered for carriage unpackaged. Such unpackaged articles may be fixed to cradles or contained in crates or other suitable handling devices.</p>			

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P131 PACKING INSTRUCTION P131		
The following packagings are authorized, provided the general packing provisions of 4.1.1 , 4.1.3 and special packing provisions of 4.1.5 are met:		
Inner packagings Bags paper plastics Receptacles fibreboard metal plastics wood Reels	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)
Special packing provision: PP68 For UN Nos. 0029, 0267 and 0455, bags and reels shall not be used as inner packagings.		

P132(a) PACKING INSTRUCTION P132(a)		
(Articles consisting of closed metal, plastics or fibreboard casings that contain a detonating explosive, or consisting of plastics-bonded detonating explosives)		
The following packagings are authorized, provided the general packing provisions of 4.1.1 , 4.1.3 and special packing provisions of 4.1.5 are met:		
Inner packagings Not necessary	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) wood, natural, ordinary (4C1) wood, natural, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, solid (4H2)

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P132(b)	PACKING INSTRUCTION (Articles without closed casings)		P132(b)
The following packagings are authorized, provided the general packing provisions of 4.1.1, 4.1.3 and special packing provisions of 4.1.5 are met:			
Inner packagings Receptacles fibreboard metal plastics wood Sheets paper plastics	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, solid (4H2)	

P133	PACKING INSTRUCTION		P133
The following packagings are authorized, provided the general packing provisions of 4.1.1, 4.1.3 and special packing provisions of 4.1.5 are met:			
Inner packagings Receptacles fibreboard metal plastics wood Trays, fitted with dividing partitions fibreboard plastics wood	Intermediate packagings Receptacles fibreboard metal plastics wood	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, solid (4H2)	
Additional requirement:			
Receptacles are only required as intermediate packagings when the inner packagings are trays.			
Special packing provision:			
PP69 For UN Nos. 0043, 0212, 0225, 0268 and 0306, trays shall not be used as inner packagings.			

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P134 PACKING INSTRUCTION P134		
The following packagings are authorized, provided the general packing provisions of 4.1.1 , 4.1.3 and special packing provisions of 4.1.5 are met:		
Inner packagings Bags water resistant Receptacles fibreboard metal plastics wood Sheets fibreboard, corrugated Tubes fibreboard	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, expanded (4H1) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)

P135 PACKING INSTRUCTION P135		
The following packagings are authorized, provided the general packing provisions of 4.1.1 , 4.1.3 and special packing provisions of 4.1.5 are met:		
Inner packagings Bags paper plastics Receptacles fibreboard metal plastics wood Sheets paper plastics	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, expanded (4H1) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)

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P136 PACKING INSTRUCTION P136		
The following packagings are authorized, provided the general packing provisions of 4.1.1 , 4.1.3 and special packing provisions of 4.1.5 are met:		
Inner packagings Bags plastics textile Boxes fibreboard plastics wood Dividing partitions in the outer packagings	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)

P137 PACKING INSTRUCTION P137		
The following packagings are authorized, provided the general packing provisions of 4.1.1 , 4.1.3 and special packing provisions of 4.1.5 are met:		
Inner packagings Bags plastics Boxes Fibreboard wood Tubes fibreboard metal plastics Dividing partitions in the outer packagings	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)
Special packing provision: PP70 For UN Nos. 0059, 0439, 0440 and 0441, when the shaped charges are packed singly, the conical cavity shall face downwards and the package marked "THIS SIDE UP". When the shaped charges are packed in pairs, the conical cavities shall face inwards to minimize the jetting effect in the event of accidental initiation.		

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P138 PACKING INSTRUCTION P138		
The following packagings are authorized, provided the general packing provisions of 4.1.1 , 4.1.3 and special packing provisions of 4.1.5 are met:		
Inner packagings Bags plastics	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)
Additional requirement: If the ends of the articles are sealed, inner packagings are not necessary.		

P139 PACKING INSTRUCTION P139		
The following packagings are authorized, provided the general packing provisions of 4.1.1 , 4.1.3 and special packing provisions of 4.1.5 are met:		
Inner packagings Bags plastics Receptacles fibreboard metal plastics wood Reels Sheets paper plastics	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)
Special packing provisions: PP71 For UN Nos. 0065, 0102, 0104, 0289 and 0290, the ends of the detonating cord shall be sealed, for example, by a plug firmly fixed so that the explosive cannot escape. The ends of flexible detonating cord shall be fastened securely. PP72 For UN Nos. 0065 and 0289, inner packagings are not required when they are in coils.		

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P140 PACKING INSTRUCTION P140		
The following packagings are authorized, provided the general packing provisions of 4.1.1 , 4.1.3 and special packing provisions of 4.1.5 are met:		
Inner packagings Bags Plastics Receptacles wood Reels Sheets paper, kraft plastics	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)
Special packing provisions: PP73 For UN No. 0105, no inner packagings are required if the ends are sealed. PP74 For UN No. 0101, the packaging shall be sift-proof except when the fuse is covered by a paper tube and both ends of the tube are covered with removable caps. PP75 For UN No. 0101, steel, aluminium or other metal boxes or drums shall not be used.		

P141 PACKING INSTRUCTION P141		
The following packagings are authorized, provided the general packing provisions of 4.1.1 , 4.1.3 and special packing provisions of 4.1.5 are met:		
Inner packagings Receptacles fibreboard metal plastics wood Trays, fitted with dividing partitions plastics wood Dividing partitions in the outer packagings	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)

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P142 PACKING INSTRUCTION P142		
The following packagings are authorized, provided the general packing provisions of 4.1.1, 4.1.3 and special packing provisions of 4.1.5 are met:		
Inner packagings Bags paper plastics Receptacles fibreboard metal plastics wood Sheets paper Trays, fitted with dividing partitions plastics	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)

P143 PACKING INSTRUCTION P143		
The following packagings are authorized, provided the general packing provisions of 4.1.1, 4.1.3 and special packing provisions of 4.1.5 are met:		
Inner packagings Bags paper, kraft plastics textile textile, rubberized Receptacles fibreboard metal Plastics wood Trays, fitted with dividing partitions plastics wood	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary (4C1) natural wood, sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)
Additional requirement: Instead of the above inner and outer packagings, composite packagings (6HH2) (plastics receptacle with outer solid plastics box) may be used.		
Special packing provision: PP76 For UN Nos. 0271, 0272, 0415 and 0491, when metal packagings are used, metal packagings shall be so constructed that the risk of explosion, by reason of increase in internal pressure from internal or external causes is prevented.		

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P144 PACKING INSTRUCTION P144		
The following packagings are authorized, provided the general packing provisions of 4.1.1 , 4.1.3 and special packing provisions of 4.1.5 are met:		
Inner packagings Receptacles fibreboard metal Plastics wood Dividing partitions in the outer packagings	Intermediate packagings Not necessary	Outer packagings Boxes steel (4A) aluminium (4B) other metal (4N) natural wood, ordinary with metal liner (4C1) plywood (4D) with metal liner reconstituted wood (4F) with metal liner plastics, expanded (4H1) plastics, solid (4H2) Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plastics (1H1, 1H2)
Special packing provision: PP77 For UN Nos. 0248 and 0249, packagings shall be protected against the ingress of water. When water-activated contrivances are transported unpackaged, they shall be provided with at least two independent protective features which prevent the ingress of water.		

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P200	PACKING INSTRUCTION	P200
<p>Type of packagings: Cylinders, tubes, pressure drums and bundles of cylinders</p> <p>Cylinders, tubes, pressure drums and bundles of cylinders are authorised provided the special packing provisions of 4.1.6 and the provisions listed below under (1) to (11) are met.</p> <p>General</p> <p>(1) Pressure receptacles shall be so closed and leakproof as to prevent escape of the gases;</p> <p>(2) Pressure receptacles containing toxic substances with an LC₅₀ less than or equal to 200 ml/m³ (ppm) as specified in the table shall not be equipped with any pressure relief device. Pressure relief devices shall be fitted on UN pressure receptacles used for the carriage of UN No. 1013 carbon dioxide and UN No. 1070 nitrous oxide;</p> <p>(3) The following three tables cover compressed gases (Table 1), liquefied and dissolved gases (Table 2) and substances not in Class 2 (Table 3). They provide:</p> <p>(a) the UN number, name and description, and the classification code of the substance;</p> <p>(b) the LC₅₀ for toxic substances;</p> <p>(c) the types of pressure receptacles authorised for the substance, shown by the letter "X";</p> <p>(d) the maximum test period for periodic inspection of the pressure receptacles;</p> <p><i>NOTE: For pressure receptacles which make use of composite materials, the periodic inspection frequencies shall be as determined by the competent authority or body designated by this authority which issued the type approval.</i></p> <p>(e) the minimum test pressure of the pressure receptacles;</p> <p>(f) the maximum working pressure of the pressure receptacles for compressed gases or the maximum filling ratio(s) for liquefied and dissolved gases;</p> <p>(g) special packing provisions that are specific to a substance.</p> <p>Test pressure, filling ratios and filling requirements</p> <p>(4) The minimum test pressure required for is 1 MPa (10 bar);</p> <p>(5) In no case shall pressure receptacles be filled in excess of the limit permitted in the following requirements:</p> <p>(a) For compressed gases, the working pressure shall be not more than two thirds of the test pressure of the pressure receptacles. Restrictions to this upper limit on working pressure are imposed by special packing provision "o". In no case shall the internal pressure at 65 °C exceed the test pressure.</p> <p>(b) For high pressure liquefied gases, the filling ratio shall be such that the settled pressure at 65 °C does not exceed the test pressure of the pressure receptacles.</p> <p>The use of test pressures and filling ratios other than those in the table is permitted, except where special packing provision "o" applies, provided that:</p> <p>(i) the criterion of special packing provision "r" is met when applicable; or</p> <p>(ii) the above criterion is met in all other cases.</p> <p>For high pressure liquefied gases and gas mixtures for which relevant data are not available, the maximum filling ratio (FR) shall be determined as follows:</p> $FR = 8.5 \times 10^{-4} \times d_g \times P_h$ <p>where</p> <p>FR = maximum filling ratio</p> <p>d_g = gas density (at 15 °C, 1 bar)(in kg/m³)</p> <p>P_h = minimum test pressure (in bar).</p>		

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P200	PACKING INSTRUCTION (<i>cont'd</i>)	P200
	<p>If the density of the gas is unknown, the maximum filling ratio shall be determined as follows:</p> $FR = \frac{P_h \times MM \times 10^{-3}}{R \times 338}$ <p>where</p> <p>FR = maximum filling ratio</p> <p>P_h = minimum test pressure (in bar)</p> <p>MM = molecular mass (in g/mol)</p> <p>R = 8.31451 × 10⁻² bar.l.mol⁻¹.K⁻¹ (gas constant).</p> <p>For gas mixtures, the average molecular mass is to be taken, taking into account the volumetric concentrations of the various components.</p> <p>(c) For low pressure liquefied gases, the maximum mass of contents per litre of water capacity shall equal 0.95 times the density of the liquid phase at 50 °C; in addition, the liquid phase shall not fill the pressure receptacle at any temperature up to 60 °C. The test pressure of the pressure receptacle shall be at least equal to the vapour pressure (absolute) of the liquid at 65 °C, minus 100 kPa (1 bar).</p> <p>For low pressure liquefied gases and gas mixtures for which relevant data are not available, the maximum filling ratio shall be determined as follows:</p> $FR = (0.0032 \times BP - 0.24) \times d_1$ <p>where</p> <p>FR = maximum filling ratio</p> <p>BP = boiling point (in Kelvin)</p> <p>d₁ = density of the liquid at boiling point (in kg/l).</p> <p>(d) For UN No. 1001 acetylene, dissolved, and UN No. 3374 acetylene, solvent free, see (10), special packing provision "p".</p> <p>(6) Other test pressure and filling ratio may be used provided they satisfy the general requirements outlined in paragraphs (4) and (5) above;</p> <p>(7) (a) The filling of pressure receptacles may only be carried out by specially-equipped centres, with qualified staff using appropriate procedures.</p> <p>The procedures should include checks:</p> <ul style="list-style-type: none"> - of the conformity to regulations of receptacles and accessories; - of their compatibility with the product to be carried; - of the absence of damage which might affect safety; - of compliance with the degree or pressure of filling, as appropriate; - of regulation markings and identification. <p>(b) LPG to be filled in cylinders shall be of high quality; this is deemed to be fulfilled if the LPG to be filled is in compliance with the limitations on corrosiveness as specified in ISO 9162:1989.</p>	
	<p>Periodic inspections</p> <p>(8) Refillable pressure receptacles shall be subjected to periodic inspections in accordance with the requirements of 6.2.1.6 and 6.2.3.5 respectively.</p> <p>(9) If special provisions for certain substances do not appear in the tables below, periodic inspections shall be carried out:</p> <p>(a) Every 5 years in the case of pressure receptacles intended for the carriage of gases of classification codes 1T, 1TF, 1TO, 1TC, 1TFC, 1TOC, 2T, 2TO, 2TF, 2TC, 2TFC, 2TOC, 4A, 4F and 4TC;</p> <p>(b) Every 5 years in the case of pressure receptacles intended for the carriage of substances from other classes;</p>	

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P200	PACKING INSTRUCTION (<i>cont'd</i>)	P200
	<p>(c) Every 10 years in the case of pressure receptacles intended for the carriage of gases of classification codes 1A, 1O, 1F, 2A, 2O and 2F.</p> <p>By derogation from this paragraph, the periodic inspection of pressure receptacles which make use of composite materials (composite pressure receptacles) shall be carried out at intervals determined by the competent authority or body designated by this authority which issued the type approval.</p> <p>Special packing provisions</p> <p>(10) Material compatibility</p> <p>a: Aluminium alloy pressure receptacles shall not be used.</p> <p>b: Copper valves shall not be used.</p> <p>c: Metal parts in contact with the contents shall not contain more than 65% copper.</p> <p>d: When steel pressure receptacles are used, only those bearing the "H" mark in accordance with 6.2.2.7.4 (p) are permitted.</p> <p>Requirements for toxic substances with an LC_{50} less than or equal to 200 ml/m³ (ppm)</p> <p>k: Valve outlets shall be fitted with pressure retaining gas-tight plugs or caps having threads that match those of the valve outlets and made of material not liable to attack by the contents of the pressure receptacle.</p> <p>Each cylinder within a bundle shall be fitted with an individual valve that shall be closed during carriage. After filling, the manifold shall be evacuated, purged and plugged.</p> <p>Bundles containing UN 1045 Fluorine, compressed, may be constructed with isolation valves on groups of cylinders not exceeding 150 litres total water capacity instead of isolation valves on every cylinder.</p> <p>Cylinders and individual cylinders within a bundle shall have a test pressure greater than or equal to 200 bar and a minimum wall thickness of 3.5 mm for aluminium alloy or 2 mm for steel. Individual cylinders not complying with this requirement shall be carried in a rigid outer packaging that will adequately protect the cylinder and its fittings and meeting the packing group I performance level. Pressure drums shall have a minimum wall thickness as specified by the competent authority.</p> <p>Pressure receptacles shall not be fitted with a pressure relief device.</p> <p>Cylinders and individual cylinders in a bundle shall be limited to a maximum water capacity of 85 litres.</p> <p>Each valve shall be capable of withstanding the test pressure of the pressure receptacle and be connected directly to the pressure receptacle by either a taper thread or other means which meets the requirements of ISO 10692-2:2001.</p> <p>Each valve shall either be of the packless type with non-perforated diaphragm, or be of a type which prevents leakage through or past the packing.</p> <p>Carriage in capsules is not allowed.</p> <p>Each pressure receptacle shall be tested for leakage after filling.</p>	

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P200	PACKING INSTRUCTION (<i>cont'd</i>)	P200
<i>Gas specific provisions</i>		
l:	UN No. 1040 ethylene oxide may also be packed in hermetically sealed glass or metal inner packagings suitably cushioned in fibreboard, wooden or metal boxes meeting the packing group I performance level. The maximum quantity permitted in any glass inner packaging is 30 g, and the maximum quantity permitted in any metal inner packaging is 200 g. After filling, each inner packaging shall be determined to be leak-tight by placing the inner packaging in a hot water bath at a temperature, and for a period of time, sufficient to ensure that an internal pressure equal to the vapour pressure of ethylene oxide at 55 °C is achieved. The maximum net mass in any outer packaging shall not exceed 2.5 kg.	
m:	Pressure receptacles shall be filled to a working pressure not exceeding 5 bar.	
n:	Cylinders and individual cylinders in a bundle shall contain not more than 5 kg of the gas. When bundles containing UN 1045 Fluorine, compressed are divided into groups of cylinders in accordance with special packing provision "k" each group shall contain not more than 5 kg of the gas.	
o:	In no case shall the working pressure or filling ratio shown in the tables be exceeded.	
p:	For UN No. 1001 acetylene, dissolved, and UN No. 3374 acetylene, solvent free: cylinders shall be filled with a homogeneous monolithic porous material; the working pressure and the quantity of acetylene shall not exceed the values prescribed in the approval or in ISO 3807-1:2000 or ISO 3807-2:2000, as applicable.	
	For UN No. 1001 acetylene, dissolved: cylinders shall contain a quantity of acetone or suitable solvent as specified in the approval (see ISO 3807-1:2000 or ISO 3807-2:2000, as applicable); cylinders fitted with pressure relief devices or manifolded together shall be carried vertically.	
	Alternatively, for UN No. 1001 acetylene, dissolved: cylinders which are not UN pressure receptacles may be filled with a non monolithic porous material; the working pressure, the quantity of acetylene and the quantity of solvent shall not exceed the values prescribed in the approval. The maximum test period for periodic inspection of the cylinders shall not exceed five years.	
	A test pressure of 52 bar shall be applied only to cylinders conforming to ISO 3807-2:2000.	
q:	Valve outlets of pressure receptacles for pyrophoric gases or flammable mixtures of gases containing more than 1% of pyrophoric compounds shall be fitted with gas-tight plugs or caps which shall be made of material not liable to attack by the contents of the pressure receptacle. When these pressure receptacles are manifolded in a bundle, each of the pressure receptacles shall be fitted with an individual valve that shall be closed during carriage, and the outlet of the manifold valve shall be fitted with a pressure retaining gas-tight plug or cap. Gas-tight plugs or caps shall have threads that match those of the valve outlets. Carriage in capsules is not allowed.	
r:	The filling ratio of this gas shall be limited such that, if complete decomposition occurs, the pressure does not exceed two thirds of the test pressure of the pressure receptacle.	
ra:	This gas may also be packed in capsules under the following conditions:	
	(a) The mass of gas shall not exceed 150 g per capsule;	
	(b) The capsules shall be free from faults liable to impair the strength;	
	(c) The leakproofness of the closure shall be ensured by an additional device (cap, crown, seal, binding, etc.) capable of preventing any leakage of the closure during carriage;	
	(d) The capsules shall be placed in an outer packaging of sufficient strength. A package shall not weigh more than 75 kg.	

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P200	PACKING INSTRUCTION (<i>cont'd</i>)	P200
s:	<p>Aluminium alloy pressure receptacles shall be:</p> <ul style="list-style-type: none"> - Equipped only with brass or stainless steel valves; and - Cleaned for hydrocarbons contamination and not contaminated with oil. UN pressure receptacles shall be cleaned in accordance with ISO 11621:1997. 	
ta:	<p>Other criteria may be used for filling of welded steel cylinders intended for the carriage of substances of UN No. 1965:</p> <ul style="list-style-type: none"> (a) with the agreement of the competent authorities of the countries where the carriage is carried out; and (b) in compliance with the provisions of a national code or standard recognised by the competent authorities. <p>When the criteria for filling are different from those in P200(5), the transport document shall include the statement "Carriage in accordance with packing instruction P200, special packing provision ta" and the indication of the reference temperature used for the calculation of the filling ratio.</p> <p>Periodic inspection</p> <p>u: The interval between periodic tests may be extended to 10 years for aluminium alloy pressure receptacles. This derogation may only be applied to UN pressure receptacles when the alloy of the pressure receptacle has been subjected to stress corrosion testing as specified in ISO 7866:1999.</p> <p>v: (1) The interval between inspections for steel cylinders, other than refillable welded steel cylinders for UN Nos. 1011, 1075, 1965, 1969 or 1978, may be extended to 15 years:</p> <ul style="list-style-type: none"> (a) with the agreement of the competent authority (authorities) of the country (countries) where the periodic inspection and the carriage take place; and (b) in accordance with the requirements of a technical code or a standard recognised by the competent authority <p>(2) For refillable welded steel cylinders for UN Nos. 1011, 1075, 1965, 1969 or 1978, the interval may be extended to 15 years, if the provisions of paragraph (12) of this packing instruction are applied.</p> <p>Requirements for N.O.S. entries and for mixtures</p> <p>z: The construction materials of the pressure receptacles and their accessories shall be compatible with the contents and shall not react to form harmful or dangerous compounds therewith. The test pressure and filling ratio shall be calculated in accordance with the relevant requirements of (5). Toxic substances with an LC₅₀ less than or equal to 200 ml/m³ shall not be carried in tubes, pressure drums or MEGCs and shall meet the requirements of special packing provision "k". However, UN 1975 Nitric oxide and dinitrogen tetroxide mixture may be carried in pressure drums. For pressure receptacles containing pyrophoric gases or flammable mixtures of gases containing more than 1% pyrophoric compounds, the requirements of special packing provision "q" shall be met. The necessary steps shall be taken to prevent dangerous reactions (i.e. polymerisation or decomposition) during carriage. If necessary, stabilisation or addition of an inhibitor shall be required. Mixtures containing UN No. 1911 diborane, shall be filled to a pressure such that, if complete decomposition of the diborane occurs, two thirds of the test pressure of the pressure receptacle shall not be exceeded. Mixtures containing UN 2192 germane, other than mixtures of up to 35% germane in hydrogen or nitrogen or up to 28% germane in helium or argon, shall be filled to a pressure such that, if complete decomposition of the germane occurs, two thirds of the test pressure of the pressure receptacle shall not be exceeded.</p>	

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P200	PACKING INSTRUCTION (cont'd)	P200
Requirements for substances not in Class 2		
ab: Pressure receptacles shall satisfy the following conditions:		
(i) The pressure test shall include an inspection of the inside of the pressure receptacles and check of accessories;		
(ii) In addition resistance to corrosion shall be checked every two years by means of suitable instruments (e.g. ultrasound) and the condition of the accessories verified;		
(iii) Wall thickness shall not be less than 3 mm.		
ac: Tests and inspections shall be carried out under the supervision of an expert approved by the competent authority.		
ad: Pressure receptacles shall satisfy the following conditions:		
(i) Pressure receptacles shall be designed for a design pressure of not less than 2.1 MPa (21 bar) (gauge pressure);		
(ii) In addition to the marks for refillable receptacles, the pressure receptacles shall bear the following particulars in clearly legible and durable characters:		
- The UN number and the proper shipping name of the substance according to 3.1.2;		
- The maximum permitted mass when filled and the tare of the pressure receptacle, including accessories fitted during filling, or the gross mass.		
(11) The applicable requirements of this packing instruction are considered to have been complied with if the following standards, as relevant, are applied:		
Applicable requirements	Reference	Title of document
(7)	EN 1919:2000	Transportable gas cylinders. Cylinders for gases (excluding acetylene and LPG). Inspection at time of filling
(7)	EN 1920:2000	Transportable gas cylinders. Cylinders for compressed gases (excluding acetylene). Inspection at time of filling
(7)	EN 13365:2002 +A1:2005	Transportable gas cylinders – Cylinder bundles for permanent and liquefied gases (excluding acetylene) – Inspection at the time of filling
(7) and (10) ta (b)	EN 1439:2008 (except 3.5 and Annex G)	LPG equipment and accessories – Procedures for checking LPG cylinders before, during and after filling
(7) and (10) ta (b)	EN 14794:2005	LPG equipment and accessories - Transportable refillable aluminium cylinders for liquefied petroleum gas (LPG) - Procedure for checking before, during and after filling
(10) p	EN 12755:2000	Transportable gas cylinders – Filling conditions for acetylene bundles
(10) p	EN ISO 11372:2011	Gas cylinders – Acetylene cylinders – Filling conditions and filling inspection (ISO 11372:2010)

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P200	PACKING INSTRUCTION (<i>cont'd</i>)	P200
<p>(12) An interval of 15 years for the periodic inspection of refillable welded steel cylinders may be granted in accordance with special packing provision v (2) of paragraph (10), if the following provisions are applied.</p>		
<p>1. General provisions</p>		
<p>1.1 For the application of this section, the competent authority shall not delegate its tasks and duties to Xb bodies (inspection bodies of type B) or IS bodies (in-house inspection services).</p>		
<p>1.2 The owner of the cylinders shall apply to the competent authority for granting the 15 year interval, and shall demonstrate that the requirements of sub-paragraphs 2, 3 and 4 are met.</p>		
<p>1.3 Cylinders manufactured since 1 January 1999 shall have been manufactured in conformity with the following standards:</p> <ul style="list-style-type: none"> - EN 1442; or - EN 13322-1; or - Annex I, parts 1 to 3 to Council Directive 84/527/EEC^a <p>as applicable according to the table in 6.2.4 of ADR.</p> <p>Other cylinders manufactured before 1 January 2009 in conformity with ADR in accordance with a technical code accepted by the national competent authority may be accepted for a 15 year interval, if they are of equivalent safety to the provisions of ADR as applicable at the time of application.</p>		
<p>1.4 The owner shall submit documentary evidence to the competent authority demonstrating that the cylinders comply with the provisions of sub-paragraph 1.3. The competent authority shall verify that these conditions are met.</p>		
<p>1.5 The competent authority shall check whether the provisions of sub-paragraphs 2 and 3 are fulfilled and correctly applied. If all provisions are fulfilled, it shall authorise the 15-year interval for the cylinders. In this authorisation, the type of cylinder (as specified in the type approval) or a group of cylinders (see Note) covered shall be clearly identified. The authorisation shall be delivered to the owner; the competent authority shall keep a copy. The owner shall keep the documents for as long as the cylinders are authorised for a 15 year interval.</p> <p><i>NOTE: A group of cylinders is defined by the production dates of identical cylinders for a period, during which the applicable provisions of ADR and of the technical code accepted by the competent authority have not changed in their technical content. Example: Cylinders of identical design and volume having been manufactured according to the provisions of ADR as applicable between 1 January 1985 and 31 December 1988 in combination with a technical code accepted by the competent authority applicable for the same period, form one group in terms of the provisions of this paragraph.</i></p>		
<p>1.6 The competent authority shall monitor the owner of the cylinders for compliance with the provisions of ADR and the authorisation given as appropriate, but at least every three years or when changes to the procedures are introduced.</p>		
<p>2. Operational provisions</p>		
<p>2.1 Cylinders having been granted a 15 year interval for periodic inspection shall only be filled in filling centres applying a documented quality system to ensure that all the provisions of paragraph (7) of this packing instruction and the requirements and responsibilities of EN 1439:2008 are fulfilled and correctly applied.</p>		
<p>2.2 The competent authority shall verify that these requirements are fulfilled and check this as appropriate, but at least every three years or when changes to the procedures are introduced.</p>		
<p>2.3 The owner shall provide documentary evidence to the competent authority that the filling centre complies with the provisions of sub-paragraph 2.1.</p>		
<p>2.4 If a filling centre is situated in a different Contracting Party to ADR, the owner shall provide additional documentary evidence that the filling centre is monitored accordingly by the competent authority of that Contracting Party to ADR.</p>		
<p>2.5 To prevent internal corrosion, only gases of high quality with very low potential contamination shall be filled into the cylinders. This is deemed to be fulfilled, if the gases conform to the limitations on corrosiveness as specified in ISO 9162:1989.</p>		

(Cont'd on next page)

^a Council directive on the approximation of the laws of the Member States relating to welded unalloyed steel gas cylinders, published in the Official Journal of the European Communities No. L 300 of 19.11.1984.

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P200	PACKING INSTRUCTION (cont'd)	P200
3.	Provisions for qualification and periodic inspection	
	<p>3.1 Cylinders of a type or group already in use, for which a 15 year interval has been granted and to which the 15 year interval has been applied, shall be subject to a periodic inspection according to 6.2.3.5.</p>	
	<p><i>NOTE: For the definition of a group of cylinders, see Note to sub-paragraph 1.5.</i></p>	
	<p>3.2 If a cylinder with a 15-year interval fails the hydraulic pressure test during a periodic inspection e.g. by bursting or leakage, the owner shall investigate and produce a report on the cause of the failure and if other cylinders (e.g. of the same type or group) are affected. In the latter case, the owner shall inform the competent authority. The competent authority shall then decide on appropriate measures and inform the competent authorities of all other Contracting Parties to ADR accordingly.</p>	
	<p>3.3 If internal corrosion as defined in the standard applied (see sub-paragraph 1.3) has been detected, the cylinder shall be withdrawn from use and shall not be granted any further period for filling and carriage.</p>	
	<p>3.4 Cylinders having been granted a 15 year interval shall only be fitted with valves designed and manufactured for a minimum 15 year period of use according to EN 13152:2001 + A1:2003 or EN 13153:2001 + A1:2003. After a periodic inspection, a new valve shall be fitted to the cylinder, except that manually operated valves, which have been refurbished or inspected according to EN 14912:2005 may be re-fitted, if they are suitable for another 15 year period of use. Refurbishment or inspection shall only be carried out by the manufacturer of the valves or according to his technical instruction by an enterprise qualified for such work and operating under a documented quality system.</p>	
4.	Marking	
	<p>Cylinders having been granted a 15 year interval for periodic inspection in accordance with this paragraph shall additionally be marked clearly and legibly with "P15Y". This marking shall be removed if the cylinder is no longer authorised for a 15 year interval.</p>	
	<p><i>NOTE: This marking shall not apply to cylinders subject to the transitional provision in 1.6.2.9, 1.6.2.10 or the provisions of special packing provision v (1) of paragraph (10) of this packing instruction.</i></p>	

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P200		PACKING INSTRUCTION (cont'd)										P200
Table 1: COMPRESSED GASES												
UN No.	Name and description	Classification code	LC ₅₀ ml/m ³	Cylinders	Tubes	Pressure drums	Bundles of cylinders	Test period, years ^a	Test pressure, bar ^b	Maximum working pressure, bar ^b	Special packing provisions	
1002	AIR, COMPRESSED	1A		X	X	X	X	10				
1006	ARGON, COMPRESSED	1A		X	X	X	X	10				
1016	CARBON MONOXIDE, COMPRESSED	1TF	3760	X	X	X	X	5			u	
1023	COAL GAS, COMPRESSED	1TF		X	X	X	X	5				
1045	FLUORINE, COMPRESSED	1TOC	185	X			X	5	200	30	a, k, n, o	
1046	HELIUM, COMPRESSED	1A		X	X	X	X	10				
1049	HYDROGEN, COMPRESSED	1F		X	X	X	X	10			d	
1056	KRYPTON, COMPRESSED	1A		X	X	X	X	10				
1065	NEON, COMPRESSED	1A		X	X	X	X	10				
1066	NITROGEN, COMPRESSED	1A		X	X	X	X	10				
1071	OIL GAS, COMPRESSED	1TF		X	X	X	X	5				
1072	OXYGEN, COMPRESSED	1O		X	X	X	X	10			s	
1612	HEXAETHYL TETRAPHOSPHATE AND COMPRESSED GAS MIXTURE	1T		X	X	X	X	5			z	
1660	NITRIC OXIDE, COMPRESSED	1TOC	115	X			X	5	225	33	k, o	
1953	COMPRESSED GAS, TOXIC, FLAMMABLE, N.O.S.	1TF	≤ 5000	X	X	X	X	5			z	
1954	COMPRESSED GAS, FLAMMABLE, N.O.S	1F		X	X	X	X	10			z	
1955	COMPRESSED GAS, TOXIC, N.O.S.	1T	≤ 5000	X	X	X	X	5			z	
1956	COMPRESSED GAS, N.O.S.	1A		X	X	X	X	10			z	
1957	DEUTERIUM, COMPRESSED	1F		X	X	X	X	10			d	
1964	HYDROCARBON GAS MIXTURE, COMPRESSED, N.O.S.	1F		X	X	X	X	10			z	
1971	METHANE, COMPRESSED or NATURAL GAS, COMPRESSED with high methane content	1F		X	X	X	X	10				
2034	HYDROGEN AND METHANE MIXTURE, COMPRESSED	1F		X	X	X	X	10			d	
2190	OXYGEN DIFLUORIDE, COMPRESSED	1TOC	2.6	X			X	5	200	30	a, k, n, o	
3156	COMPRESSED GAS, OXIDIZING, N.O.S.	1O		X	X	X	X	10			z	
3303	COMPRESSED GAS, TOXIC, OXIDIZING, N.O.S.	1TO	≤ 5000	X	X	X	X	5			z	
3304	COMPRESSED GAS, TOXIC, CORROSIVE, N.O.S.	1TC	≤ 5000	X	X	X	X	5			z	

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P200		PACKING INSTRUCTION (cont'd)										P200
Table 1: COMPRESSED GASES												
UN No.	Name and description	Classification code	LC ₅₀ ml/m ³	Cylinders	Tubes	Pressure drums	Bundles of cylinders	Test period, years ^a	Test pressure, bar ^b	Maximum working pressure, bar ^b	Special packing provisions	
3305	COMPRESSED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	1TFC	≤ 5000	X	X	X	X	5			z	
3306	COMPRESSED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	1TOC	≤ 5000	X	X	X	X	5			z	

^a Not applicable for pressure receptacles made of composite materials.

^b Where the entries are blank, the working pressure shall not exceed two thirds of the test pressure.

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P200		PACKING INSTRUCTION (cont'd)										P200
Table 2: LIQUEFIED GASES AND DISSOLVED GASES												
UN No.	Name and description	Classification code	LC ₅₀ ml/m ³	Cylinders	Tubes	Pressure drums	Bundles of cylinders	Test period, years ^a	Test pressure, bar	Filling ratio	Special packing provisions	
1001	ACETYLENE, DISSOLVED	4F		X			X	10	60		c, p	
1005	AMMONIA, ANHYDROUS	2TC	4000	X	X	X	X	5	29	0.54	b, ra	
1008	BORON TRIFLUORIDE	2TC	387	X	X	X	X	5	225 300	0.715 0.86	a	
1009	BROMOTRIFLUORO-METHANE (REFRIGERANT GAS R 13B1)	2A		X	X	X	X	10	42 120 250	1.13 1.44 1.60	ra ra ra	
1010	BUTADIENES, STABILIZED (1,2-butadiene) or	2F		X	X	X	X	10	10	0.59	ra	
1010	BUTADIENES, STABILIZED (1,3-butadiene) or	2F		X	X	X	X	10	10	0.55	ra	
1010	BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED	2F		X	X	X	X	10	10	0.50	ra, v, z	
1011	BUTANE	2F		X	X	X	X	10	10	0.52	ra, v	
1012	BUTYLENES MIXTURES or	2F		X	X	X	X	10	10	0.50	ra, z	
1012	1-BUTYLENE or	2F		X	X	X	X	10	10	0.53		
1012	CIS-2-BUTYLENE or	2F		X	X	X	X	10	10	0.55		
1012	TRANS-2 BUTYLENE	2F		X	X	X	X	10	10	0.54		
1013	CARBON DIOXIDE	2A		X	X	X	X	10	190 250	0.68 0.76	ra ra	
1017	CHLORINE	2TOC	293	X	X	X	X	5	22	1.25	a, ra	
1018	CHLORODIFLUORO-METHANE (REFRIGERANT GAS R 22)	2A		X	X	X	X	10	27	1.03	ra	
1020	CHLOROPENTAFLUORO-ETHANE (REFRIGERANT GAS R 115)	2A		X	X	X	X	10	25	1.05	ra	
1021	1-CHLORO-1,2,2,2-TETRAFLUOROETHANE (REFRIGERANT GAS R 124)	2A		X	X	X	X	10	11	1.20	ra	
1022	CHLOROTRIFLUORO-METHANE (REFRIGERANT GAS R 13)	2A		X	X	X	X	10	100 120 190 250	0.83 0.90 1.04 1.11	ra ra ra ra	
1026	CYANOGEN	2TF	350	X	X	X	X	5	100	0.70	ra, u	
1027	CYCLOPROPANE	2F		X	X	X	X	10	18	0.55	ra	
1028	DICHLORODIFLUORO-METHANE (REFRIGERANT GAS R 12)	2A		X	X	X	X	10	16	1.15	ra	
1029	DICHLOROFLUORO-METHANE (REFRIGERANT GAS R 21)	2A		X	X	X	X	10	10	1.23	ra	
1030	1,1-DIFLUOROETHANE (REFRIGERANT GAS R 152a)	2F		X	X	X	X	10	16	0.79	ra	

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P200		PACKING INSTRUCTION (cont'd)									P200
Table 2: LIQUEFIED GASES AND DISSOLVED GASES											
UN No.	Name and description	Classification code	LC ₅₀ ml/m ³	Cylinders	Tubes	Pressure drums	Bundles of cylinders	Test period, years ^a	Test pressure, bar	Filling ratio	Special packing provisions
1032	DIMETHYLAMINE, ANHYDROUS	2F		X	X	X	X	10	10	0.59	b, ra
1033	DIMETHYL ETHER	2F		X	X	X	X	10	18	0.58	ra
1035	ETHANE	2F		X	X	X	X	10	95 120 300	0.25 0.30 0.40	ra ra ra
1036	ETHYLAMINE	2F		X	X	X	X	10	10	0.61	b, ra
1037	ETHYL CHLORIDE	2F		X	X	X	X	10	10	0.80	a, ra
1039	ETHYL METHYL ETHER	2F		X	X	X	X	10	10	0.64	ra
1040	ETHYLENE OXIDE, or ETHYLENE OXIDE WITH NITROGEN up to a total pressure of 1MPa (10 bar) at 50 °C	2TF	2900	X	X	X	X	5	15	0.78	l, ra
1041	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with more than 9% but not more than 87% ethylene oxide	2F		X	X	X	X	10	190 250	0.66 0.75	ra ra
1043	FERTILIZER AMMONIATING SOLUTION with free ammonia	4A		X		X	X	5			b, z
1048	HYDROGEN BROMIDE, ANHYDROUS	2TC	2860	X	X	X	X	5	60	1.51	a, d, ra
1050	HYDROGEN CHLORIDE, ANHYDROUS	2TC	2810	X	X	X	X	5	100 120 150 200	0.30 0.56 0.67 0.74	a, d, ra a, d, ra a, d, ra a, d, ra
1053	HYDROGEN SULPHIDE	2TF	712	X	X	X	X	5	48	0.67	d, ra, u
1055	ISOBUTYLENE	2F		X	X	X	X	10	10	0.52	ra
1058	LIQUEFIED GASES, non-flammable, charged with nitrogen, carbon dioxide or air	2A		X	X	X	X	10	Test pressure = 1.5 × working pressure		ra
1060	METHYLACETYLENE AND PROPADIENE MIXTURE, STABILIZED	2F		X	X	X	X	10			c, ra, z
	Propadiene with 1% to 4% methylacetylene	2F		X	X	X	X	10	22	0.52	c, ra
	Mixture P1	2F		X	X	X	X	10	30	0.49	c, ra
	Mixture P2	2F		X	X	X	X	10	24	0.47	c, ra

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P200 PACKING INSTRUCTION (cont'd) P200											
Table 2: LIQUEFIED GASES AND DISSOLVED GASES											
UN No.	Name and description	Classification code	LC ₅₀ ml/m ³	Cylinders	Tubes	Pressure drums	Bundles of cylinders	Test period, years ^a	Test pressure, bar	Filling ratio	Special packing provisions
1061	METHYLAMINE, ANHYDROUS	2F		X	X	X	X	10	13	0.58	b, ra
1062	METHYL BROMIDE with not more than 2% chloropicrin	2T	850	X	X	X	X	5	10	1.51	a
1063	METHYL CHLORIDE (REFRIGERANT GAS R 40)	2F		X	X	X	X	10	17	0.81	a, ra
1064	METHYL MERCAPTAN	2TF	1350	X	X	X	X	5	10	0.78	d, ra, u
1067	DINITROGEN TETROXIDE (NITROGEN DIOXIDE)	2TOC	115	X		X	X	5	10	1.30	k
1069	NITROSYL CHLORIDE	2TC	35	X			X	5	13	1.10	k, ra
1070	NITROUS OXIDE	2O		X	X	X	X	10	180 225 250	0.68 0.74 0.75	
1075	PETROLEUM GASES, LIQUEFIED	2F		X	X	X	X	10			v, z
1076	PHOSGENE	2TC	5	X		X	X	5	20	1.23	a, k, ra
1077	PROPYLENE	2F		X	X	X	X	10	27	0.43	ra
1078	REFRIGERANT GAS, N.O.S.	2A		X	X	X	X	10			ra, z
	Mixture F1	2A		X	X	X	X	10	12	1.23	
	Mixture F2	2A		X	X	X	X	10	18	1.15	
	Mixture F3	2A		X	X	X	X	10	29	1.03	
1079	SULPHUR DIOXIDE	2TC	2520	X	X	X	X	5	12	1.23	ra
1080	SULPHUR HEXAFLUORIDE	2A		X	X	X	X	10	70	1.06	ra
									140	1.34	ra
									160	1.38	ra
1081	TETRAFLUOROETHYLENE, STABILIZED	2F		X	X	X	X	10	200		m, o, ra
1082	TRIFLUOROCHLOROETHYLENE, STABILIZED	2TF	2000	X	X	X	X	5	19	1.13	ra, u
1083	TRIMETHYLAMINE, ANHYDROUS	2F		X	X	X	X	10	10	0.56	b, ra
1085	VINYL BROMIDE, STABILIZED	2F		X	X	X	X	10	10	1.37	a, ra
1086	VINYL CHLORIDE, STABILIZED	2F		X	X	X	X	10	12	0.81	a, ra
1087	VINYL METHYL ETHER, STABILIZED	2F		X	X	X	X	10	10	0.67	ra
1581	CHLOROPICRIN AND METHYL BROMIDE MIXTURE with more than 2% chloropicrin	2T	850	X	X	X	X	5	10	1.51	a
1582	CHLOROPICRIN AND METHYL CHLORIDE MIXTURE	2T	^d	X	X	X	X	5	17	0.81	a

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P200 PACKING INSTRUCTION (cont'd) P200											
Table 2: LIQUEFIED GASES AND DISSOLVED GASES											
UN No.	Name and description	Classification code	LC ₅₀ ml/m ³	Cylinders	Tubes	Pressure drums	Bundles of cylinders	Test period, years ^a	Test pressure, bar	Filling ratio	Special packing provisions
1589	CYANOGEN CHLORIDE, STABILIZED	2TC	80	X			X	5	20	1.03	k
1741	BORON TRICHLORIDE	2TC	2541	X	X	X	X	5	10	1.19	a, ra
1749	CHLORINE TRIFLUORIDE	2TOC	299	X	X	X	X	5	30	1.40	a
1858	HEXAFLUOROPROPYLENE (REFRIGERANT GAS R 1216)	2A		X	X	X	X	10	22	1.11	ra
1859	SILICON TETRAFLUORIDE	2TC	450	X	X	X	X	5	200 300	0.74 1.10	a
1860	VINYL FLUORIDE, STABILIZED	2F		X	X	X	X	10	250	0.64	a, ra
1911	DIBORANE	2TF	80	X			X	5	250	0.07	d, k, o
1912	METHYL CHLORIDE AND METHYLENE CHLORIDE MIXTURE	2F		X	X	X	X	10	17	0.81	a, ra
1952	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with not more than 9% ethylene oxide	2A		X	X	X	X	10	190 250	0.66 0.75	ra ra
1958	1,2-DICHLORO-1,1,2,2-TETRAFLUOROETHANE (REFRIGERANT GAS R 114)	2A		X	X	X	X	10	10	1.30	ra
1959	1,1-DIFLUOROETHYLENE (REFRIGERANT GAS R 1132a)	2F		X	X	X	X	10	250	0.77	ra
1962	ETHYLENE	2F		X	X	X	X	10	225 300	0.34 0.38	
1965	HYDROCARBON GAS MIXTURE, LIQUEFIED, N.O.S	2F		X	X	X	X	10		^b	ra, ta, v, z
	Mixture A	2F						10	10	0.50	
	Mixture A01	2F						10	15	0.49	
	Mixture A02	2F						10	15	0.48	
	Mixture A0	2F						10	15	0.47	
	Mixture A1	2F						10	20	0.46	
	Mixture B1	2F						10	25	0.45	
	Mixture B2	2F						10	25	0.44	
	Mixture B	2F						10	25	0.43	
	Mixture C	2F						10	30	0.42	
1967	INSECTICIDE GAS, TOXIC, N.O.S.	2T		X	X	X	X	5			z
1968	INSECTICIDE GAS, N.O.S.	2A		X	X	X	X	10			ra, z
1969	ISOBUTANE	2F		X	X	X	X	10	10	0.49	ra, v

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P200 PACKING INSTRUCTION (cont'd) P200											
Table 2: LIQUEFIED GASES AND DISSOLVED GASES											
UN No.	Name and description	Classification code	LC ₅₀ ml/m ³	Cylinders	Tubes	Pressure drums	Bundles of cylinders	Test period, years ^a	Test pressure, bar	Filling ratio	Special packing provisions
1973	CHLORODIFLUOROMETHANE AND CHLOROPENTAFLUOROETHANE MIXTURE with fixed boiling point, with approximately 49% chlorodifluoromethane (REFRIGERANT GAS R 502)	2A		X	X	X	X	10	31	1.01	ra
1974	CHLORODIFLUOROBROMOMETHANE (REFRIGERANT GAS R 12B1)	2A		X	X	X	X	10	10	1.61	ra
1975	NITRIC OXIDE AND DINITROGEN TETROXIDE MIXTURE (NITRIC OXIDE AND NITROGEN DIOXIDE MIXTURE)	2TOC	115	X		X	X	5			k, z
1976	OCTAFLUOROCYCLOBUTANE (REFRIGERANT GAS RC 318)	2.A		X	X	X	X	10	11	1.32	ra
1978	PROPANE	2F		X	X	X	X	10	23	0.43	ra, v
1982	TETRAFLUOROMETHANE (REFRIGERANT GAS R 14)	2A		X	X	X	X	10	200 300	0.71 0.90	
1983	1-CHLORO-2,2,2-TRIFLUOROETHANE (REFRIGERANT GAS R 133a)	2A		X	X	X	X	10	10	1.18	ra
1984	TRIFLUOROMETHANE (REFRIGERANT GAS R 23)	2A		X	X	X	X	10	190 250	0.88 0.96	ra ra
2035	1,1,1-TRIFLUOROETHANE (REFRIGERANT GAS R 143a)	2F		X	X	X	X	10	35	0.73	ra
2036	XENON	2A		X	X	X	X	10	130	1.28	
2044	2,2-DIMETHYLPROPANE	2F		X	X	X	X	10	10	0.53	ra
2073	AMMONIA SOLUTION, relative density less than 0.880 at 15 °C in water,	4A									
	with more than 35% but not more than 40% ammonia	4A		X	X	X	X	5	10	0.80	b
	with more than 40% but not more than 50% ammonia	4A		X	X	X	X	5	12	0.77	b
2188	ARSINE	2TF	20	X			X	5	42	1.10	d, k
2189	DICHLOROSILANE	2TFC	314	X	X	X	X	5	10 200	0.90 1.08	a
2191	SULPHURYL FLUORIDE	2T	3020	X	X	X	X	5	50	1.10	u
2192	GERMANE ^c	2TF	620	X	X	X	X	5	250	0.064	d, ra, r, q
2193	HEXAFLUROETHANE (REFRIGERANT GAS R 116)	2A		X	X	X	X	10	200	1.13	
2194	SELENIUM HEXAFLUROIDE	2TC	50	X			X	5	36	1.46	k, ra

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P200 PACKING INSTRUCTION (cont'd) P200											
Table 2: LIQUEFIED GASES AND DISSOLVED GASES											
UN No.	Name and description	Classification code	LC ₅₀ ml/m ³	Cylinders	Tubes	Pressure drums	Bundles of cylinders	Test period, years ^a	Test pressure, bar	Filling ratio	Special packing provisions
2195	TELLURIUM HEXAFLUORIDE	2TC	25	X			X	5	20	1.00	k, ra
2196	TUNGSTEN HEXAFLUORIDE	2TC	160	X			X	5	10	3.08	a, k, ra
2197	HYDROGEN IODIDE, ANHYDROUS	2TC	2860	X	X	X	X	5	23	2.25	a, d, ra
2198	PHOSPHORUS PENTAFLUORIDE	2TC	190	X			X	5	200 300	0.90 1.25	k k
2199	PHOSPHINE ^c	2TF	20	X			X	5	225 250	0.30 0.45	d, k, q, ra d, k, q, ra
2200	PROPADIENE, STABILIZED	2F		X	X	X	X	10	22	0.50	ra
2202	HYDROGEN SELENIDE, ANHYDROUS	2TF	2	X			X	5	31	1.60	k
2203	SILANE ^c	2F		X	X	X	X	10	225 250	0.32 0.36	q q
2204	CARBONYL SULPHIDE	2TF	1700	X	X	X	X	5	30	0.87	ra, u
2417	CARBONYL FLUORIDE	2TC	360	X	X	X	X	5	200 300	0.47 0.70	
2418	SULPHUR TETRAFLUORIDE	2TC	40	X			X	5	30	0.91	a, k, ra
2419	BROMOTRIFLUORO-ETHYLENE	2F		X	X	X	X	10	10	1.19	ra
2420	HEXAFLUOROACETONE	2TC	470	X	X	X	X	5	22	1.08	ra
2421	NITROGEN TRIOXIDE	2TOC	CARRIAGE PROHIBITED								
2422	OCTAFLUOROBUT-2-ENE (REFRIGERANT GAS R 1318)	2A		X	X	X	X	10	12	1.34	ra
2424	OCTAFLUOROPROPANE (REFRIGERANT GAS R 218)	2A		X	X	X	X	10	25	1.04	ra
2451	NITROGEN TRIFLUORIDE	2O		X	X	X	X	10	200	0.50	
2452	ETHYLACETYLENE, STABILIZED	2F		X	X	X	X	10	10	0.57	c, ra
2453	ETHYL FLUORIDE (REFRIGERANT GAS R 161)	2F		X	X	X	X	10	30	0.57	ra
2454	METHYL FLUORIDE (REFRIGERANT GAS R 41)	2F		X	X	X	X	10	300	0.63	ra
2455	METHYL NITRITE	2A	CARRIAGE PROHIBITED								
2517	1-CHLORO-1,1-DIFLUOROETHANE (REFRIGERANT GAS R 142b)	2F		X	X	X	X	10	10	0.99	ra
2534	METHYLCHLOROSILANE	2TFC	600	X	X	X	X	5			ra, z
2548	CHLORINE PENTAFLUORIDE	2TOC	122	X			X	5	13	1.49	a, k
2599	CHLOROTRIFLUORO-METHANE AND	2A		X	X	X	X	10	31	0.12	ra

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P200		PACKING INSTRUCTION (cont'd)										P200
Table 2: LIQUEFIED GASES AND DISSOLVED GASES												
UN No.	Name and description	Classification code	LC ₅₀ ml/m ³	Cylinders	Tubes	Pressure drums	Bundles of cylinders	Test period, years ^a	Test pressure, bar	Filling ratio	Special packing provisions	
	TRIFLUOROMETHANE AZEOTROPIC MIXTURE with approximately 60% chlorotrifluoromethane (REFRIGERANT GAS R 503)								42 100	0.17 0.64	ra ra	
2601	CYCLOBUTANE	2F		X	X	X	X	10	10	0.63	ra	
2602	DICHLORODIFLUOROMETHANE AND DIFLUOROETHANE AZEOTROPIC MIXTURE with approximately 74% dichlorodifluoromethane (REFRIGERANT GAS R 500)	2A		X	X	X	X	10	22	1.01	ra	
2676	STIBINE	2TF	20	X			X	5	200	0.49	k, ra, r	
2901	BROMINE CHLORIDE	2TOC	290	X	X	X	X	5	10	1.50	a	
3057	TRIFLUOROACETYL CHLORIDE	2TC	10	X		X	X	5	17	1.17	k, ra	
3070	ETHYLENE OXIDE AND DICHLORODIFLUOROMETHANE MIXTURE with not more than 12,5% ethylene oxide	2A		X	X	X	X	10	18	1.09	ra	
3083	PERCHLORYL FLUORIDE	2TO	770	X	X	X	X	5	33	1.21	u	
3153	PERFLUORO(METHYL VINYL ETHER)	2F		X	X	X	X	10	20	0.75	ra	
3154	PERFLUORO(ETHYL VINYL ETHER)	2F		X	X	X	X	10	10	0.98	ra	
3157	LIQUEFIED GAS, OXIDIZING, N.O.S.	2O		X	X	X	X	10			z	
3159	1,1,1,2-TETRAFLUOROETHANE (REFRIGERANT GAS R 134a)	2A		X	X	X	X	10	18	1.05	ra	
3160	LIQUEFIED GAS, TOXIC, FLAMMABLE, N.O.S.	2TF	≤ 5000	X	X	X	X	5			ra, z	
3161	LIQUEFIED GAS, FLAMMABLE, N.O.S.	2F		X	X	X	X	10			ra, z	
3162	LIQUEFIED GAS, TOXIC, N.O.S.	2T	≤ 5000	X	X	X	X	5			z	
3163	LIQUEFIED GAS, N.O.S.	2A		X	X	X	X	10			ra, z	
3220	PENTAFLUOROETHANE (REFRIGERANT GAS R 125)	2A		X	X	X	X	10	49 35	0.95 0.87	ra ra	
3252	DIFLUOROMETHANE (REFRIGERANT GAS R 32)	2F		X	X	X	X	10	48	0.78	ra	
3296	HEPTAFLUOROPROPANE (REFRIGERANT GAS R 227)	2A		X	X	X	X	10	13	1.21	ra	

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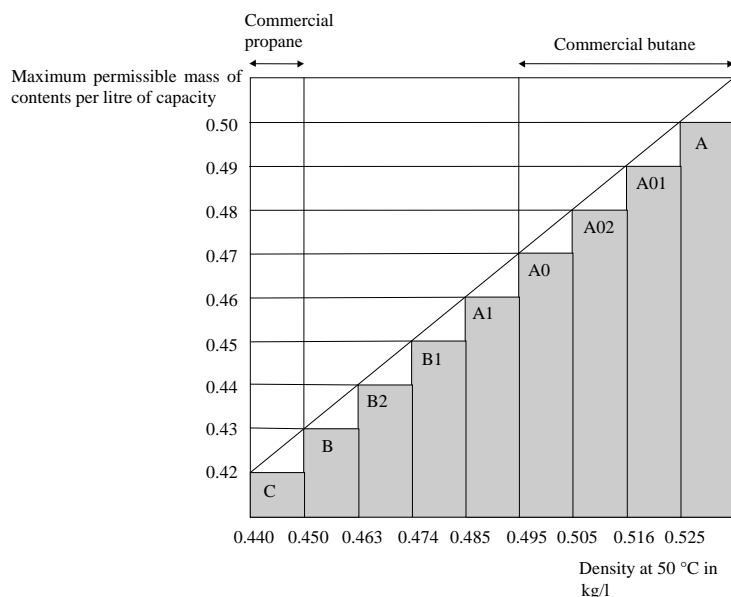
P200 PACKING INSTRUCTION (cont'd) P200											
Table 2: LIQUEFIED GASES AND DISSOLVED GASES											
UN No.	Name and description	Classification code	LC ₅₀ ml/m ³	Cylinders	Tubes	Pressure drums	Bundles of cylinders	Test period, years ^a	Test pressure, bar	Filling ratio	Special packing provisions
3297	ETHYLENE OXIDE AND CHLOROTETRAFLUOROETHANE MIXTURE with not more than 8.8% ethylene oxide	2A		X	X	X	X	10	10	1.16	ra
3298	ETHYLENE OXIDE AND PENTAFLUOROETHANE MIXTURE with not more than 7.9% ethylene oxide	2A		X	X	X	X	10	26	1.02	ra
3299	ETHYLENE OXIDE AND TETRAFLUOROETHANE MIXTURE with not more than 5.6% ethylene oxide	2A		X	X	X	X	10	17	1.03	ra
3300	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with more than 87% ethylene oxide	2TF	More than 2900	X	X	X	X	5	28	0.73	ra
3307	LIQUEFIED GAS, TOXIC, OXIDIZING, N.O.S.	2TO	≤ 5000	X	X	X	X	5			z
3308	LIQUEFIED GAS, TOXIC, CORROSIVE, N.O.S.	2TC	≤ 5000	X	X	X	X	5			ra, z
3309	LIQUEFIED GAS, TOXIC, FLAMMABLE, CORROSIVE, N.O.S.	2TFC	≤ 5000	X	X	X	X	5			ra, z
3310	LIQUEFIED GAS, TOXIC, OXIDIZING, CORROSIVE, N.O.S.	2TO C	≤ 5000	X	X	X	X	5			z
3318	AMMONIA SOLUTION, relative density less than 0.880 at 15 °C in water, with more than 50% ammonia	4TC		X	X	X	X	5			b
3337	REFRIGERANT GAS R 404A (Pentafluoroethane, 1,1,1-trifluoroethane, and 1,1,1,2-tetrafluoroethane zeotropic mixture with approximately 44% pentafluoroethane and 52% 1,1,1-trifluoroethane)	2A		X	X	X	X	10	36	0.82	ra
3338	REFRIGERANT GAS R 407A (Difluoromethane, pentafluoroethane, and 1,1,1,2-tetrafluoroethane zeotropic mixture with approximately 20% difluoromethane and 40% pentafluoroethane)	2A		X	X	X	X	10	32	0.94	ra

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P200		PACKING INSTRUCTION (cont'd)										P200
Table 2: LIQUEFIED GASES AND DISSOLVED GASES												
UN No.	Name and description	Classification code	LC ₅₀ ml/m ³	Cylinders	Tubes	Pressure drums	Bundles of cylinders	Test period, years ^a	Test pressure, bar	Filling ratio	Special packing provisions	
3339	REFRIGERANT GAS R 407B (Difluoromethane, pentafluoroethane, and 1,1,1,2-tetrafluoroethane zeotropic mixture with approximately 10% difluoromethane and 70% pentafluoroethane)	2A		X	X	X	X	10	33	0.93	ra	
3340	REFRIGERANT GAS R 407C (Difluoromethane, pentafluoroethane, and 1,1,1,2-tetrafluoroethane zeotropic mixture with approximately 23% difluoromethane and 25% pentafluoroethane)	2A		X	X	X	X	10	30	0.95	ra	
3354	INSECTICIDE GAS, FLAMMABLE, N.O.S	2F		X	X	X	X	10			ra, z	
3355	INSECTICIDE GAS, TOXIC, FLAMMABLE, N.O.S.	2TF		X	X	X	X	5			ra, z	
3374	ACETYLENE, SOLVENT FREE	2F		X			X	5	60		c, p	

^a Not applicable for pressure receptacles made of composite materials.

^b For mixtures of UN No. 1965, the maximum permissible filling mass per litre of capacity is as follows:



^c Considered as pyrophoric.

^d Considered to be toxic. The LC₅₀ value still to be determined.

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P200 PACKING INSTRUCTION (cont'd) P200												
Table 3: SUBSTANCES NOT IN CLASS 2												
UN No.	Name and description	Class	Classification Code	LC ₅₀ ml/m ³	Cylinders	Tubes	Pressure drums	Bundles of cylinders	Test period, years ^a	Test pressure, bar	Filling ratio	Special packing provisions
1051	HYDROGEN CYANIDE, STABILIZED containing less than 3% water	6.1	TF1	40	X			X	5	100	0.55	k
1052	HYDROGEN FLUORIDE, ANHYDROUS	8	CT1	966	X		X	X	5	10	0.84	a, ab, ac
1745	BROMINE PENTAFLUORIDE	5.1	OTC	25	X		X	X	5	10	^b	k, ab, ad
1746	BROMINE TRIFLUORIDE	5.1	OTC	50	X		X	X	5	10	^b	k, ab, ad
1790	HYDROFLUORIC ACID, solution, with more than 85% hydrofluoric acid	8	CT1	966	X		X	X	5	10	0.84	ab, ac
2495	IODINE PENTAFLUORIDE	5.1	OTC	120	X		X	X	5	10	^b	k, ab, ad

^a Not applicable for pressure receptacles made of composite materials.

^b A minimum ullage of 8% by volume is required.

P201 PACKING INSTRUCTION P201	
This instruction applies to UN Nos. 3167, 3168 and 3169.	
The following packagings are authorized:	
(1)	Cylinders and gas receptacles conforming to the construction, testing and filling requirements approved by the competent authority.
(2)	The following combination packagings provided that the general provisions of 4.1.1 and 4.1.3 are met: Outer packagings: Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G); Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Jerricans (3A1, 3A2, 3B1, 3B2, 3H1, 3H2). Inner packagings: (a) For non-toxic gases, hermetically sealed inner packagings of glass or metal with a maximum capacity of 5 litres per package; (b) For toxic gases, hermetically sealed inner packagings of glass or metal with a maximum capacity of 1 litre per package. Packagings shall conform to the packing group III performance level.

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P202	PACKING INSTRUCTION	P202
<i>(Reserved)</i>		

P203	PACKING INSTRUCTION	P203
This instruction applies to Class 2 refrigerated liquefied gases.		
Requirements for closed cryogenic receptacles:		
(1)	The special packing provisions of 4.1.6 shall be met.	
(2)	The requirements of Chapter 6.2 shall be met.	
(3)	The closed cryogenic receptacles shall be so insulated that they do not become coated with frost.	
(4)	Test pressure Refrigerated liquids shall be filled in closed cryogenic receptacles with the following minimum test pressures:	
	(a) For closed cryogenic receptacles with vacuum insulation, the test pressure shall not be less than 1.3 times the sum of the maximum internal pressure of the filled receptacle, including during filling and discharge, plus 100 kPa (1 bar);	
	(b) For other closed cryogenic receptacles, the test pressure shall be not less than 1.3 times the maximum internal pressure of the filled receptacle, taking into account the pressure developed during filling and discharge.	
(5)	Degree of filling For non-flammable, non-toxic refrigerated liquefied gases (classification codes 3A and 3O) the volume of liquid phase at the filling temperature and at a pressure of 100 kPa (1 bar) shall not exceed 98% of the water capacity of the pressure receptacle. For flammable refrigerated liquefied gases (classification code 3F) the degree of filling shall remain below the level at which, if the contents were raised to the temperature at which the vapour pressure equalled the opening pressure of the relief valve, the volume of the liquid phase would reach 98% of the water capacity at that temperature.	
(6)	Pressure-relief devices Closed cryogenic receptacles shall be fitted with at least one pressure-relief device.	
(7)	Compatibility Materials used to ensure the leakproofness of the joints or for the maintenance of the closures shall be compatible with the contents. In the case of receptacles intended for the carriage of oxidizing gases (classification code 3O), these materials shall not react with these gases in a dangerous manner.	
(8)	Periodic inspection The periodic inspection and test frequencies of pressure relief valves in accordance with 6.2.1.6.3 shall not exceed five years.	

(Cont'd on next page)

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P203	PACKING INSTRUCTION (cont'd)	P203
Requirements for open cryogenic receptacles:		
Only the following non oxidizing refrigerated liquefied gases of classification code 3A may be carried in open cryogenic receptacles: UN Nos. 1913, 1951, 1963, 1970, 1977, 2591, 3136 and 3158.		
Open cryogenic receptacles shall be constructed to meet the following requirements:		
<ol style="list-style-type: none"> (1) The receptacles shall be designed, manufactured, tested and equipped in such a way as to withstand all conditions, including fatigue, to which they will be subjected during their normal use and during normal conditions of carriage. (2) The capacity shall be not more than 450 litres. (3) The receptacle shall have a double wall construction with the space between the inner and outer wall being evacuated (vacuum insulation). The insulation shall prevent the formation of hoar frost on the exterior of the receptacle. (4) The materials of construction shall have suitable mechanical properties at the service temperature. (5) Materials which are in direct contact with the dangerous goods shall not be affected or weakened by the dangerous goods intended to be carried and shall not cause a dangerous effect, e.g. catalysing a reaction or reacting with the dangerous goods. (6) Receptacles of glass double wall construction shall have an outer packaging with suitable cushioning or absorbent materials which withstand the pressures and impacts liable to occur under normal conditions of carriage. (7) The receptacle shall be designed to remain in an upright position during carriage, e.g. have a base whose smaller horizontal dimension is greater than the height of the centre of gravity when filled to capacity or be mounted on gimbals. (8) The openings of the receptacles shall be fitted with devices allowing gases to escape, preventing any splashing out of liquid, and so configured that they remain in place during carriage. (9) Open cryogenic receptacles shall bear the following marks permanently affixed e.g. by stamping, engraving or etching: <ul style="list-style-type: none"> - The manufacturer's name and address; - The model number or name; - The serial or batch number; - The UN number and proper shipping name of gases for which the receptacle is intended; - The capacity of the receptacle in litres. 		

P204	PACKING INSTRUCTION	P204
<i>(Deleted)</i>		

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P205	PACKING INSTRUCTION	P205
This instruction applies to UN No. 3468.		
<ol style="list-style-type: none"> (1) For metal hydride storage systems, the special packing provisions of 4.1.6 shall be met. (2) Only pressure receptacles not exceeding 150 litres in water capacity and having a maximum developed pressure not exceeding 25 MPa are covered by this packing instruction. (3) Metal hydride storage systems meeting the applicable requirements for the construction and testing of pressure receptacles containing gas of Chapter 6.2 are authorised for the carriage of hydrogen only. (4) When steel pressure receptacles or composite pressure receptacles with steel liners are used, only those bearing the "H" mark, in accordance with 6.2.2.9.2 (j) shall be used. (5) Metal hydride storage systems shall meet the service conditions, design criteria, rated capacity, type tests, batch tests, routine tests, test pressure, rated charging pressure and provisions for pressure relief devices for transportable metal hydride storage systems specified in ISO 16111:2008 (Transportable gas storage devices – Hydrogen absorbed in reversible metal hydride) and their conformity and approval shall be assessed in accordance with 6.2.2.5. (6) Metal hydride storage systems shall be filled with hydrogen at a pressure not exceeding the rated charging pressure shown in the permanent markings on the system as specified by ISO 16111:2008. (7) The periodic test requirements for a metal hydride storage system shall be in accordance with ISO 16111:2008 and carried out in accordance with 6.2.2.6, and the interval between periodic inspections shall not exceed five years. 		

P206	PACKING INSTRUCTION	P206
This instruction applies to UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505.		
Unless otherwise indicated in ADR, cylinders and pressure drums conforming to the applicable requirements of Chapter 6.2 are authorized.		
<ol style="list-style-type: none"> (1) The special packing provisions of 4.1.6 shall be met. (2) The maximum test period for periodic inspection shall be 5 years. (3) Cylinders and pressure drums shall be so filled that at 50 °C the non-gaseous phase does not exceed 95% of their water capacity and they are not completely filled at 60 °C. When filled, the internal pressure at 65 °C shall not exceed the test pressure of the cylinders and pressure drums. The vapour pressures and volumetric expansion of all substances in the cylinders and pressure drums shall be taken into account. (4) The minimum test pressure shall be in accordance with packing instruction P200 for the propellant but shall not be less than 20 bar. 		
Additional requirement:		
Cylinders and pressure drums shall not be offered for carriage when connected with spray application equipment such as a hose and wand assembly.		
Special packing provision:		
PP89 For UN Nos. 3501, 3502, 3503, 3504 and 3505, notwithstanding 4.1.6.9 (b), non-refillable cylinders used may have a water capacity in litres not exceeding 1 000 litres divided by the test pressure expressed in bars provided capacity and pressure restrictions of the construction standard comply with ISO 11118:1999, which limits the maximum capacity to 50 litres.		

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P207	PACKING INSTRUCTION	P207
This instruction applies to UN No. 1950.		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
(a) Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G); Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2). Packagings shall conform to the packing group II performance level.		
(b) Rigid outer packagings with a maximum net mass as follows: Fibreboard 55 kg Other than fibreboard 125 kg The provisions of 4.1.1.3 need not be met.		
The packagings shall be designed and constructed to prevent movement of the aerosols and inadvertent discharge during normal conditions of carriage.		
Special packing provision:		
PP87 For UN 1950 waste aerosols carried in accordance with special provision 327, the packagings shall have a means of retaining any free liquid that might escape during carriage, e.g. absorbent material. The packagings shall be adequately ventilated to prevent the creation of flammable atmosphere and the build-up of pressure.		
Special packing provision specific to RID and ADR		
RR6 For UN 1950 in the case of carriage by full load, metal articles may also be packed as follows: The articles shall be grouped together in units on trays and held in position with an appropriate plastics cover; these units shall be stacked and suitably secured on pallets.		

P208	PACKING INSTRUCTION	P208
This packing instruction applies to UN No. 3150 devices, small, hydrocarbon gas powered or hydrocarbon gas refills for small devices		
(1) The special packing provisions of 4.1.6 when applicable shall be met.		
(2) The articles shall comply with the provisions of the country in which they were filled.		
(3) The devices and refills shall be packed in outer packagings conforming to 6.1.4 tested and approved in accordance with Chapter 6.1 for packing group II.		

P300	PACKING INSTRUCTION	P300
This instruction applies to UN No. 3064.		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
Combination packagings consisting of inner metal cans of not more than 1 litre capacity each and outer wooden boxes (4C1, 4C2, 4D or 4F) containing not more than 5 litres of solution.		
Additional requirements:		
1. Metal cans shall be completely surrounded with absorbent cushioning material.		
2. Wooden boxes shall be completely lined with suitable material impervious to water and nitroglycerin.		

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P301	PACKING INSTRUCTION	P301
This instruction applies to UN No. 3165.		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
(1)	<p>Aluminium pressure receptacle made from tubing and having welded heads. Primary containment of the fuel within this receptacle shall consist of a welded aluminium bladder having a maximum internal volume of 46 litres. The outer receptacle shall have a minimum design gauge pressure of 1 275 kPa and a minimum burst gauge pressure of 2 755 kPa. Each receptacle shall be leak checked during manufacture and before dispatch and shall be found leakproof. The complete inner unit shall be securely packed in non-combustible cushioning material, such as vermiculite, in a strong outer tightly closed metal packaging which will adequately protect all fittings. Maximum quantity of fuel per unit and package is 42 litres.</p>	
(2)	<p>Aluminium pressure receptacle. Primary containment of the fuel within this receptacle shall consist of a welded vapour tight fuel compartment with an elastomeric bladder having a maximum internal volume of 46 litres. The pressure receptacle shall have a minimum design gauge pressure of 2 860 kPa and a minimum burst gauge pressure of 5 170 kPa. Each receptacle shall be leak-checked during manufacture and before dispatch and shall be securely packed in non-combustible cushioning material such as vermiculite, in a strong outer tightly closed metal packaging which will adequately protect all fittings. Maximum quantity of fuel per unit and package is 42 litres.</p>	

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P302	PACKING INSTRUCTION	P302
This instruction applies to UN No. 3269.		
The following combination packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
Outer packagings:		
Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G);		
Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);		
Jerricans (3A1, 3A2, 3B1, 3B2, 3H1, 3H2);		
Inner packagings:		
The activator (organic peroxide) shall have a maximum quantity of 125 ml per inner packaging if liquid, and 500 g per inner packaging if solid.		
The base material and the activator shall be each separately packed in inner packagings.		
The components may be placed in the same outer packaging provided that they will not interact dangerously in the event of a leakage.		
Packagings shall conform to the packing group II or III performance level according to the criteria for Class 3 applied to the base material.		

P400	PACKING INSTRUCTION	P400
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
(1) Pressure receptacles, provided that the general provisions of 4.1.3.6 are met. They shall be made of steel and shall be subjected to an initial test and periodic tests every 10 years at a pressure of not less than 1 MPa (10 bar, gauge pressure). During carriage, the liquid shall be under a layer of inert gas with a gauge pressure of not less than 20 kPa (0.2 bar);		
(2) Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F or 4G), drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1D or 1G) or jerricans (3A1, 3A2, 3B1 or 3B2) enclosing hermetically sealed metal cans with inner packagings of glass or metal, with a capacity of not more than 1 litre each, having threaded closures with gaskets. Inner packagings shall be cushioned on all sides with dry, absorbent, non-combustible material in a quantity sufficient to absorb the entire contents. Inner packagings shall not be filled to more than 90% of their capacity. Outer packagings shall have a maximum net mass of 125 kg;		
(3) Steel, aluminium or metal drums (1A1, 1A2, 1B1, 1B2, 1N1 or 1N2), jerricans (3A1, 3A2, 3B1 or 3B2) or boxes (4A, 4B or 4N) with a maximum net mass of 150 kg each with hermetically sealed inner metal cans not more than 4 litre capacity each, with threaded closures fitted with gaskets. Inner packagings shall be cushioned on all sides with dry, absorbent, non-combustible material in a quantity sufficient to absorb the entire contents. Each layer of inner packagings shall be separated by a dividing partition in addition to cushioning material. Inner packagings shall not be filled to more than 90% of their capacity.		
Special packing provision:		
PP86 For UN Nos. 3392 and 3394, air shall be eliminated from the vapour space by nitrogen or other means.		

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P401	PACKING INSTRUCTION	P401
<p>The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:</p> <p>(1) Pressure receptacles, provided that the general provisions of 4.1.3.6 are met. They shall be made of steel and subjected to an initial test and periodic tests every 10 years at a pressure of not less than 0.6 MPa (6 bar, gauge pressure). During carriage, the liquid shall be under a layer of inert gas with a gauge pressure of not less than 20 kPa (0.2 bar);</p> <p>(2) Combination packagings:</p> <p style="padding-left: 20px;">Outer packagings:</p> <p style="padding-left: 40px;">Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G);</p> <p style="padding-left: 40px;">Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);</p> <p style="padding-left: 40px;">Jerricans (3A1, 3A2, 3B1, 3B2, 3H1, 3H2).</p> <p style="padding-left: 20px;">Inner packagings:</p> <p style="padding-left: 40px;">Glass, metal or plastics which have threaded closures with a maximum capacity of 1 litre.</p> <p style="padding-left: 20px;">Each inner packaging shall be surrounded by inert cushioning and absorbent material in a quantity sufficient to absorb the entire contents.</p> <p style="padding-left: 20px;">The maximum net mass per outer packaging shall not exceed 30 kg.</p>		
<p>Special packing provision specific to RID and ADR:</p> <p>RR7 For UN Nos. 1183, 1242, 1295 and 2988, the pressure receptacles shall however be subjected to the tests every five years.</p>		

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P402	PACKING INSTRUCTION	P402
<p>The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:</p>		
<p>(1) Pressure receptacles, provided that the general provisions of 4.1.3.6 are met. They shall be made of steel and subjected to an initial test and periodic tests every 10 years at a pressure of not less than 0.6 MPa (6 bar, gauge pressure). During carriage, the liquid shall be under a layer of inert gas with a gauge pressure of not less than 20 kPa (0.2 bar);</p>		
<p>(2) Combination packagings:</p>		
<p>Outer packagings:</p>		
<p style="padding-left: 40px;">Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G);</p>		
<p style="padding-left: 40px;">Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);</p>		
<p style="padding-left: 40px;">Jerricans (3A1, 3A2, 3B1, 3B2, 3H1, 3H2).</p>		
<p>Inner packagings with a maximum net mass as follows:</p>		
<p style="padding-left: 40px;">Glass 10 kg</p>		
<p style="padding-left: 40px;">Metal or plastics 15 kg</p>		
<p>Each inner packaging shall be fitted with threaded closures.</p>		
<p>Each inner packaging shall be surrounded by inert cushioning and absorbent material in a quantity sufficient to absorb the entire contents.</p>		
<p>The maximum net mass per outer packaging shall not exceed 125 kg.</p>		
<p>(3) Steel drums (1A1) with a maximum capacity of 250 litres;</p>		
<p>(4) Composite packagings consisting of a plastics receptacle with outer steel drum or aluminium (6HA1 or 6HB1) with a maximum capacity of 250 litres.</p>		
<p>Special packing provisions specific to RID and ADR:</p>		
<p>RR4 For UN No. 3130, the openings of receptacles shall be tightly closed by means of two devices in series, one of which shall be screwed or secured in an equivalent manner.</p>		
<p>RR7 For UN No. 3129, the pressure receptacles shall however be subjected to the tests every five years.</p>		
<p>RR8 For UN Nos. 1389, 1391, 1411, 1421, 1928, 3129, 3130, 3148 and 3482, the pressure receptacles shall however be subjected to an initial test and to periodic tests at a pressure of not less than 1 MPa (10 bar).</p>		

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P403		PACKING INSTRUCTION		P403
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:				
Combination packagings:				Maximum net mass
Inner packagings	Outer packagings			
Glass 2 kg Plastics 15 kg Metal 20 kg Inner packagings shall be hermetically sealed (e.g. by taping or by threaded closures).	Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plastics (1H1, 1H2) plywood (1D) fibre (1G)			400 kg 400 kg 400 kg 400 kg 400 kg 400 kg
	Boxes steel (4A) aluminium (4B) other metal (4N) natural wood (4C1) natural wood with sift proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) expanded plastics (4H1) solid plastics (4H2)			400 kg 400 kg 400 kg 250 kg 250 kg 250 kg 125 kg 125 kg 60 kg 250 kg
	Jerricans steel (3A1, 3A2) aluminium (3B1, 3B2) plastics (3H1, 3H2)			120 kg 120 kg 120 kg
Single packagings:				
Drums				
steel (1A1, 1A2)				250 kg
aluminium (1B1, 1B2)				250 kg
metal other than steel or aluminium (1N1, 1N2)				250 kg
plastics (1H1, 1H2)				250 kg
Jerricans				
steel (3A1, 3A2)				120 kg
aluminium (3B1, 3B2)				120 kg
plastics (3H1, 3H2)				120 kg
Composite packagings				
plastics receptacle with outer steel or aluminium drums (6HA1 or 6HB1)				250 kg
plastics receptacle with outer fibre, plastics or plywood drums (6HG1, 6HH1 or 6HD1)				75 kg
plastics receptacle with outer steel or aluminium crate or box or with outer wooden, plywood, fibreboard or solid plastics boxes (6HA2, 6HB2, 6HC, 6HD2, 6HG2 or 6HH2)				75 kg
Pressure receptacles , provided that the general provisions of 4.1.3.6 are met.				
Additional requirement:				
Packagings shall be hermetically sealed.				
Special packing provision:				
PP83 For UN No. 2813, waterproof bags containing not more than 20 g of substance for the purposes of heat formation may be packaged for carriage. Each waterproof bag shall be sealed in a plastics bag and placed within an intermediate packaging. No outer packaging shall contain more than 400 g of substance. Water or liquid which may react with the water reactive substance shall not be included in the packaging.				

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P404	PACKING INSTRUCTION	P404
This instruction applies to pyrophoric solids: UN Nos.: 1383, 1854, 1855, 2008, 2441, 2545, 2546, 2846, 2881, 3200, 3391 and 3393.		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
(1) Combination packagings		
Outer packagings: (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F or 4H2)		
Inner packagings: Metal packagings with a capacity of not more than 15 kg each. Inner packagings shall be hermetically sealed and have threaded closures;		
(2) Metal packagings: (1A1, 1A2, 1B1, 1N1, 1N2, 3A1, 3A2, 3B1 and 3B2) Maximum gross mass: 150 kg;		
(3) Composite packagings: Plastics receptacle with outer steel or aluminium drum (6HA1 or 6HB1) Maximum gross mass: 150 kg.		
Pressure receptacles , provided that the general provisions of 4.1.3.6 are met.		
Special packing provision:		
PP86	For UN Nos. 3391 and 3393, air shall be eliminated from the vapour space by nitrogen or other means.	

P405	PACKING INSTRUCTION	P405
This instruction applies to UN No. 1381.		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
(1) For UN No. 1381, phosphorus, wet:		
(a) Combination packagings		
Outer packagings: (4A, 4B, 4N, 4C1, 4C2, 4D or 4F) Maximum net mass: 75 kg		
Inner packagings:		
(i) hermetically sealed metal cans, with a maximum net mass of 15 kg; or		
(ii) glass inner packagings cushioned on all sides with dry, absorbent, non-combustible material in a quantity sufficient to absorb the entire contents with a maximum net mass of 2 kg; or		
(b) Drums (1A1, 1A2, 1B1, 1B2, 1N1 or 1N2); maximum net mass: 400 kg		
Jerricans (3A1 or 3B1); maximum net mass: 120 kg.		
These packagings shall be capable of passing the leakproofness test specified in 6.1.5.4 at the packing group II performance level;		
(2) For UN No. 1381, dry phosphorus:		
(a) When fused, drums (1A2, 1B2 or 1N2) with a maximum net mass of 400 kg; or		
(b) In projectiles or hard cased articles when carried without Class 1 components: as specified by the competent authority.		

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P406	PACKING INSTRUCTION	P406
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
(1) Combination packagings		
outer packagings: (4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2, 1G, 1D, 1H1, 1H2, 3H1 or 3H2)		
inner packagings: water-resistant packagings;		
(2) Plastics, plywood or fibreboard drums (1H2, 1D or 1G) or boxes (4A, 4B, 4N, 4C1, 4D, 4F, 4C2, 4G and 4H2) with a water resistant inner bag, plastics film lining or water resistant coating;		
(3) Metal drums (1A1, 1A2, 1B1, 1B2, 1N1 or 1N2), plastics drums (1H1 or 1H2), metal jerricans (3A1, 3A2, 3B1 or 3B2), plastics jerricans (3H1 or 3H2), plastics receptacle with outer steel or aluminium drums (6HA1 or 6HB1), plastics receptacle with outer fibre, plastics or plywood drums (6HG1, 6HH1 or 6HD1), plastics receptacle with outer steel or aluminium crate or box or with outer wooden, plywood, fibreboard or solid plastics boxes (6HA2, 6HB2, 6HC, 6HD2, 6HG2 or 6HH2).		
Additional requirements:		
1. Packagings shall be designed and constructed to prevent the loss of water or alcohol content or the content of the phlegmatizer.		
2. Packagings shall be so constructed and closed so as to avoid an explosive overpressure or pressure build-up of more than 300 kPa (3 bar).		
Special packing provisions:		
PP24 UN Nos. 2852, 3364, 3365, 3366, 3367, 3368 and 3369 shall not be carried in quantities of more than 500 g per package.		
PP25 For UN No. 1347, the quantity carried shall not exceed 15 kg per package.		
PP26 For UN Nos. 1310, 1320, 1321, 1322, 1344, 1347, 1348, 1349, 1517, 2907, 3317 and 3376 packagings shall be lead free.		
PP48 For UN No. 3474, metal packagings shall not be used.		
PP78 UN No. 3370 shall not be carried in quantities of more than 11.5 kg per package.		
PP80 For UN No. 2907, packagings shall meet the packing group II performance level. Packagings meeting the test criteria of packing group I shall not be used.		

P407	PACKING INSTRUCTION	P407
This instruction applies to UN Nos. 1331, 1944, 1945 and 2254.		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
Outer packagings:		
Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G);		
Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);		
Jerricans (3A1, 3A2, 3B1, 3B2, 3H1, 3H2).		
Inner packagings:		
Matches shall be tightly packed in securely closed inner packagings to prevent accidental ignition under normal conditions of carriage.		
The maximum gross mass of the package shall not exceed 45 kg except for fibreboard boxes which shall not exceed 30 kg.		
Packagings shall conform to the packing group III performance level.		
Special packing provision:		
PP27 UN No. 1331, Strike-anywhere matches shall not be packed in the same outer packaging with any other dangerous goods other than safety matches or wax Vesta matches, which shall be packed in separate inner packagings. Inner packagings shall not contain more than 700 strike-anywhere matches.		

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P408	PACKING INSTRUCTION	P408
This instruction applies to UN No. 3292.		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
(1) For cells:		
Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);		
Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);		
Jerricans (3A2, 3B2, 3H2).		
There shall be sufficient cushioning material to prevent contact between cells and between cells and the internal surfaces of the outer packaging and to ensure that no dangerous movement of the cells within the outer packaging occurs in carriage.		
Packagings shall conform to the packing group II performance level.		
(2) Batteries may be carried unpacked or in protective enclosures (e.g. fully enclosed or wooden slatted crates). The terminals shall not support the weight of other batteries or materials packed with the batteries.		
Packagings need not meet the requirements of 4.1.1.3.		
Additional requirement:		
Cells and batteries shall be protected against short circuit and shall be isolated in such a manner as to prevent short circuits.		

P409	PACKING INSTRUCTION	P409
This instruction applies to UN Nos. 2956, 3242 and 3251.		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
(1) Fibre drum (1G) which may be fitted with a liner or coating; maximum net mass: 50 kg;		
(2) Combination packagings: Fibreboard box (4G) with a single inner plastic bag; maximum net mass: 50 kg;		
(3) Combination packagings: Fibreboard box (4G) or fibre drum (1G) with plastics inner packagings each containing a maximum of 5 kg; maximum net mass: 25 kg.		

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P410		PACKING INSTRUCTION		P410
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:				
Combination packagings:			Maximum net mass	
Inner packagings		Outer packagings	Packing group II	Packing group III
Glass	10 kg	Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plastics (1H1, 1H2) plywood (1D) fibre (1G) ^a		
Plastics ^a	30 kg		400 kg	400 kg
Metal	40 kg		400 kg	400 kg
Paper ^{a, b}	10 kg		400 kg	400 kg
Fibre ^{a, b}	10 kg		400 kg	400 kg
			400 kg	400 kg
			400 kg	400 kg
			400 kg	400 kg
			400 kg	400 kg
		Boxes steel (4A) aluminium (4B) other metal (4N) natural wood (4C1) natural wood with sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) ^a expanded plastics (4H1) solid plastics (4H2)		
			400 kg	400 kg
			400 kg	400 kg
			400 kg	400 kg
			400 kg	400 kg
			400 kg	400 kg
			400 kg	400 kg
			400 kg	400 kg
			400 kg	400 kg
		Jerricans steel (3A1, 3A2) aluminium (3B1, 3B2) plastics (3H1, 3H2)		
			120 kg	120 kg
			120 kg	120 kg
Single packagings:				
Drums				
steel (1A1 or 1A2)			400 kg	400 kg
aluminium (1B1 or 1B2)			400 kg	400 kg
metal other than steel or aluminium (1N1 or 1N2)			400 kg	400 kg
plastics (1H1 or 1H2)			400 kg	400 kg
Jerricans				
steel (3A1 or 3A2)			120 kg	120 kg
aluminium (3B1 or 3B2)			120 kg	120 kg
plastics (3H1 or 3H2)			120 kg	120 kg
Boxes				
steel (4A) ^c			400 kg	400 kg
aluminium (4B) ^c			400 kg	400 kg
other metal (4N) ^c			400 kg	400 kg
natural wood (4C1) ^c			400 kg	400 kg
plywood (4D) ^c			400 kg	400 kg
reconstituted wood (4F) ^c			400 kg	400 kg
natural wood with sift-proof walls (4C2) ^c			400 kg	400 kg
fibreboard (4G) ^c			400 kg	400 kg
solid plastics (4H2) ^c			400 kg	400 kg
Bags				
Bags (5H3, 5H4, 5L3, 5M2) ^{c, d}			50 kg	50 kg

^a These packagings shall be sift-proof.^b These inner packagings shall not be used when the substances being carried may become liquid during carriage.^c These packagings shall not be used when the substances being carried may become liquid during carriage.^d These packagings shall only be used for packing group II substances when carried in a closed vehicle or container.

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P410	PACKING INSTRUCTION (cont'd)		P410
Composite packagings	Maximum net mass		
	Packing group II	Packing group III	
plastics receptacle with outer steel, aluminium, plywood, fibre or plastics drum (6HA1, 6HB1, 6HG1, 6HD1, or 6HH1)	400 kg	400 kg	
plastics receptacle with outer steel or aluminium crate or box, or outer wooden, plywood, fibreboard or solid plastics box (6HA2, 6HB2, 6HC, 6HD2, 6HG2 or 6HH2)	75 kg	75 kg	
glass receptacle with outer steel, aluminium, plywood or fibre drum (6PA1, 6PB1, 6PD1 or 6PG1) or outer steel or aluminium crate or box or with outer wooden or fibreboard box or with outer wickerwork hamper (6PA2, 6PB2, 6PC, 6PD2, or 6PG2) or with outer solid or expanded plastics packaging (6PH1 or 6PH2)	75 kg	75 kg	
Pressure receptacles , provided that the general provisions of 4.1.3.6 are met.			
Special packing provisions:			
PP39 For UN No. 1378, for metal packagings a venting device is required.			
PP40 For UN Nos. 1326, 1352, 1358, 1395, 1396, 1436, 1437, 1871, 2805 and 3182, packing group II, bags are not allowed.			
PP83 For UN No. 2813, waterproof bags containing not more than 20 g of substance for the purposes of heat formation may be packaged for carriage. Each waterproof bag shall be sealed in a plastics bag and placed within an intermediate packaging. No outer packaging shall contain more than 400 g of substance. Water or liquid which may react with the water reactive substance shall not be included in the packaging.			

P411	PACKING INSTRUCTION	P411
This instruction applies to UN No. 3270.		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);		
Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);		
Jerricans (3A2, 3B2, 3H2);		
provided that explosion is not possible by reason of increased internal pressure.		
The maximum net mass shall not exceed 30 kg.		

P500	PACKING INSTRUCTION	P500
This instruction applies to UN No. 3356.		
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);		
Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);		
Jerricans (3A2, 3B2, 3H2).		
Packagings shall conform to the packing group II performance level.		
The generator(s) shall be carried in a package which meets the following requirements when one generator in the package is actuated:		
(a) Other generators in the package will not be actuated;		
(b) Packaging material will not ignite; and		
(c) The outside surface temperature of the completed package shall not exceed 100 °C.		

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P501	PACKING INSTRUCTION		P501
This instruction applies to UN No. 2015.			
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:			
Combination packagings:	Inner packaging maximum capacity	Outer packaging maximum net mass	
(1) Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4H2) or drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D) or jerricans (3A1, 3A2, 3B1, 3B2, 3H1, 3H2) with glass, plastics or metal inner packagings	5 l	125 kg	
(2) Fibreboard box (4G) or fibre drum (1G), with plastics or metal inner packagings each in a plastics bag	2 l	50 kg	
Single packagings:	Maximum capacity		
Drums steel (1A1) aluminium (1B1) metal other than steel or aluminium (1N1) plastics (1H1)	250 l		
Jerricans steel (3A1) aluminium (3B1) plastics (3H1)	60 l		
Composite packagings plastics receptacle with outer steel or aluminium drum (6HA1, 6HB1) plastics receptacle with outer fibre, plastics or plywood drum (6HG1, 6HH1, 6HD1) plastics receptacle with outer steel or aluminium crate or box or plastics receptacle with outer wooden, plywood, fibreboard or solid plastics box (6HA2, 6HB2, 6HC, 6HD2, 6HG2 or 6HH2) glass receptacle with outer steel, aluminium, fibre, plywood, solid plastics or expanded plastics drum (6PA1, 6PB1, 6PG1, 6PD1, 6PH1 or 6PH2) or with outer steel or aluminium crate or box or with outer wooden or fibreboard box or with outer wickerwork hamper (6PA2, 6PB2, 6PC, 6PG2 or 6PD2)	250 l 250 l 60 l 60 l		
Additional requirements:			
1. Packagings shall have a maximum filling degree of 90%.			
2. Packagings shall be vented.			

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P502		PACKING INSTRUCTION		P502
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:				
Combination packagings:				Maximum net mass
Inner packagings		Outer packagings		
Glass	5 l	Drums		
Metal	5 l	steel (1A1, 1A2)		125 kg
Plastics	5 l	aluminium (1B1, 1B2)		125 kg
		other metal (1N1, 1N2)		125 kg
		plywood (1D)		125 kg
		fibre (1G)		125 kg
		plastics (1H1, 1H2)		125 kg
		Boxes		
		steel (4A)		125 kg
		aluminium (4B)		125 kg
		other metal (4N)		125 kg
		natural wood (4C1)		125 kg
		natural wood with sift-proof walls (4C2)		125 kg
		plywood (4D)		125 kg
		reconstituted wood (4F)		125 kg
		fibreboard (4G)		125 kg
		expanded plastics (4H1)		60 kg
		solid plastics (4H2)		125 kg
Single packagings:				Maximum capacity
Drums				
steel (1A1)				250 l
aluminium (1B1)				
plastics (1H1)				
Jerricans				
steel (3A1)				60 l
aluminium (3B1)				
plastics (3H1)				
Composite packagings:				
plastics receptacle with outer steel or aluminium drum (6HA1, 6HB1)				250 l
plastics receptacle with outer fibre, plastics or plywood drum (6HG1, 6HH1, 6HD1)				250 l
plastics receptacle with outer steel or aluminium crate or box or plastics receptacle with outer wooden, plywood, fibreboard or solid plastics box (6HA2, 6HB2, 6HC, 6HD2, 6HG2 or 6HH2)				60 l
glass receptacle with outer steel, aluminium, fibre, plywood, solid plastics or expanded plastics drum (6PA1, 6PB1, 6PG1, 6PD1, 6PH1 or 6PH2) or with outer steel or aluminium crate or box or with outer wooden or fibreboard box or with outer wickerwork hamper (6PA2, 6PB2, 6PC, 6PG2 or 6PD2)				60 l
Special packing provision:				
PP28 For UN No. 1873, only glass inner packagings and glass inner receptacles are authorized respectively for combination packagings and composite packagings.				

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P503		PACKING INSTRUCTION		P503
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:				
Combination packagings:				
Inner packagings		Outer packagings		Maximum net mass
Glass	5 kg	Drums steel (1A1, 1A2) aluminium (1B1, 1B2) other metal (1N1, 1N2) plywood (1D) fibre (1G) plastics (1H1, 1H2)		
Metal	5 kg			125 kg
Plastics	5 kg			125 kg
				125 kg
				125 kg
				125 kg
		Boxes steel (4A) aluminium (4B) other metal (4N) natural wood (4C1) natural wood with sift-proof walls (4C2) plywood (4D) reconstituted wood (4F) fibreboard (4G) expanded plastics (4H1) solid plastics (4H2)		
				125 kg
				125 kg
				125 kg
				125 kg
				125 kg
				125 kg
				40 kg
				60 kg
				125 kg
Single packagings:				
Metal drums (1A1, 1A2, 1B1, 1B2, 1N1 or 1N2) with a maximum net mass of 250 kg.				
Fibreboard (1G) or plywood drums (1D) fitted with inner liners with a maximum net mass of 200 kg.				

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P504	PACKING INSTRUCTION	P504
The following packagings are authorized, provided that the general provisions of 4.1.1 and 4.1.3 are met:		
Combination packagings:		Maximum net mass
(1)	Glass receptacles with a maximum capacity of 5 litres in 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H2 outer packagings	75 kg
(2)	Plastics receptacles with a maximum capacity of 30 litres in 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H2 outer packagings	75 kg
(3)	Metal receptacles with a maximum capacity of 40 litres in 1G, 4F or 4G outer packagings	125 kg
(4)	Metal receptacles with a maximum capacity of 40 litres in 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 4A, 4B, 4N, 4C1, 4C2, 4D, 4H2 outer packagings	225 kg
Single packagings:		Maximum capacity
Drums		
	steel, non-removable head (1A1)	250 l
	steel, removable head (1A2)	250 l
	aluminium, non-removable head (1B1)	250 l
	aluminium, removable head (1B2)	250 l
	metal other than steel or aluminium, non-removable head (1N1)	250 l
	metal other than steel or aluminium, removable head (1N2)	250 l
	plastics, non-removable head (1H1)	250 l
	plastics, removable head (1H2)	250 l
Jerricans		
	steel, non-removable head (3A1)	60 l
	steel, removable head (3A2)	60 l
	aluminium, non-removable head (3B1)	60 l
	aluminium, removable head (3B2)	60 l
	plastics, non-removable head (3H1)	60 l
	plastics, removable head (3H2)	60 l
Composite packagings		
	plastics receptacle with outer steel or aluminium drum (6HA1, 6HB1)	250 l
	plastics receptacle with outer fibre, plastics or plywood drum (6HG1, 6HH1, 6HD1)	120 l
	plastics receptacle with outer steel or aluminium crate or box or plastics receptacle with outer wooden, plywood, fibreboard or solid plastics box (6HA2, 6HB2, 6HC, 6HD2, 6HG2 or 6HH2)	60 l
	glass receptacle with outer steel, aluminium, fibre, plywood, solid plastics or expanded plastics drum (6PA1, 6PB1, 6PG1, 6PD1, 6PH1 or 6PH2) or with outer steel or aluminium crate or box or with outer wooden fibreboard box or with outer wickerwork hamper (6PA2, 6PB2, 6PC, 6PG2 or 6PD2)	60 l
Special packing provisions:		
PP10 For UN No. 2014, 2984 and 3149, the packaging shall be vented.		

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P520	PACKING INSTRUCTION								P520
This instruction applies to organic peroxides of Class 5.2 and self-reactive substances of Class 4.1									
The packagings listed below are authorized provided the general provisions of 4.1.1 and 4.1.3 and special provisions of 4.1.7.1 are met.									
The packing methods are designated OP1 to OP8. The packing methods appropriate for the individual currently assigned organic peroxides and self-reactive substances are listed in 2.2.41.4 and 2.2.52.4. The quantities specified for each packing method are the maximum quantities authorized per package. The following packagings are authorized:									
(1) Combination packagings with outer packagings comprising boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1 and 4H2), drums (1A1, 1A2, 1B1, 1B2, 1G, 1H1, 1H2 and 1D), jerricans (3A1, 3A2, 3B1, 3B2, 3H1 and 3H2); (2) Single packagings consisting of drums (1A1, 1A2, 1B1, 1B2, 1G, 1H1, 1H2 and 1D) and jerricans (3A1, 3A2, 3B1, 3B2, 3H1 and 3H2); (3) Composite packagings with plastics inner receptacles (6HA1, 6HA2, 6HB1, 6HB2, 6HC, 6HD1, 6HD2, 6HG1, 6HG2, 6HH1 and 6HH2).									
Maximum quantity per packaging/package^a for packing methods OP1 to OP8									
Packing Method	OP1	OP2 ^a	OP3	OP4 ^a	OP5	OP6	OP7	OP8	
Maximum Quantity									
Maximum mass (kg) for solids and for combination packagings (liquid and solid)	0.5	0.5/10	5	5/25	25	50	50	400 ^b	
Maximum contents in litres for liquids ^c	0.5	-	5	-	30	60	60	225 ^d	
^a <i>If two values are given, the first applies to the maximum net mass per inner packaging and the second to the maximum net mass of the complete package.</i>									
^b <i>60 kg for jerricans / 200 kg for boxes and, for solids, 400 kg in combination packagings with outer packagings comprising boxes (4C1, 4C2, 4D, 4F, 4G, 4H1 and 4H2) and with inner packagings of plastics or fibre with a maximum net mass of 25 kg.</i>									
^c <i>Viscous substances shall be treated as solids when they do not meet the criteria provided in the definition for "liquids" presented in 1.2.1.</i>									
^d <i>60 litres for jerricans.</i>									
Additional requirements:									
1. Metal packagings, including inner packagings of combination packagings and outer packagings of combination or composite packagings may only be used for packing methods OP7 and OP8.									
2. In combination packagings, glass receptacles may only be used as inner packagings with maximum contents of 0.5 kg for solids or 0.5 litre for liquids.									
3. In combination packagings, cushioning materials shall not be readily combustible.									
4. The packaging of an organic peroxide or self-reactive substance required to bear an "EXPLOSIVE" subsidiary risk label (model No.1, see 5.2.2.2.2) shall also comply with the provisions given in 4.1.5.10 and 4.1.5.11.									
Special packing provisions:									
PP21 For certain self-reactive substances of types B or C, UN Nos. 3221, 3222, 3223, 3224, 3231, 3232, 3233 and 3234, a smaller packaging than that allowed by packing methods OP5 or OP6 respectively shall be used (see 4.1.7 and 2.2.41.4).									
PP22 UN No. 3241, 2-Bromo-2-nitropropane-1, 3-diol, shall be packed in accordance with packing method OP6.									

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P600	PACKING INSTRUCTION	P600
This instruction applies to UN Nos. 1700, 2016 and 2017.		
The following packagings are authorized, provided the general provisions of 4.1.1 and 4.1.3 are met:		
Outer packagings (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H2) meeting the packing group II performance level. The articles shall be individually packaged and separated from each other using partitions, dividers, inner packagings or cushioning material to prevent inadvertent discharge during normal conditions of carriage.		
Maximum net mass: 75 kg		

P601	PACKING INSTRUCTION	P601
The following packagings are authorized provided the general provisions of 4.1.1 and 4.1.3 are met and the packagings are hermetically sealed:		
(1) Combination packagings with a maximum gross mass of 15 kg, consisting of		
<ul style="list-style-type: none"> – one or more glass inner packaging(s) with a maximum quantity of 1 litre each and filled to not more than 90% of their capacity; the closure(s) of which shall be physically held in place by any means capable of preventing back-off or loosening by impact or vibration during carriage, individually placed in – metal receptacles together with cushioning and absorbent material sufficient to absorb the entire contents of the glass inner packaging(s), further packed in – 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G or 4H2 outer packagings; 		
(2) Combination packagings consisting of metal inner packagings not exceeding 5 litres in capacity individually packed with absorbent material sufficient to absorb the contents and inert cushioning material in 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G or 4H2 outer packagings with a maximum gross mass of 75 kg. Inner packagings shall not be filled to more than 90% of their capacity. The closure of each inner packaging shall be physically held in place by any means capable of preventing back-off or loosening of the closure by impact or vibration during carriage;		
(3) Packagings consisting of:		
Outer packagings: Steel or plastics drums (1A1, 1A2, 1H1 or 1H2), tested in accordance with the test requirements in 6.1.5 at a mass corresponding to the mass of the assembled package either as a packaging intended to contain inner packagings, or as a single packaging intended to contain solids or liquids, and marked accordingly;		
Inner packagings:		
Drums and composite packagings (1A1, 1B1, 1N1, 1H1 or 6HA1) meeting the requirements of Chapter 6.1 for single packagings, subject to the following conditions:		
<ul style="list-style-type: none"> (a) The hydraulic pressure test shall be conducted at a pressure of at least 0.3 MPa (gauge pressure); (b) The design and production leakproofness tests shall be conducted at a test pressure of 30 kPa; (c) They shall be isolated from the outer drum by the use of inert shock-mitigating cushioning material which surrounds the inner packaging on all sides; (d) Their capacity shall not exceed 125 litres; 		

(Cont'd on next page)

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P601	PACKING INSTRUCTION (cont'd)	P601
(3)	<p><i>Packagings consisting of: (cont'd)</i></p> <p>(e) Closures shall be of a screw cap type that are:</p> <p style="margin-left: 20px;">(i) physically held in place by any means capable of preventing back-off or loosening of the closure by impact or vibration during carriage; and</p> <p style="margin-left: 20px;">(ii) provided with a cap seal;</p> <p>(f) The outer and inner packagings shall be subjected periodically to a leakproofness test according to (b) at intervals of not more than two and a half years;</p> <p>(g) The complete packaging shall be visually inspected to the satisfaction of the competent authority at least every 3 years; and</p> <p>(h) The outer and inner packaging shall bear in clearly legible and durable characters:</p> <p style="margin-left: 20px;">(i) the date (month, year) of the initial test and the latest periodic test and inspection;</p> <p style="margin-left: 20px;">(ii) the stamp of the expert who carried out the test and inspection;</p>	
(4)	<p>Pressure receptacles, provided that the general provisions of 4.1.3.6 are met. They shall be subjected to an initial test and periodic tests every 10 years at a pressure of not less than 1 MPa (10 bar) (gauge pressure). Pressure receptacles may not be equipped with any pressure relief device. Each pressure receptacle containing a toxic by inhalation liquid with an LC₅₀ less than or equal to 200 ml/m³ (ppm) shall be closed with a plug or valve conforming to the following:</p> <p>(a) Each plug or valve shall have a taper-threaded connection directly to the pressure receptacle and be capable of withstanding the test pressure of the pressure receptacle without damage or leakage;</p> <p>(b) Each valve shall be of the packless type with non-perforated diaphragm, except that, for corrosive substances, a valve may be of the packed type with an assembly made gas-tight by means of a seal cap with gasket joint attached to the valve body or the pressure receptacle to prevent loss of substance through or past the packing;</p> <p>(c) Each valve outlet shall be sealed by a threaded cap or threaded solid plug and inert gasket material;</p> <p>(d) The materials of construction for the pressure receptacle, valves, plugs, outlet caps, luting and gaskets shall be compatible with each other and with the contents.</p> <p>Each pressure receptacle with a wall thickness at any point of less than 2.0 mm and each pressure receptacle which does not have fitted valve protection shall be carried in an outer packaging. Pressure receptacles shall not be manifolded or interconnected.</p>	
Special packing provision:		
PP82 <i>(Deleted)</i>		
Special packing provisions specific to RID and ADR:		
RR3 <i>(Deleted)</i>		
RR7 For UN No. 1251, the pressure receptacles shall however be subjected to the tests every five years.		
RR10 UN No. 1614, when completely absorbed by an inert porous material, shall be packed in metal receptacles of a capacity of not more than 7.5 litres, placed in wooden cases in such a manner that they cannot come into contact with one another. The receptacles shall be entirely filled with the porous material which shall not shake down or form dangerous spaces even after prolonged use or under impact, even at temperatures of up to 50 °C.		

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P602	PACKING INSTRUCTION	P602
<p>The following packagings are authorised provided the general provisions of 4.1.1 and 4.1.3 are met and the packagings are hermetically sealed:</p>		
<p>(1) Combination packagings with a maximum gross mass of 15 kg, consisting of</p> <ul style="list-style-type: none"> – one or more glass inner packaging(s) with a maximum quantity of 1 litre each and filled to not more than 90% of their capacity; the closure(s) of which shall be physically held in place by any means capable of preventing back-off or loosening by impact or vibration during carriage, individually placed in – metal receptacles together with cushioning and absorbent material sufficient to absorb the entire contents of the glass inner packaging(s), further packed in – 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G or 4H2 outer packagings; 		
<p>(2) Combination packagings consisting of metal inner packagings individually packed with absorbent material sufficient to absorb the entire contents and inert cushioning material in 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G or 4H2 outer packagings with a maximum gross mass of 75 kg. Inner packagings shall not be filled to more than 90% of their capacity. The closure of each inner packaging shall be physically held in place by any means capable of preventing back-off or loosening of the closure by impact or vibration during carriage. Inner packagings shall not exceed 5 litres in capacity;</p>		
<p>(3) Drums and composite packagings (1A1, 1B1, 1N1, 1H1, 6HA1 or 6HH1), subject to the following conditions:</p> <ul style="list-style-type: none"> (a) The hydraulic pressure test shall be conducted at a pressure of at least 0.3 MPa (gauge pressure); (b) The design and production leakproofness tests shall be conducted at a test pressure of 30 kPa; and (c) Closures shall be of a screw cap type that are: <ul style="list-style-type: none"> (i) physically held in place by any means capable of preventing back-off or loosening of the closure by impact or vibration during carriage; and (ii) provided with a cap seal; 		
<p>(4) Pressure receptacles, provided that the general provisions of 4.1.3.6 are met. They shall be subjected to an initial test and periodic tests every 10 years at a pressure of not less than 1 MPa (10 bar) (gauge pressure). Pressure receptacles may not be equipped with any pressure relief device. Each pressure receptacle containing a toxic by inhalation liquid with an LC₅₀ less than or equal to 200 ml/m³ (ppm) shall be closed with a plug or valve conforming to the following:</p> <ul style="list-style-type: none"> (a) Each plug or valve shall have a taper-threaded connection directly to the pressure receptacle and be capable of withstanding the test pressure of the pressure receptacle without damage or leakage; (b) Each valve shall be of the packless type with non-perforated diaphragm, except that, for corrosive substances, a valve may be of the packed type with an assembly made gas-tight by means of a seal cap with gasket joint attached to the valve body or the pressure receptacle to prevent loss of substance through or past the packing; (c) Each valve outlet shall be sealed by a threaded cap or threaded solid plug and inert gasket material; (d) The materials of construction for the pressure receptacle, valves, plugs, outlet caps, luting and gaskets shall be compatible with each other and with the contents. <p>Each pressure receptacle with a wall thickness at any point of less than 2.0 mm and each pressure receptacle which does not have fitted valve protection shall be carried in an outer packaging. Pressure receptacles shall not be manifolded or interconnected.</p>		

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P620	PACKING INSTRUCTION	P620
This instruction applies to UN Nos. 2814 and 2900.		
The following packagings are authorized provided the special packing provisions of 4.1.8 are met:		
Packagings meeting the requirements of Chapter 6.3 and approved accordingly consisting of:		
<p>(a) Inner packagings comprising:</p> <ul style="list-style-type: none"> (i) leakproof primary receptacle(s); (ii) a leakproof secondary packaging; (iii) other than for solid infectious substances, an absorbent material in sufficient quantity to absorb the entire contents placed between the primary receptacle(s) and the secondary packaging; if multiple primary receptacles are placed in a single secondary packaging, they shall be either individually wrapped or separated so as to prevent contact between them; <p>(b) A rigid outer packaging:</p> <ul style="list-style-type: none"> Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G); Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Jerricans (3A1, 3A2, 3B1, 3B2, 3H1, 3H2). <p>The smallest external dimension shall be not less than 100 mm.</p>		
Additional requirements:		
<ol style="list-style-type: none"> 1. Inner packagings containing infectious substances shall not be consolidated with inner packagings containing unrelated types of goods. Complete packages may be overpacked in accordance with the provisions of 1.2.1 and 5.1.2; such an overpack may contain dry ice. 2. Other than for exceptional consignments, e.g. whole organs which require special packaging, the following additional requirements shall apply: <ol style="list-style-type: none"> (a) Substances consigned at ambient temperatures or at a higher temperature: Primary receptacles shall be of glass, metal or plastics. Positive means of ensuring a leakproof seal shall be provided, e.g. a heat seal, a skirted stopper or a metal crimp seal. If screw caps are used, they shall be secured by positive means, e.g., tape, paraffin sealing tape or manufactured locking closure; (b) Substances consigned refrigerated or frozen: Ice, dry ice or other refrigerant shall be placed around the secondary packaging(s) or alternatively in an overpack with one or more complete packages marked in accordance with 6.3.3. Interior supports shall be provided to secure secondary packaging(s) or packages in position after the ice or dry ice has dissipated. If ice is used, the outer packaging or overpack shall be leakproof. If dry ice is used, the outer packaging or overpack shall permit the release of carbon dioxide gas. The primary receptacle and the secondary packaging shall maintain their integrity at the temperature of the refrigerant used; (c) Substances consigned in liquid nitrogen: Plastics primary receptacles capable of withstanding very low temperature shall be used. The secondary packaging shall also be capable of withstanding very low temperatures, and in most cases will need to be fitted over the primary receptacle individually. Provisions for the consignment of liquid nitrogen shall also be fulfilled. The primary receptacle and the secondary packaging shall maintain their integrity at the temperature of the liquid nitrogen; (d) Lyophilised substances may also be carried in primary receptacles that are flame-sealed glass ampoules or rubber-stoppered glass vials fitted with metal seals. 3. Whatever the intended temperature of the consignment, the primary receptacle or the secondary packaging shall be capable of withstanding without leakage an internal pressure producing a pressure differential of not less than 95 kPa and temperatures in the range -40 °C to +55 °C. 4. Other dangerous goods shall not be packed in the same packaging as Class 6.2 infectious substances unless they are necessary for maintaining the viability, stabilizing or preventing degradation or neutralizing the hazards of the infectious substances. A quantity of 30 ml or less of dangerous goods included in Classes 3, 8 or 9 may be packed in each primary receptacle containing infectious substances. These small quantities of dangerous goods of Classes 3, 8 or 9 are not subject to any additional requirements of ADR when packed in accordance with this packing instruction. 5. Alternative packagings for the carriage of animal material may be authorized by the competent authority of the country of origin ^a in accordance with the provisions of 4.1.8.7. 		

^a If the country of origin is not a Contracting Party to ADR, the competent authority of the first Contracting Party to the ADR reached by the consignment.

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P621	PACKING INSTRUCTION	P621
This instruction applies to UN No. 3291.		
(1)	<p>Provided that there is sufficient absorbent material to absorb the entire amount of liquid present and the packaging is capable of retaining liquids:</p> <p style="padding-left: 40px;">Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);</p> <p style="padding-left: 40px;">Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);</p> <p style="padding-left: 40px;">Jerricans (3A2, 3B2, 3H2).</p> <p>Packagings shall conform to the packing group II performance level for solids.</p>	
(2)	<p>For packages containing larger quantities of liquid:</p> <p style="padding-left: 40px;">Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G);</p> <p style="padding-left: 40px;">Jerricans (3A1, 3A2, 3B1, 3B2, 3H1, 3H2);</p> <p style="padding-left: 40px;">Composites (6HA1, 6HB1, 6HG1, 6HH1, 6HD1, 6HA2, 6HB2, 6HC, 6HD2, 6HG2, 6HH2, 6PA1, 6PB1, 6PG1, 6PD1, 6PH1, 6PH2, 6PA2, 6PB2, 6PC, 6PG2 or 6PD2).</p> <p>Packagings shall conform to the packing group II performance level for liquids.</p>	
Additional requirement:		
Packagings intended to contain sharp objects such as broken glass and needles shall be resistant to puncture and retain liquids under the performance test conditions in Chapter 6.1.		

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P650	PACKING INSTRUCTION	P650
This packing instruction applies to UN No. 3373.		
<p>(1) The packaging shall be of good quality, strong enough to withstand the shocks and loadings normally encountered during carriage, including transshipment between vehicles or containers and between vehicles or containers and warehouses as well as any removal from a pallet or overpack for subsequent manual or mechanical handling. Packagings shall be constructed and closed to prevent any loss of contents that might be caused under normal conditions of carriage by vibration or by changes in temperature, humidity or pressure.</p> <p>(2) The packaging shall consist of at least three components:</p> <ul style="list-style-type: none">(a) a primary receptacle;(b) a secondary packaging; and(c) an outer packaging <p>of which either the secondary or the outer packaging shall be rigid.</p> <p>(3) Primary receptacles shall be packed in secondary packagings in such a way that, under normal conditions of carriage, they cannot break, be punctured or leak their contents into the secondary packaging. Secondary packagings shall be secured in outer packagings with suitable cushioning material. Any leakage of the contents shall not compromise the integrity of the cushioning material or of the outer packaging.</p> <p>(4) For carriage, the mark illustrated below shall be displayed on the external surface of the outer packaging on a background of a contrasting colour and shall be clearly visible and legible. The mark shall be in the form of a square set at an angle of 45° (diamond-shaped) with minimum dimensions of 50 mm by 50 mm; the width of the line shall be at least 2 mm and the letters and numbers shall be at least 6 mm high. The proper shipping name "BIOLOGICAL SUBSTANCE, CATEGORY B" in letters at least 6 mm high shall be marked on the outer packaging adjacent to the diamond-shaped mark.</p>		
		
<p>(5) At least one surface of the outer packaging shall have a minimum dimension of 100 mm × 100 mm.</p> <p>(6) The completed package shall be capable of successfully passing the drop test in 6.3.5.3 as specified in 6.3.5.2 at a height of 1.2 m. Following the appropriate drop sequence, there shall be no leakage from the primary receptacle(s) which shall remain protected by absorbent material, when required, in the secondary packaging.</p>		

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P650	PACKING INSTRUCTION (<i>cont'd</i>)	P650
(7)	<p>For liquid substances:</p> <ul style="list-style-type: none"> (a) The primary receptacle(s) shall be leakproof; (b) The secondary packaging shall be leakproof; (c) If multiple fragile primary receptacles are placed in a single secondary packaging, they shall be either individually wrapped or separated to prevent contact between them; (d) Absorbent material shall be placed between the primary receptacle(s) and the secondary packaging. The absorbent material shall be in quantity sufficient to absorb the entire contents of the primary receptacle(s) so that any release of the liquid substance will not compromise the integrity of the cushioning material or of the outer packaging; (e) The primary receptacle or the secondary packaging shall be capable of withstanding, without leakage, an internal pressure of 95 kPa (0.95 bar). 	
(8)	<p>For solid substances:</p> <ul style="list-style-type: none"> (a) The primary receptacle(s) shall be siftproof; (b) The secondary packaging shall be siftproof; (c) If multiple fragile primary receptacles are placed in a single secondary packaging, they shall be either individually wrapped or separated to prevent contact between them; (d) If there is any doubt as to whether or not residual liquid may be present in the primary receptacle during carriage then a packaging suitable for liquids, including absorbent materials, shall be used. 	
(9)	<p>Refrigerated or frozen specimens: Ice, dry ice and liquid nitrogen:</p> <ul style="list-style-type: none"> (a) When dry ice or liquid nitrogen is used as a coolant, the requirements of 5.5.3 shall apply. When used, ice shall be placed outside the secondary packagings or in the outer packaging or an overpack. Interior supports shall be provided to secure the secondary packagings in the original position. If ice is used, the outside packaging or overpack shall be leakproof. (b) The primary receptacle and the secondary packaging shall maintain their integrity at the temperature of the refrigerant used as well as the temperatures and the pressures which could result if refrigeration were lost. 	
(10)	When packages are placed in an overpack, the package markings required by this packing instruction shall either be clearly visible or be reproduced on the outside of the overpack.	
(11)	Infectious substances assigned to UN No. 3373 which are packed and packages which are marked in accordance with this packing instruction are not subject to any other requirement in ADR.	
(12)	Clear instructions on filling and closing such packages shall be provided by packaging manufacturers and subsequent distributors to the consignor or to the person who prepares the package (e.g. patient) to enable the package to be correctly prepared for carriage.	
(13)	Other dangerous goods shall not be packed in the same packaging as Class 6.2 infectious substances unless they are necessary for maintaining the viability, stabilizing or preventing degradation or neutralizing the hazards of the infectious substances. A quantity of 30 ml or less of dangerous goods included in Classes 3, 8 or 9 may be packed in each primary receptacle containing infectious substances. When these small quantities of dangerous goods are packed with infectious substances in accordance with this packing instruction no other requirements of ADR need be met.	
(14)	If any substance has leaked and has been spilled in a vehicle or container, it may not be reused until after it has been thoroughly cleaned and, if necessary, disinfected or decontaminated. Any other goods and articles carried in the same vehicle or container shall be examined for possible contamination.	
Additional requirement:		
Alternative packagings for the carriage of animal material may be authorized by the competent authority of the country of origin ^a in accordance with the provisions of 4.1.8.7.		

^a *If the country of origin is not a Contracting Party to ADR, the competent authority of the first Contracting Party to the ADR reached by the consignment.*

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P800	PACKING INSTRUCTION	P800
This instruction applies to UN Nos. 2803 and 2809.		
The following packagings are authorized, provided the general provisions of 4.1.1 and 4.1.3 are met:		
<p>(1) Pressure receptacles, provided that the general provisions of 4.1.3.6 are met.</p> <p>(2) Steel flasks or bottles with threaded closures with a capacity not exceeding 3 l; or</p> <p>(3) Combination packagings which conform to the following requirements:</p> <p style="margin-left: 20px;">(a) Inner packagings shall comprise glass, metal or rigid plastics intended to contain liquids with a maximum net mass of 15 kg each;</p> <p style="margin-left: 20px;">(b) The inner packagings shall be packed with sufficient cushioning material to prevent breakage;</p> <p style="margin-left: 20px;">(c) Either the inner packagings or the outer packagings shall have inner liners or bags of strong leakproof and puncture-resistant material impervious to the contents and completely surrounding the contents to prevent it from escaping from the package irrespective of its position or orientation;</p> <p style="margin-left: 20px;">(d) The following outer packagings and maximum net masses are authorized:</p>		
Outer packaging:	Maximum net mass	
Drums		
steel (1A1, 1A2)	400 kg	
metal, other than steel or aluminium (1N1, 1N2)	400 kg	
plastics (1H1, 1H2)	400 kg	
plywood (1D)	400 kg	
fibre (1G)	400 kg	
Boxes		
steel (4A)	400 kg	
metal, other than steel or aluminium (4N)	400 kg	
natural wood (4C1)	250 kg	
natural wood with sift-proof walls (4C2)	250 kg	
plywood (4D)	250 kg	
reconstituted wood (4F)	125 kg	
fibreboard (4G)	125 kg	
expanded plastics (4H1)	60 kg	
solid plastics (4H2)	125 kg	
Special packing provision:		
<p>PP41 For UN No. 2803, when it is necessary to carry gallium at low temperatures in order to maintain it in a completely solid state, the above packagings may be overpacked in a strong, water-resistant outer packaging which contains dry ice or other means of refrigeration. If a refrigerant is used, all of the above materials used in the packaging of gallium shall be chemically and physically resistant to the refrigerant and shall have impact resistance at the low temperatures of the refrigerant employed. If dry ice is used, the outer packaging shall permit the release of carbon dioxide gas.</p>		

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P801	PACKING INSTRUCTION	P801
This instruction applies to new and used batteries assigned to UN Nos. 2794, 2795 or 3028.		
The following packagings are authorized, provided the general provisions of 4.1.1, except 4.1.1.3, and 4.1.3 are met:		
<ul style="list-style-type: none"> (1) Rigid outer packagings; (2) Wooden slatted crates; (3) Pallets. 		
Additional requirements:		
<ul style="list-style-type: none"> 1. Batteries shall be protected against short circuits. 2. Batteries stacked shall be adequately secured in tiers separated by a layer of non conductive material. 3. Battery terminals shall not support the weight of other superimposed elements. 4. Batteries shall be packaged or secured to prevent inadvertent movement. Any cushioning material used shall be inert. 		

P801a	PACKING INSTRUCTION	P801a
This instruction applies to used batteries of UN Nos. 2794, 2795, 2800 and 3028.		
Stainless steel or solid plastics battery boxes of a capacity of up to 1 m ³ are authorized provided the following provisions are met:		
<ul style="list-style-type: none"> (1) The battery boxes shall be resistant to the corrosive substances contained in the storage batteries; (2) Under normal conditions of carriage, no corrosive substance shall leak from the battery boxes and no other substance (e.g. water) shall enter the battery boxes. No dangerous residues of corrosive substances contained in the storage batteries shall adhere to the outside of the battery boxes; (3) The battery boxes shall not be loaded with storage batteries to a height greater than the height of their sides; (4) No storage battery containing substances or other dangerous goods which may react dangerously with one another shall be placed in a battery box; (5) The battery boxes shall be either: <ul style="list-style-type: none"> (a) covered; or (b) carried in closed or sheeted vehicles or containers. 		

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P802	PACKING INSTRUCTION	P802
The following packagings are authorized, provided the general provisions of 4.1.1 and 4.1.3 are met:		
(1) Combination packagings: Outer packagings: 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G or 4H2; maximum net mass: 75 kg. Inner packagings: glass or plastics; maximum capacity: 10 litres;		
(2) Combination packagings: Outer packagings: 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G or 4H2; maximum net mass: 125 kg. Inner packagings: metal; maximum capacity: 40 litres;		
(3) Composite packagings: Glass receptacle with outer steel, aluminium, plywood or solid plastics drum (6PA1, 6PB1, 6PD1, or 6PH2) or with outer steel or aluminium crate or box or with outer wooden box or with outer wickerwork hamper (6PA2, 6PB2, 6PC or 6PD2); maximum capacity: 60 litres;		
(4) Steel drums (1A1) with a maximum capacity of 250 litres;		
(5) Pressure receptacles, provided that the general provisions of 4.1.3.6 are met.		

P803	PACKING INSTRUCTION	P803
This instruction applies to UN No. 2028.		
The following packagings are authorized, provided the general provisions of 4.1.1 and 4.1.3 are met:		
(1) Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);		
(2) Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H2).		
Maximum net mass: 75 kg.		
The articles shall be individually packaged and separated from each other using partitions, dividers, inner packagings or cushioning material to prevent inadvertent discharge during normal conditions of carriage.		

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P804	PACKING INSTRUCTION	P804
This instruction applies to UN No. 1744.		
The following packagings are authorized provided the general provisions of 4.1.1 and 4.1.3 are met and the packagings are hermetically sealed:		
<p>(1) Combination packagings with a maximum gross mass of 25 kg, consisting of</p> <ul style="list-style-type: none"> - one or more glass inner packaging(s) with a maximum capacity of 1.3 litres each and filled to not more than 90% of their capacity; the closure(s) of which shall be physically held in place by any means capable of preventing back-off or loosening by impact or vibration during carriage, individually placed in - metal or rigid plastics receptacles together with cushioning and absorbent material sufficient to absorb the entire contents of the glass inner packaging(s), further packed in - 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G or 4H2 outer packagings. <p>(2) Combination packagings consisting of metal or polyvinylidene fluoride (PVDF) inner packagings, not exceeding 5 litres in capacity individually packed with absorbent material sufficient to absorb the contents and inert cushioning material in 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G or 4H2 outer packagings with a maximum gross mass of 75 kg. Inner packagings shall not be filled to more than 90% of their capacity. The closure of each inner packaging shall be physically held in place by any means capable of preventing back-off or loosening of the closure by impact or vibration during carriage;</p> <p>(3) Packagings consisting of:</p> <p>Outer packagings:</p> <p>Steel or plastics drums (1A1, 1A2, 1H1 or 1H2) tested in accordance with the test requirements in 6.1.5 at a mass corresponding to the mass of the assembled package either as a packaging intended to contain inner packagings, or as a single packaging intended to contain solids or liquids, and marked accordingly;</p> <p>Inner packagings:</p> <p>Drums and composite packagings (1A1, 1B1, 1N1, 1H1 or 6HA1) meeting the requirements of Chapter 6.1 for single packagings, subject to the following conditions:</p> <ul style="list-style-type: none"> (a) The hydraulic pressure test shall be conducted at a pressure of at least 300 kPa (3 bar) (gauge pressure); (b) The design and production leakproofness tests shall be conducted at a test pressure of 30 kPa (0.3 bar); (c) They shall be isolated from the outer drum by the use of inert shock-mitigating cushioning material which surrounds the inner packaging on all sides; (d) Their capacity shall not exceed 125 litres; (e) Closures shall be of a screw type that are: <ul style="list-style-type: none"> (i) Physically held in place by any means capable of preventing back-off or loosening of the closure by impact or vibration during carriage; (ii) Provided with a cap seal; (f) The outer and inner packagings shall be subjected periodically to an internal inspection and leakproofness test according to (b) at intervals of not more than two and a half years; and (g) The outer and inner packagings shall bear in clearly legible and durable characters: <ul style="list-style-type: none"> (i) the date (month, year) of the initial test and the latest periodic test and inspection of the inner packaging; and (ii) the name or authorized symbol of the expert who carried out the tests and inspections; <p>(4) Pressure receptacles, provided that the general provisions of 4.1.3.6 are met.</p> <ul style="list-style-type: none"> (a) They shall be subjected to an initial test and periodic tests every 10 years at a pressure of not less than 1 MPa (10 bar) (gauge pressure); (b) They shall be subjected periodically to an internal inspection and leakproofness test at intervals of not more than two and a half years; (c) They may not be equipped with any pressure relief device; (d) Each pressure receptacle shall be closed with a plug or valve(s) fitted with a secondary closure device; and (e) The materials of construction for the pressure receptacle, valves, plugs, outlet caps, luting and gaskets shall be compatible with each other and with the contents. 		

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P900	PACKING INSTRUCTION	P900
<i>(Reserved)</i>		

P901	PACKING INSTRUCTION	P901
This instruction applies to UN No. 3316.		
The following combination packagings are authorized provided the general provisions of 4.1.1 and 4.1.3 are met: Drums (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G); Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Jerricans (3A1, 3A2, 3B1, 3B2, 3H1, 3H2).		
Packagings shall conform to the performance level consistent with the packing group assigned to the kit as a whole (see special provision 251 of Chapter 3.3).		
Maximum quantity of dangerous goods per outer packaging: 10 kg excluding the mass of any carbon dioxide, solid (dry ice) used as a refrigerant.		
Additional requirements:		
Dangerous goods in kits shall be packed in inner packagings which shall not exceed either 250 ml or 250 g and shall be protected from other materials in the kit.		

P902	PACKING INSTRUCTION	P902
This instruction applies to UN No. 3268.		
Packaged articles:		
The following packagings are authorized provided the general provisions of 4.1.1 and 4.1.3 are met: Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G); Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Jerricans (3A2, 3B2, 3H2).		
Packagings shall conform to the packing group III performance level.		
The packagings shall be designed and constructed so as to prevent movement of the articles and inadvertent operation during normal conditions of carriage.		
Unpackaged articles:		
The articles may also be carried unpackaged in dedicated handling devices, vehicles or containers when moved from where they are manufactured to an assembly plant.		
Additional requirement:		
Any pressure receptacle shall be in accordance with the requirements of the competent authority for the substance(s) contained therein.		

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P903	PACKING INSTRUCTION	P903
This instruction applies to UN Nos. 3090 , 3091, 3480 and 3481.		
The following packagings are authorized provided that the general provisions of 4.1.1 and 4.1.3 are met:		
(1)	<p>For cells and batteries:</p> <p style="padding-left: 40px;">Drums (1A2, 1B2, 1N2, 1H2, 1D, 1G);</p> <p style="padding-left: 40px;">Boxes (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);</p> <p style="padding-left: 40px;">Jerricans (3A2, 3B2, 3H2).</p> <p>Cells or batteries shall be packed in packagings so that the cells or batteries are protected against damage that may be caused by the movement or placement of the cells or batteries within the packaging.</p> <p>Packagings shall conform to the packing group II performance level.</p>	
(2)	<p>In addition for cells or batteries with a gross mass of 12 kg or more employing a strong, impact resistant outer casing, and assemblies of such cells or batteries:</p> <p>(a) Strong outer packagings, in protective enclosures (e.g. in fully enclosed or wooden slatted crates); or</p> <p>(b) Pallets or other handling devices.</p> <p>Cells or batteries shall be secured to prevent inadvertent movement, and the terminals shall not support the weight of other superimposed elements.</p> <p>Packagings need not meet the requirements of 4.1.1.3.</p>	
(3)	<p>For cells or batteries packed with equipment:</p> <p>Packagings conforming to the requirements in paragraph (1) of this packing instruction, then placed with the equipment in an outer packaging; or</p> <p>Packagings that completely enclose the cells or batteries, then placed with equipment in a packaging conforming to the requirements in paragraph (1) of this packing instruction.</p> <p>The equipment shall be secured against movement within the outer packaging.</p> <p>For the purpose of this packing instruction, "equipment" means apparatus requiring the lithium metal or lithium ion cells or batteries with which it is packed for its operation.</p>	
(4)	<p>For cells or batteries contained in equipment:</p> <p>Strong outer packagings constructed of suitable material, and of adequate strength and design in relation to the packaging capacity and its intended use. They shall be constructed in such a manner as to prevent accidental operation during carriage. Packagings need not meet the requirements of 4.1.1.3.</p> <p>Large equipment can be offered for carriage unpackaged or on pallets when the cells or batteries are afforded equivalent protection by the equipment in which they are contained.</p> <p>Devices such as radio frequency identification (RFID) tags, watches and temperature loggers, which are not capable of generating a dangerous evolution of heat, may be carried when intentionally active in strong outer packagings.</p>	
Additional requirement:		
Cells or batteries shall be protected against short circuit.		

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P903a	PACKING INSTRUCTION	P903a
This instruction applies to used cells and batteries of UN Nos. 3090 , 3091, 3480 and 3481.		
The following packagings are authorized, provided the general provisions of 4.1.1 and 4.1.3 are met:		
Packagings conforming to the packing group II performance level.		
Non-approved packagings shall, however, be permitted provided that:		
<ul style="list-style-type: none"> - they meet the general provisions of 4.1.1, except 4.1.1.3, and 4.1.3; - the cells and batteries are packed and stowed so as to prevent any risk of short circuits; - the packages weigh not more than 30 kg. 		
Additional requirement:		
Batteries shall be protected against short circuit.		

P903b	PACKING INSTRUCTION	P903b
This instruction applies to used cells and batteries of UN Nos. 3090, 3091, 3480 and 3481.		
Used lithium cells and batteries with a gross mass of not more than 500 g each, collected for disposal, may be carried together with other used non-lithium batteries or alone without being individually protected, under the following conditions:		
<ol style="list-style-type: none"> (1) In 1H2 drums or 4H2 boxes conforming to the packing group II performance level for solids; (2) In 1A2 drums or 4A boxes fitted with a polyethylene bag and conforming to the packing group II performance level for solids. The polyethylene bag <ul style="list-style-type: none"> - shall have an impact resistance of at least 480 grams in both parallel and perpendicular planes with respect to the length of the bag; - shall have a minimum of 500 microns of thickness with an electrical resistivity of more than 10 Mohms and a water absorption rate over 24 hours at 25 °C lower than 0.01%; - shall be closed; and - may only be used once; (3) In collecting trays with a gross mass of less than 30 kg made from non-conducting material meeting the general conditions of 4.1.1.1, 4.1.1.2 and 4.1.1.5 to 4.1.1.8. 		
Additional requirements:		
The empty space in the packaging shall be filled with cushioning material. The cushioning material may be dispensed with when the packaging is entirely fitted with a polyethylene bag and the bag is closed.		
Hermetically sealed packagings shall be fitted with a venting device according to 4.1.1.8. The venting device shall be so designed that an overpressure caused by gases does not exceed 10 kPa.		

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P904	PACKING INSTRUCTION	P904
This instruction applies to UN No. 3245.		
The following packagings are authorized:		
<p>(1) Packagings meeting the provisions of 4.1.1.1, 4.1.1.2, 4.1.1.4, 4.1.1.8 and 4.1.3 and so designed that they meet the construction requirements of 6.1.4. Outer packagings constructed of suitable material, and of adequate strength and design in relation to the packaging capacity and its intended use, shall be used. Where this packing instruction is used for the carriage of inner packagings of combination packagings the packaging shall be designed and constructed to prevent inadvertent discharge during normal conditions of carriage.</p> <p>(2) Packagings, which need not conform to the packaging test requirements of Part 6, but conforming to the following:</p> <p>(a) An inner packaging comprising:</p> <p>(i) primary receptacle(s) and a secondary packaging, the primary receptacle(s) or the secondary packaging shall be leakproof for liquids or siftproof for solids;</p> <p>(ii) for liquids, absorbent material placed between the primary receptacle(s) and the secondary packaging. The absorbent material shall be in a quantity sufficient to absorb the entire contents of the primary receptacle(s) so that any release of the liquid substance will not compromise the integrity of the cushioning material or of the outer packaging;</p> <p>(iii) if multiple fragile primary receptacles are placed in a single secondary packaging they shall be individually wrapped or separated to prevent contact between them;</p> <p>(b) An outer packaging shall be strong enough for its capacity, mass and intended use, and with a smallest external dimension of at least 100 mm.</p> <p>For carriage, the mark illustrated below shall be displayed on the external surface of the outer packaging on a background of a contrasting colour and shall be clearly visible and legible. The mark shall be in the form of a square set at an angle of 45° (diamond-shaped) with each side having a length of at least 50 mm; the width of the line shall be at least 2 mm and the letters and numbers shall be at least 6 mm high.</p>		
		
Additional requirement:		
<u>Ice, dry ice and liquid nitrogen</u>		
When dry ice or liquid nitrogen is used as a coolant, the requirements of 5.5.3 shall apply. When used, ice shall be placed outside the secondary packagings or in the outer packaging or an overpack. Interior supports shall be provided to secure the secondary packaging in the original position. If ice is used, the outside packaging or overpack shall be leakproof.		

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P905	PACKING INSTRUCTION	P905
This instruction applies to UN Nos. 2990 and 3072.		
Any suitable packaging is authorized, provided the general provisions of 4.1.1 and 4.1.3 are met, except that packagings need not conform to the requirements of Part 6.		
When the life saving appliances are constructed to incorporate or are contained in rigid outer weatherproof casings (such as for lifeboats), they may be carried unpackaged.		
Additional requirements:		
<ol style="list-style-type: none"> 1. All dangerous substances and articles contained as equipment within the appliances shall be secured to prevent inadvertent movement and in addition: <ol style="list-style-type: none"> (a) Signal devices of Class 1 shall be packed in plastics or fibreboard inner packagings; (b) Non-flammable, non-toxic gases shall be contained in cylinders as specified by the competent authority, which may be connected to the appliance; (c) Electric storage batteries (Class 8) and lithium batteries (Class 9) shall be disconnected or electrically isolated and secured to prevent any spillage of liquid; and (d) Small quantities of other dangerous substances (for example in Classes 3, 4.1 and 5.2) shall be packed in strong inner packagings. 2. Preparation for transport and packaging shall include provisions to prevent any accidental inflation of the appliance. 		

P906	PACKING INSTRUCTION	P906
This instruction applies to UN Nos. 2315, 3151, 3152 and 3432.		
The following packagings are authorized, provided the general provisions of 4.1.1 and 4.1.3 are met:		
<ol style="list-style-type: none"> (1) For liquids and solids containing or contaminated with PCBs or polyhalogenated biphenyls or terphenyls: Packagings in accordance with P001 or P002, as appropriate; (2) For transformers and condensers and other devices: Leakproof packagings which are capable of containing, in addition to the devices, at least 1.25 times the volume of the liquid PCBs or polyhalogenated biphenyls or terphenyls present in them. There shall be sufficient absorbent material in the packagings to absorb at least 1.1 times the volume of liquid which is contained in the devices. In general, transformers and condensers shall be carried in leakproof metal packagings which are capable of holding, in addition to the transformers and condensers, at least 1.25 times the volume of the liquid present in them. 		
Notwithstanding the above, liquids and solids not packaged in accordance with P001 and P002 and unpackaged transformers and condensers may be carried in cargo transport units fitted with a leakproof metal tray to a height of at least 800 mm, containing sufficient inert absorbent material to absorb at least 1.1 times the volume of any free liquid.		
Additional requirement:		
Adequate provisions shall be taken to seal the transformers and condensers to prevent leakage during normal conditions of carriage.		

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R001	PACKING INSTRUCTION			R001
The following packagings are authorized provided the general provisions of 4.1.1 and 4.1.3 are met:				
Light gauge metal packagings	Maximum capacity/maximum net mass			
	Packing group I	Packing group II	Packing group III	
steel, non-removable head (0A1)	Not allowed	40 l / 50 kg	40 l / 50 kg	
steel, removable head (0A2) ^a	Not allowed	40 l / 50 kg	40 l / 50 kg	
^a <i>Not allowed for UN No. 1261 NITROMETHANE.</i>				
<i>NOTE 1: This instruction applies to solids and liquids (provided the design type is tested and marked appropriately).</i>				
<i>NOTE 2: For Class 3, packing group II, these packagings may be used only for substances with no subsidiary risk and a vapour pressure of not more than 110 kPa at 50 °C and for slightly toxic pesticides.</i>				

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4.1.4.2 Packing instructions concerning the use of IBCs

IBC01	PACKING INSTRUCTION	IBC01
The following IBCs are authorized, provided the general provisions of 4.1.1 , 4.1.2 and 4.1.3 are met: Metal (31A, 31B and 31N).		
Special packing provision specific to RID and ADR:		
BB1	For UN No. 3130, the openings of receptacles for this substance shall be tightly closed by means of two devices in series, one of which shall be screwed or secured in an equivalent manner.	

IBC02	PACKING INSTRUCTION	IBC02
The following IBCs are authorized, provided the general provisions of 4.1.1 , 4.1.2 and 4.1.3 are met:		
(1)	Metal (31A, 31B and 31N);	
(2)	Rigid plastics (31H1 and 31H2);	
(3)	Composite (31HZ1).	
Special packing provisions:		
B5	For UN Nos. 1791, 2014, 2984 and 3149, IBCs shall be provided with a device to allow venting during carriage. The inlet to the venting device shall be sited in the vapour space of the IBC under maximum filling conditions during carriage.	
B7	For UN Nos. 1222 and 1865, IBCs with a capacity greater than 450 litres are not permitted due to the substance's potential for explosion when carried in large volumes.	
B8	The pure form of this substance shall not be transported in IBCs since it is known to have a vapour pressure of more than 110 kPa at 50 °C or 130 kPa at 55 °C.	
B15	For UN No. 2031 with more than 55% nitric acid, the permitted use of rigid plastics IBCs and of composite IBCs with a rigid plastics inner receptacle shall be two years from their date of manufacture.	
Special packing provision specific to RID and ADR:		
BB2	For UN No.1203, notwithstanding special provision 534 (see 3.3.1), IBCs shall only be used when the actual vapour pressure is not more than 110 kPa at 50 °C, or 130 kPa at 55 °C.	

IBC03	PACKING INSTRUCTION	IBC03
The following IBCs are authorized, provided the general provisions of 4.1.1 , 4.1.2 and 4.1.3 are met:		
(1)	Metal (31A, 31B and 31N);	
(2)	Rigid plastics (31H1 and 31H2);	
(3)	Composite (31HZ1, 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2).	
Special packing provision:		
B8	The pure form of this substance shall not be carried in IBCs since it is known to have a vapour pressure of more than 110 kPa at 50 °C or 130 kPa at 55 °C.	

IBC04	PACKING INSTRUCTION	IBC04
The following IBCs are authorized, provided the general provisions of 4.1.1 , 4.1.2 and 4.1.3 are met: Metal (11A, 11B, 11N, 21A, 21B and 21N).		

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IBC05	PACKING INSTRUCTION	IBC05
The following IBCs are authorized, provided the general provisions of 4.1.1 , 4.1.2 and 4.1.3 are met:		
(1) Metal (11A, 11B, 11N, 21A, 21B and 21N);		
(2) Rigid plastics (11H1, 11H2, 21H1 and 21H2);		
(3) Composite (11HZ1 and 21HZ1).		

IBC06	PACKING INSTRUCTION	IBC06
The following IBCs are authorized, provided the general provisions of 4.1.1 , 4.1.2 and 4.1.3 are met:		
(1) Metal (11A, 11B, 11N, 21A, 21B and 21N);		
(2) Rigid plastics (11H1, 11H2, 21H1 and 21H2);		
(3) Composite (11HZ1, 11HZ2, 21HZ1 and 21HZ2).		
Additional requirement:		
Where the solid may become liquid during carriage see 4.1.3.4.		
Special packing provisions:		
B12	For UN No. 2907, IBCs shall meet the packing group II performance level. IBCs meeting the test criteria of packing group I shall not be used.	

IBC07	PACKING INSTRUCTION	IBC07
The following IBCs are authorized, provided the general provisions of 4.1.1 , 4.1.2 and 4.1.3 are met:		
(1) Metal (11A, 11B, 11N, 21A, 21B and 21N);		
(2) Rigid plastics (11H1, 11H2, 21H1 and 21H2);		
(3) Composite (11HZ1, 11HZ2, 21HZ1 and 21HZ2);		
(4) Wooden (11C, 11D and 11F).		
Additional requirements:		
1. Where the solid may become liquid during carriage see 4.1.3.4.		
2. Liners of wooden IBCs shall be siftproof.		

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IBC08	PACKING INSTRUCTION	IBC08
<p>The following IBCs are authorized, provided the general provisions of 4.1.1, 4.1.2 and 4.1.3 are met:</p>		
<p>(1) Metal (11A, 11B, 11N, 21A, 21B and 21N);</p>		
<p>(2) Rigid plastics (11H1, 11H2, 21H1 and 21H2);</p>		
<p>(3) Composite (11HZ1, 11HZ2, 21HZ1 and 21HZ2);</p>		
<p>(4) Fibreboard (11G);</p>		
<p>(5) Wooden (11C, 11D and 11F);</p>		
<p>(6) Flexible (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 and 13M2).</p>		
<p>Additional requirement:</p>		
<p>Where the solid may become liquid during carriage see 4.1.3.4.</p>		
<p>Special packing provisions:</p>		
B3	Flexible IBCs shall be sift-proof and water-resistant or shall be fitted with a sift-proof and water-resistant liner.	
B4	Flexible, fibreboard or wooden IBCs shall be sift-proof and water-resistant or shall be fitted with a sift-proof and water-resistant liner.	
B6	For UN Nos. 1363, 1364, 1365, 1386, 1408, 1841, 2211, 2217, 2793 and 3314, IBCs are not required to meet the IBC testing requirements of Chapter 6.5.	
B13	<i>Note: For UN Nos. 1748, 2208, 2880, 3485, 3486 and 3487, carriage by sea in IBCs is prohibited according to the IMDG Code.</i>	

IBC99	PACKING INSTRUCTION	IBC99
<p>Only IBCs which are approved for these goods by the competent authority may be used. A copy of the competent authority approval shall accompany each consignment or the transport document shall include an indication that the packaging was approved by the competent authority.</p>		

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IBC100	PACKING INSTRUCTION	IBC100
This instruction applies to UN Nos. 0082, 0241, 0331 and 0332.		
The following IBCs are authorized, provided the general provisions of 4.1.1 , 4.1.2 and 4.1.3 and special provisions of 4.1.5 are met:		
(1) Metal (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B and 31N);		
(2) Flexible (13H2, 13H3, 13H4, 13L2, 13L3, 13L4 and 13M2);		
(3) Rigid plastics (11H1, 11H2, 21H1, 21H2, 31H1 and 31H2);		
(4) Composite (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 and 31HZ2).		
Additional requirements:		
1. IBCs shall only be used for free flowing substances.		
2. Flexible IBCs shall only be used for solids.		
Special packing provisions:		
B9	For UN No. 0082, this packing instruction may only be used when the substances are mixtures of ammonium nitrate or other inorganic nitrates with other combustible substances which are not explosive ingredients. Such explosives shall not contain nitroglycerin, similar liquid organic nitrates, or chlorates. Metal IBCs are not authorized.	
B10	For UN No. 0241, this packing instruction may only be used for substances which consist of water as an essential ingredient and high proportions of ammonium nitrate or other oxidizing substances some or all of which are in solution. The other constituents may include hydrocarbons or aluminium powder, but shall not include nitro-derivatives such as trinitrotoluene. Metal IBCs are not authorized.	

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IBC520		PACKING INSTRUCTION			IBC520		
This instruction applies to organic peroxides and self-reactive substances of type F.							
The IBCs listed below are authorized for the formulations listed, provided the general provisions of 4.1.1, 4.1.2 and 4.1.3 and special provisions of 4.1.7.2 are met.							
For formulations not listed below, only IBCs which are approved by the competent authority may be used (see 4.1.7.2.2).							
UN No.	Organic peroxide	Type of IBC	Maximum quantity (litres/kg)	Control Temperature	Emer-gency Temperature		
3109	ORGANIC PEROXIDE, TYPE F, LIQUID						
	tert-Butyl hydroperoxide, not more than 72% with water	31A	1 250				
	tert-Butyl peroxyacetate, not more than 32% in diluent type A	31A 31HA1	1 250 1 000				
	tert-Butyl peroxybenzoate, not more than 32% in diluent type A	31A	1 250				
	tert-Butyl peroxy-3,5,5-trimethylhexanoate, not more than 37% in diluent type A	31A 31HA1	1 250 1 000				
	Cumyl hydroperoxide, not more than 90% in diluent type A	31HA1	1 250				
	Dibenzoyl peroxide, not more than 42% as a stable dispersion in water	31H1	1 000				
	Di-tert-butyl peroxide, not more than 52% in diluent type A	31A 31HA1	1 250 1 000				
	1,1-Di-(tert-butylperoxy) cyclohexane, not more than 42% in diluent type A	31H1	1 000				
	1,1-Di-(tert-butylperoxy) cyclohexane, not more than 37% in diluent type A	31A	1 250				
	Dilauroyl peroxide, not more than 42%, stable dispersion, in water	31HA1	1 000				
	Isopropyl cumyl hydroperoxide, not more than 72% in diluent type A	31HA1	1 250				
	p-Menthyl hydroperoxide, not more than 72% in diluent type A	31HA1	1 250				
	Peroxyacetic acid, stabilized, not more than 17%	31A 31H1 31H2 31HA1	1 500 1 500 1 500 1 500				
	3110	ORGANIC PEROXIDE, TYPE F, SOLID					
		Dicumyl peroxide	31A 31H1 31HA1	2 000			
3119		ORGANIC PEROXIDE, TYPE F, LIQUID, TEMPERATURE CONTROLLED					
		tert-Amyl peroxyvalate, not more than 32% in diluent type A	31A	1 250	+10 °C	+15 °C	
	tert-Butyl peroxy-2-ethylhexanoate, not more than 32% in diluent type B	31HA1 31A	1 000 1 250	+30 °C +30 °C	+35 °C +35 °C		
	tert-Butyl peroxyneodecanoate, not more than 32% in diluent type A	31A	1 250	0 °C	+10 °C		
	tert-Butyl peroxyneodecanoate, not more than 52%, stable dispersion, in water	31A	1 250	-5 °C	+5 °C		
	tert-Butyl peroxyvalate, not more than 27% in diluent type B	31HA1 31A	1 000 1 250	+10 °C +10 °C	+15 °C +15 °C		
	Cumyl peroxyneodecanoate, not more than 52%, stable dispersion, in water	31A	1 250	-15 °C	-5 °C		

(Cont'd on next page)

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IBC520		PACKING INSTRUCTION (cont'd)				IBC520
UN No.	Organic peroxide	Type of IBC	Maximum quantity (litres)	Control Temperature	Emergency Temperature	
3119 (cont'd)	tert-Butyl peroxyneodecanoate, not more than 42% stable dispersion, in water	31A	1 250	- 5 °C	+ 5 °C	
	Di-(4-tert-butylcyclohexyl) peroxydicarbonate, not more than 42%, stable dispersion, in water	31HA1	1 000	+30 °C	+35 °C	
	Dicetyl peroxydicarbonate, not more than 42%, stable dispersion, in water	31HA1	1 000	+30 °C	+35 °C	
	Di-(2-neodecanoylperoxyisopropyl)benzene, not more than 42%, stable dispersion, in water	31A	1 250	-15 °C	-5 °C	
	3-Hydroxy-1,1-dimethylbutyl peroxyneodecanoate, not more than 52%, stable dispersion, in water	31A	1 250	-15 °C	-5 °C	
	Di-(2-ethylhexyl) peroxydicarbonate, not more than 62%, stable dispersion, in water	31A	1 250	-20 °C	-10 °C	
	Dimyristyl peroxydicarbonate, not more than 42%, stable dispersion, in water	31HA1	1 000	+15 °C	+20 °C	
	Di-(3,5,5-trimethylhexanoyl) peroxide, not more than 52% in diluent type A	31HA1 31A	1 000 1 250	+10 °C +10 °C	+15 °C +15 °C	
	Di-(3,5,5-trimethylhexanoyl) peroxide, not more than 52%, stable dispersion, in water	31A	1 250	+10 °C	+15 °C	
	1,1,3,3-Tetramethylbutyl peroxyneodecanoate, not more than 52%, stable dispersion, in water	31A 31HA1	1 250 1 000	- 5 °C - 5 °C	+ 5 °C + 5 °C	
	Dicyclohexylperoxydicarbonate, not more than 42% as a stable dispersion, in water	31A	1 250	+10 °C	+15 °C	
	Diisobutyl peroxide, not more than 28% as a stable dispersion in water	31HA1 31A	1 000 1 250	-20 °C -20 °C	-10 °C -10 °C	
	Diisobutyl peroxide, not more than 42% as a stable dispersion in water	31HA1 31A	1 000 1 250	-25 °C -25 °C	-15 °C -15 °C	
3120	ORGANIC PEROXIDE, TYPE F, SOLID, TEMPERATURE CONTROLLED No formulation listed					
Additional requirements:						
1. IBCs shall be provided with a device to allow venting during carriage. The inlet to the pressure-relief device shall be sited in the vapour space of the IBC under maximum filling conditions during carriage.						
2. To prevent explosive rupture of metal IBCs or composite IBCs with complete metal casing, the emergency-relief devices shall be designed to vent all the decomposition products and vapours evolved during self-accelerating decomposition or during a period of not less than one hour of fire-engulfment as calculated by the formula in 4.2.1.13.8. The control and emergency temperatures specified in this packing instruction are based on a non-insulated IBC. When consigning an organic peroxide in an IBC in accordance with this instruction, it is the responsibility of the consignor to ensure that:						
(a) the pressure and emergency relief devices installed on the IBC are designed to take appropriate account of the self-accelerating decomposition of the organic peroxide and of fire-engulfment; and						
(b) when applicable, the control and emergency temperatures indicated are appropriate, taking into account the design (e.g. insulation) of the IBC to be used.						

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IBC620	PACKING INSTRUCTION	IBC620
This instruction applies to UN No. 3291.		
The following IBCs are authorized, provided the general provisions of 4.1.1 , except 4.1.1.15, 4.1.2 and 4.1.3 are met: Rigid, leakproof IBCs conforming to the packing group II performance level.		
Additional requirements:		
<ol style="list-style-type: none">1. There shall be sufficient absorbent material to absorb the entire amount of liquid present in the IBC.2. IBCs shall be capable of retaining liquids.3. IBCs intended to contain sharp objects such as broken glass and needles shall be resistant to puncture.		

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4.1.4.3 Packing instructions concerning the use of large packagings

LP01		PACKING INSTRUCTION (LIQUIDS)			LP01
The following large packagings are authorized provided the general provision of 4.1.1 and 4.1.3 are met:					
Inner packagings		Large outer packagings	Packing group I	Packing group II	Packing group III
Glass	10 litres	Steel (50A)	Not allowed	Not allowed	Maximum capacity: 3 m ³
Plastics	30 litres	Aluminium (50B)			
Metal	40 litres	Metal other than steel or aluminium (50N)			
		Rigid plastics (50H)			
		Natural wood (50C)			
		Plywood (50D)			
		Reconstituted wood (50F)			
		Fibreboard (50G)			

LP02		PACKING INSTRUCTION (SOLIDS)			LP02
The following large packagings are authorized provided the general provisions of 4.1.1 and 4.1.3 are met:					
Inner packagings		Large outer packagings	Packing group I	Packing group II	Packing group III
Glass	10 kg	Steel (50A)	Not allowed	Not allowed	Maximum capacity: 3 m ³
Plastics ^b	50 kg	Aluminium (50B)			
Metal	50 kg	Metal other than steel or aluminium (50N)			
Paper ^{a, b}	50 kg	Rigid plastics (50H)			
Fibre ^{a, b}	50 kg	Natural wood (50C)			
		Plywood (50D)			
		Reconstituted wood (50F)			
		Fibreboard (50G)			
		Flexible plastics (51H) ^c			
^a These inner packagings shall not be used when the substances being carried may become liquid during carriage.					
^b These inner packagings shall be sift-proof.					
^c To be used with flexible inner packagings only.					
Special packing provisions:					
L2	For UN 1950 aerosols, the large packaging shall meet the packing group III performance level. Large packagings for waste aerosols carried in accordance with special provision 327 shall have in addition a means of retaining any free liquid that might escape during carriage e.g. absorbent material.				
L3	<i>Note: For UN Nos. 2208 and 3486, carriage by sea in large packagings is prohibited.</i>				

LP99	PACKING INSTRUCTION	LP99
Only large packagings which are approved for these goods by the competent authority may be used. A copy of the competent authority approval shall accompany each consignment or the transport document shall include an indication that the packaging was approved by the competent authority.		

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LP101 PACKING INSTRUCTION LP101		
The following packagings are authorized, provided the general provisions of 4.1.1 and 4.1.3 and special provisions of 4.1.5 are met:		
Inner packagings	Intermediate packagings	Large packagings
Not necessary	Not necessary	Steel (50A) Aluminium (50B) Metal other than steel or aluminium (50N) Rigid plastics (50H) Natural wood (50C) Plywood (50D) Reconstituted wood (50F) Fibreboard (50G)
Special packing provision:		
<p>L1 For UN Nos. 0006, 0009, 0010, 0015, 0016, 0018, 0019, 0034, 0035, 0038, 0039, 0048, 0056, 0137, 0138, 0168, 0169, 0171, 0181, 0182, 0183, 0186, 0221, 0243, 0244, 0245, 0246, 0254, 0280, 0281, 0286, 0287, 0297, 0299, 0300, 0301, 0303, 0321, 0328, 0329, 0344, 0345, 0346, 0347, 0362, 0363, 0370, 0412, 0424, 0425, 0434, 0435, 0436, 0437, 0438, 0451, 0488 and 0502:</p> <p>Large and robust explosives articles, normally intended for military use, without their means of initiation or with their means of initiation containing at least two effective protective features, may be carried unpackaged. When such articles have propelling charges or are self-propelled, their ignition systems shall be protected against stimuli encountered during normal conditions of carriage. A negative result in Test Series 4 on an unpackaged article indicates that the article can be considered for carriage unpackaged. Such unpackaged articles may be fixed to cradles or contained in crates or other suitable handling devices.</p>		

LP102 PACKING INSTRUCTION LP102		
The following packagings are authorized, provided the general provisions of 4.1.1 and 4.1.3 and special provisions of 4.1.5 are met:		
Inner packagings	Intermediate packagings	Outer packagings
<p>Bags water resistant</p> <p>Receptacles fibreboard metal plastics wood</p> <p>Sheets fibreboard, corrugated</p> <p>Tubes fibreboard</p>	Not necessary	Steel (50A) Aluminium (50B) Metal other than steel or aluminium (50N) Rigid plastics (50H) Natural wood (50C) Plywood (50D) Reconstituted wood (50F) Fibreboard (50G)

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LP621	PACKING INSTRUCTION	LP621
This instruction applies to UN No. 3291.		
The following large packagings are authorized, provided the general provisions of 4.1.1 and 4.1.3 are met:		
<p>(1) For clinical waste placed in inner packagings: Rigid, leakproof large packagings conforming to the requirements of Chapter 6.6 for solids, at the packing group II performance level, provided there is sufficient absorbent material to absorb the entire amount of liquid present and the large packaging is capable of retaining liquids;</p> <p>(2) For packages containing larger quantities of liquid: Large rigid packagings conforming to the requirements of Chapter 6.6, at the packing group II performance level, for liquids.</p>		
Additional requirement:		
Large packagings intended to contain sharp objects such as broken glass and needles shall be resistant to puncture and retain liquids under the performance test conditions in Chapter 6.6.		

LP902	PACKING INSTRUCTION	LP902
This instruction applies to UN No. 3268.		
Packaged articles:		
The following packagings are authorized, provided the general provisions of 4.1.1 and 4.1.3 are met:		
Packagings conforming to the packing group III performance level. The packagings shall be designed and constructed to prevent movement of the articles and inadvertent operation during normal conditions of carriage.		
Unpackaged articles:		
The articles may also be carried unpackaged in dedicated handling devices, vehicles, or containers when moved from where they are manufactured to an assembly plant.		
Additional requirement:		
Any pressure receptacle shall be in accordance with the requirements of the competent authority for the substance(s) contained in the pressure receptacle(s).		

4.1.4.4 (Deleted)

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4.1.5 Special packing provisions for goods of Class 1

- 4.1.5.1 The general provisions of Section 4.1.1 shall be met.
- 4.1.5.2 All packagings for Class 1 goods shall be so designed and constructed that:
- (a) They will protect the explosives, prevent them escaping and cause no increase in the risk of unintended ignition or initiation when subjected to normal conditions of carriage including foreseeable changes in temperature, humidity and pressure;
 - (b) The complete package can be handled safely in normal conditions of carriage; and
 - (c) The packages will withstand any loading imposed on them by foreseeable stacking to which they will be subject during carriage so that they do not add to the risk presented by the explosives, the containment function of the packagings is not harmed, and they are not distorted in a way or to an extent which will reduce their strength or cause instability of a stack.
- 4.1.5.3 All explosive substances and articles, as prepared for carriage, shall have been classified in accordance with the procedures detailed in 2.2.1.
- 4.1.5.4 Class 1 goods shall be packed in accordance with the appropriate packing instruction shown in Column (8) of Table A of Chapter 3.2, as detailed in 4.1.4.
- 4.1.5.5 Unless otherwise specified in ADR, packagings, including IBCs and large packagings, shall conform to the requirements of chapters 6.1, 6.5 or 6.6, as appropriate, and shall meet their test requirements for packing group II.
- 4.1.5.6 The closure device of packagings containing liquid explosives shall ensure a double protection against leakage.
- 4.1.5.7 The closure device of metal drums shall include a suitable gasket; if a closure device includes a screw-thread, the ingress of explosive substances into the screw-thread shall be prevented.
- 4.1.5.8 Packagings for water soluble substances shall be water resistant. Packagings for desensitized or phlegmatized substances shall be closed to prevent changes in concentration during carriage.
- 4.1.5.9 When the packaging includes a double envelope filled with water which may freeze during transport, a sufficient quantity of an anti-freeze agent shall be added to the water to prevent freezing. Anti-freeze that could create a fire hazard because of its inherent flammability shall not be used.
- 4.1.5.10 Nails, staples and other closure devices made of metal without protective covering shall not penetrate to the inside of the outer packaging unless the inner packaging adequately protects the explosives against contact with the metal.
- 4.1.5.11 Inner packagings, fittings and cushioning materials and the placing of explosive substances or articles in packages shall be accomplished in a manner which prevents the explosive substances or articles from becoming loose in the outer packaging under normal conditions of carriage. Metallic components of articles shall be prevented from making contact with metal packagings. Articles containing explosive substances not enclosed in an outer casing shall be separated from each other in order to prevent friction and impact. Padding, trays, partitioning in the inner or outer packaging, mouldings or receptacles may be used for this purpose.

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- 4.1.5.12 Packagings shall be made of materials compatible with, and impermeable to, the explosives contained in the package, so that neither interaction between the explosives and the packaging materials, nor leakage, causes the explosive to become unsafe to carriage, or the hazard division or compatibility group to change.
- 4.1.5.13 The ingress of explosive substances into the recesses of seamed metal packagings shall be prevented.
- 4.1.5.14 Plastics packagings shall not be liable to generate or accumulate sufficient static electricity so that a discharge could cause the packaged explosive substances or articles to initiate, ignite or function.
- 4.1.5.15 Large and robust explosives articles, normally intended for military use, without their means of initiation or with their means of initiation containing at least two effective protective features, may be carried unpackaged. When such articles have propelling charges or are self-propelled, their ignition systems shall be protected against stimuli encountered during normal conditions of carriage. A negative result in Test Series 4 on an unpackaged article indicates that the article can be considered for carriage unpackaged. Such unpackaged articles may be fixed to cradles or contained in crates or other suitable handling, storage or launching devices in such a way that they will not become loose during normal conditions of carriage.

Where such large explosive articles are as part of their operational safety and suitability tests subjected to test regimes that meet the intentions of ADR and such tests have been successfully undertaken, the competent authority may approve such articles to be carried in accordance with ADR.

- 4.1.5.16 Explosive substances shall not be packed in inner or outer packagings where the differences in internal and external pressures, due to thermal or other effects, could cause an explosion or rupture of the package.
- 4.1.5.17 Whenever loose explosive substances or the explosive substance of an uncased or partly cased article may come into contact with the inner surface of metal packagings (1A1, 1A2, 1B1, 1B2, 4A, 4B and metal receptacles), the metal packaging shall be provided with an inner liner or coating (see 4.1.1.2).
- 4.1.5.18 Packing instruction P101 may be used for any explosive provided the packaging has been approved by a competent authority regardless of whether the packaging complies with the packing instruction assignment in Column (8) of Table A of Chapter 3.2.

4.1.6 Special packing provisions for goods of Class 2 and goods of other classes assigned to packing instruction P200

- 4.1.6.1 This section provides general requirements applicable to the use of pressure receptacles and open cryogenic receptacles for the carriage of Class 2 substances and goods of other classes assigned to packing instruction P200 (e.g. UN 1051 hydrogen cyanide, stabilized). Pressure receptacles shall be constructed and closed so as to prevent any loss of contents which might be caused under normal conditions of carriage, including by vibration, or by changes in temperature, humidity or pressure (resulting from change in altitude, for example).
- 4.1.6.2 Parts of pressure receptacles and open cryogenic receptacles which are in direct contact with dangerous goods shall not be affected or weakened by those dangerous goods and shall not cause a dangerous effect (e.g. catalysing a reaction or reacting with the dangerous goods) (see also table of standards at the end of this section).

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4.1.6.3 Pressure receptacles, including their closures and open cryogenic receptacles, shall be selected to contain a gas or a mixture of gases according to the requirements of 6.2.1.2 and the requirements of the relevant packing instructions of 4.1.4.1. This sub-section also applies to pressure receptacles which are elements of MEGCs and battery-vehicles.

4.1.6.4 A change of use of a refillable pressure receptacle shall include emptying, purging and evacuation operations to the extent necessary for safe operation (see also table of standards at the end of this section). In addition, a pressure receptacle that previously contained a Class 8 corrosive substance or a substance of another class with a corrosive subsidiary risk shall not be authorized for the carriage of a Class 2 substance unless the necessary inspection and testing as specified in 6.2.1.6 and 6.2.3.5 respectively have been performed.

4.1.6.5 Prior to filling, the packer shall perform an inspection of the pressure receptacle or open cryogenic receptacle and ensure that the pressure receptacle or open cryogenic receptacle is authorized for the substance and, in case of a chemical under pressure, for the propellant to be carried and that the requirements have been met. Shut-off valves shall be closed after filling and remain closed during carriage. The consignor shall verify that the closures and equipment are not leaking.

NOTE: Shut-off valves fitted to individual cylinders in bundles may be open during carriage, unless the substance carried is subject to special packing provision 'k' or 'q' in packing provision P200.

4.1.6.6 Pressure receptacles and open cryogenic receptacles shall be filled according to the working pressures, filling ratios and provisions specified in the appropriate packing instruction for the specific substance being filled. Reactive gases and gas mixtures shall be filled to a pressure such that if complete decomposition of the gas occurs, the working pressure of the pressure receptacle shall not be exceeded. Bundles of cylinders shall not be filled in excess of the lowest working pressure of any given cylinder in the bundle.

4.1.6.7 Pressure receptacles, including their closures, shall conform to the design, construction, inspection and testing requirements detailed in Chapter 6.2. When outer packagings are prescribed, the pressure receptacles and open cryogenic receptacles shall be firmly secured therein. Unless otherwise specified in the detailed packing instructions, one or more inner packagings may be enclosed in one outer packaging.

4.1.6.8 Valves shall be designed and constructed in such a way that they are inherently able to withstand damage without release of the contents or shall be protected from damage which could cause inadvertent release of the contents of the pressure receptacle, by one of the following methods (see also table of standards at the end of this section):

- (a) Valves are placed inside the neck of the pressure receptacle and protected by a threaded plug or cap;
- (b) Valves are protected by caps. Caps shall possess vent-holes of sufficient cross-sectional area to evacuate the gas if leakage occurs at the valves;
- (c) Valves are protected by shrouds or guards;
- (d) Pressure receptacles are carried in frames, (e.g. cylinders in bundles); or
- (e) Pressure receptacles are carried in protective boxes. For UN pressure receptacles the packaging as prepared for carriage shall be capable of meeting the drop test specified in 6.1.5.3 at the packing group I performance level.

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- 4.1.6.9 Non-refillable pressure receptacles shall:
- (a) be carried in an outer packaging, such as a box or crate, or in shrink-wrapped or stretch-wrapped trays;
 - (b) be of a water capacity less than or equal to 1.25 litres when filled with flammable or toxic gas;
 - (c) not be used for toxic gases with an LC_{50} less than or equal to 200 ml/m^3 ; and
 - (d) not be repaired after being put into service.
- 4.1.6.10 Refillable pressure receptacles, other than cryogenic receptacles, shall be periodically inspected according to the provisions of 6.2.1.6, or 6.2.3.5.1 for non UN receptacles, and packing instruction P200, P205 or P206 as applicable. Pressure relief valves for closed cryogenic receptacles shall be subject to periodic inspections and tests according to the provisions of 6.2.1.6.3 and packing instruction P203. Pressure receptacles shall not be filled after they become due for periodic inspection but may be carried after the expiry of the time-limit for purposes of performing inspection or disposal, including the intermediate carriage operations.
- 4.1.6.11 Repairs shall be consistent with the fabrication and testing requirements of the applicable design and construction standards and are only permitted as indicated in the relevant periodic inspection standards specified in chapter 6.2. Pressure receptacles, other than the jacket of closed cryogenic receptacles, shall not be subjected to repairs of any of the following:
- (a) weld cracks or other weld defects;
 - (b) cracks in walls;
 - (c) leaks or defects in the material of the wall, head or bottom.
- 4.1.6.12 Receptacles shall not be offered for filling:
- (a) when damaged to such an extent that the integrity of the receptacle or its service equipment may be affected;
 - (b) unless the receptacle and its service equipment has been examined and found to be in good working order; and
 - (c) unless the required certification, retest, and filling markings are legible.
- 4.1.6.13 Filled receptacles shall not be offered for carriage:
- (a) when leaking;
 - (b) when damaged to such an extent that the integrity of the receptacle or its service equipment may be affected;
 - (c) unless the receptacle and its service equipment has been examined and found to be in good working order; and
 - (d) unless the required certification, retest, and filling markings are legible.
- 4.1.6.14 Owners shall, on the basis of a reasoned request from the competent authority, provide it with all the information necessary to demonstrate the conformity of the pressure receptacle in a language easily understood by the competent authority. They shall cooperate with that authority, at its request, on any action taken to eliminate non-conformity of the pressure receptacles which they own.

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- 4.1.6.15 For UN pressure receptacles, the ISO standards listed below shall be applied. For other pressure receptacles, the requirements of section 4.1.6 are considered to have been complied with if the following standards, as relevant, are applied:

Applicable paragraphs	Reference	Title of document
4.1.6.2	ISO 11114-1:1997	Transportable gas cylinders – Compatibility of cylinder and valve materials with gas contents – Part 1: Metallic Materials
	ISO 11114-2:2000	Transportable gas cylinders – Compatibility of cylinder and valve materials with gas contents – Part 2: Non-metallic Materials
4.1.6.4	ISO 11621:1997	Gas cylinders – Procedures for change of gas service <i>NOTE: The EN version of this ISO standard fulfils the requirements and may also be used.</i>
4.1.6.8 Valves with inherent protection	Annex A of ISO 10297:2006	Gas cylinder – Refillable gas cylinder valves – Specification and type testing <i>NOTE: The EN version of this ISO standard fulfils the requirements and may also be used</i>
	EN 13152:2001 + A1:2003	Testing and specifications of LPG cylinder valves – self closing
	EN 13153:2001 + A1:2003	Testing and specifications of LPG cylinder valves – manually operated
4.1.6.8 (b) and (c)	either ISO 11117:1998 or ISO 11117:2008 + Cor 1:2009	Gas Cylinders – Valve Protection caps and valve guards for industrial and medical gas cylinders – Design construction and tests
	EN 962:1996 + A2:2000	Valve protection caps and valve guards for industrial and medical gas cylinders – Design, construction and tests
	ISO 16111:2008	Transportable gas storage devices – Hydrogen absorbed in reversible metal hydride

4.1.7 Special packing provisions for organic peroxides (Class 5.2) and self-reactive substances of Class 4.1

- 4.1.7.0.1 For organic peroxides, all receptacles shall be "effectively closed". Where significant internal pressure may develop in a package by the evolution of a gas, a vent may be fitted, provided the gas emitted will not cause danger, otherwise the degree of filling shall be limited. Any venting device shall be so constructed that liquid will not escape when the package is in an upright position and it shall be able to prevent ingress of impurities. The outer packaging, if any, shall be so designed as not to interfere with the operation of the venting device.

4.1.7.1 Use of packagings (except IBCs)

- 4.1.7.1.1 Packagings for organic peroxides and self-reactive substances shall conform to the requirements of Chapter 6.1 and shall meet its test requirements for packing group II.
- 4.1.7.1.2 The packing methods for organic peroxides and self-reactive substances are listed in packing instruction 520 and are designated OP1 to OP8. The quantities specified for each packing method are the maximum quantities authorized per package.
- 4.1.7.1.3 The packing methods appropriate for the individual currently assigned organic peroxides and self-reactive substances are listed in 2.2.41.4 and 2.2.52.4.

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4.1.7.1.4 For new organic peroxides, new self-reactive substances or new formulations of currently assigned organic peroxides or self-reactive substances, the following procedure shall be used to assign the appropriate packing method:

(a) ORGANIC PEROXIDE, TYPE B or SELF-REACTIVE SUBSTANCE, TYPE B:

Packing method OP5 shall be assigned, provided that the organic peroxide (or self-reactive substance) satisfies the criteria of 20.4.3 (b) (resp. 20.4.2 (b)) of the Manual of Tests and Criteria in a packaging authorized by the packing method. If the organic peroxide (or self-reactive substance) can only satisfy these criteria in a smaller packaging than those authorized by packing method OP5 (viz. one of the packagings listed for OP1 to OP4), then the corresponding packing method with the lower OP number is assigned;

(b) ORGANIC PEROXIDE, TYPE C or SELF-REACTIVE SUBSTANCE, TYPE C:

Packing method OP6 shall be assigned, provided that the organic peroxide (or self-reactive substance) satisfies the criteria of 20.4.3 (c) (resp. 20.4.2 (c)) of the Manual of Tests and Criteria in a packaging authorized by the packing method. If the organic peroxide (or self-reactive substance) can only satisfy these criteria in a smaller packaging than those authorized by packing method OP6 then the corresponding packing method with the lower OP number is assigned;

(c) ORGANIC PEROXIDE, TYPE D or SELF-REACTIVE SUBSTANCE, TYPE D:

Packing method OP7 shall be assigned to this type of organic peroxide or self-reactive substance;

(d) ORGANIC PEROXIDE, TYPE E or SELF-REACTIVE SUBSTANCE, TYPE E:

Packing method OP8 shall be assigned to this type of organic peroxide or self-reactive substance;

(e) ORGANIC PEROXIDE, TYPE F or SELF-REACTIVE SUBSTANCE, TYPE F:

Packing method OP8 shall be assigned to this type of organic peroxide or self-reactive substance.

4.1.7.2 Use of intermediate bulk containers

4.1.7.2.1 The currently assigned organic peroxides specifically listed in packing instruction IBC520 may be carried in IBCs in accordance with this packing instruction. IBCs shall conform to the requirements of Chapter 6.5 and shall meet its test requirements for packing group II.

4.1.7.2.2 Other organic peroxides and self-reactive substances of type F may be carried in IBCs under conditions established by the competent authority of the country of origin when, on the basis of the appropriate tests, that competent authority is satisfied that such carriage may be safely conducted. The tests undertaken shall include those necessary:

(a) To prove that the organic peroxide (or self-reactive substance) complies with the principles for classification given in 20.4.3 (f) [resp. 20.4.2 (f)] of the Manual of Tests and Criteria, exit box F of Figure 20.1 (b) of the Manual;

(b) To prove the compatibility of all materials normally in contact with the substance during carriage;

(c) To determine, when applicable, the control and emergency temperatures associated with the carriage of the product in the IBC concerned as derived from the SADT;

(d) To design, when applicable, pressure and emergency relief devices; and

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- (e) To determine if any special provisions are necessary for safe carriage of the substance.

If the country of origin is not a Contracting Party to ADR, the classification and transport conditions shall be recognized by the competent authority of the first country Contracting Party to ADR reached by the consignment.

- 4.1.7.2.3 Emergencies to be taken into account are self-accelerating decomposition and fire engulfment. To prevent explosive rupture of metal or composite IBCs with a complete metal casing, the emergency-relief devices shall be designed to vent all the decomposition products and vapours evolved during self-accelerating decomposition or during a period of not less than one hour of complete fire engulfment calculated by the equations given in 4.2.1.13.8.

4.1.8 Special packing provisions for infectious substances (Class 6.2)

- 4.1.8.1 Consignors of infectious substances shall ensure that packages are prepared in such a manner that they arrive at their destination in good condition and present no hazard to persons or animals during carriage.

- 4.1.8.2 The definitions in 1.2.1 and the general packing provisions of 4.1.1.1 to 4.1.1.17, except 4.1.1.3, 4.1.1.9 to 4.1.1.12 and 4.1.1.15 apply to infectious substances packages. However, liquids shall only be filled into packagings which have an appropriate resistance to the internal pressure that may develop under normal conditions of carriage.

- 4.1.8.3 An itemized list of contents shall be enclosed between the secondary packaging and the outer packaging. When the infectious substances to be carried are unknown, but suspected of meeting the criteria for inclusion in Category A, the words "suspected Category A infectious substance" shall be shown, in parenthesis, following the proper shipping name on the document inside the outer packaging.

- 4.1.8.4 Before an empty packaging is returned to the consignor, or sent elsewhere, it shall be disinfected or sterilized to nullify any hazard and any label or marking indicating that it had contained an infectious substance shall be removed or obliterated.

- 4.1.8.5 Provided an equivalent level of performance is maintained, the following variations in the primary receptacles placed within a secondary packaging are allowed without the need for further testing of the completed packaging:

- (a) Primary receptacles of equivalent or smaller size as compared to the tested primary receptacles may be used provided:
- (i) the primary receptacles are of similar design to the primary receptacle tested (e.g. shape: round, rectangular, etc.);
 - (ii) the material of construction of the primary receptacles (e.g. glass, plastics, metal) offers resistance to impact and stacking forces equivalent to or better than that of the primary receptacles originally tested;
 - (iii) the primary receptacles have the same or smaller openings and the closure is of equivalent design (e.g. screw cap, friction lid, etc.);
 - (iv) sufficient additional cushioning material is used to take up empty spaces and to prevent significant movement of the primary receptacles; and
 - (v) primary receptacles are oriented within the secondary packagings in the same manner as in the tested package;

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- (b) A lesser number of the tested primary receptacles, or of the alternative types of primary receptacles identified in (a) above, may be used provided sufficient cushioning is added to fill the void space(s) and to prevent significant movement of the primary receptacles.

4.1.8.6 Paragraphs 4.1.8.1 to 4.1.8.5 only apply to infectious substances of Category A (UN Nos. 2814 and 2900). They do not apply to UN No. 3373 BIOLOGICAL SUBSTANCE, CATEGORY B (see packing instruction P650 of 4.1.4.1), nor to UN No. 3291 CLINICAL WASTE, UNSPECIFIED, N.O.S. or (BIO) MEDICAL WASTE, N.O.S. or REGULATED MEDICAL WASTE, N.O.S.

4.1.8.7 For the carriage of animal material, packagings or IBCs not specifically authorized in the applicable packing instruction shall not be used for the carriage of a substance or article unless specifically approved by the competent authority of the country of origin² and provided:

- (a) The alternative packaging complies with the general requirements of this Part;
- (b) When the packing instruction indicated in Column (8) of Table A of Chapter 3.2 so specifies, the alternative packaging meets the requirements of Part 6;
- (c) The competent authority of the country of origin² determines that the alternative packaging provides at least the same level of safety as if the substance were packed in accordance with a method specified in the particular packing instruction indicated in Column (8) of Table A of Chapter 3.2; and
- (d) A copy of the competent authority approval accompanies each consignment or the transport document includes an indication that alternative packaging was approved by the competent authority.

4.1.9 Special packing provisions for Class 7

4.1.9.1 General

4.1.9.1.1 Radioactive material, packagings and packages shall meet the requirements of Chapter 6.4. The quantity of radioactive material in a package shall not exceed the limits specified in 2.2.7.2.2, 2.2.7.2.4.1, 2.2.7.2.4.4, 2.2.7.2.4.5, 2.2.7.2.4.6, special provision 336 of Chapter 3.3 and 4.1.9.3.

The types of packages for radioactive materials covered by ADR, are:

- (a) Excepted package (see 1.7.1.5);
- (b) Industrial package Type 1 (Type IP-1 package);
- (c) Industrial package Type 2 (Type IP-2 package);
- (d) Industrial package Type 3 (Type IP-3 package);
- (e) Type A package;
- (f) Type B(U) package;
- (g) Type B(M) package;
- (h) Type C package.

Packages containing fissile material or uranium hexafluoride are subject to additional requirements.

² If the country of origin is not a Contracting Party to ADR, the competent authority of the first Contracting Party to the ADR reached by the consignment.

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4.1.9.1.2 The non-fixed contamination on the external surfaces of any package shall be kept as low as practicable and, under routine conditions of transport, shall not exceed the following limits:

- (a) 4 Bq/cm² for beta and gamma emitters and low toxicity alpha emitters; and
- (b) 0.4 Bq/cm² for all other alpha emitters.

These limits are applicable when averaged over any area of 300 cm² of any part of the surface.

4.1.9.1.3 A package, other than an excepted package, shall not contain any items other than those that are necessary for the use of the radioactive material. The interaction between these items and the package under the conditions of carriage applicable to the design, shall not reduce the safety of the package.

4.1.9.1.4 Except as provided in 7.5.11, CV33, the level of non-fixed contamination on the external and internal surfaces of overpacks, containers, tanks, IBCs and vehicles shall not exceed the limits specified in 4.1.9.1.2.

4.1.9.1.5 For radioactive material having other dangerous properties the package design shall take into account those properties. Radioactive material with a subsidiary risk, packaged in packages that do not require competent authority approval, shall be carried in packagings, IBCs, tanks or bulk containers fully complying with the requirements of the relevant chapters of Part 6 as appropriate, as well as applicable requirements of chapters 4.1, 4.2 or 4.3 for that subsidiary risk.

4.1.9.1.6 Before the first shipment of any package, the following requirements shall be fulfilled:

- (a) If the design pressure of the containment system exceeds 35 kPa (gauge), it shall be ensured that the containment system of each package conforms to the approved design requirements relating to the capability of that system to maintain its integrity under that pressure;
- (b) For each Type B(U), Type B(M) and Type C package and for each package containing fissile material, it shall be ensured that the effectiveness of its shielding and containment and, where necessary, the heat transfer characteristics and the effectiveness of the confinement system, are within the limits applicable to or specified for the approved design;
- (c) For packages containing fissile material, where, in order to comply with the requirements of 6.4.11.1, neutron poisons are specifically included as components of the package, checks shall be performed to confirm the presence and distribution of those neutron poisons.

4.1.9.1.7 Before each shipment of any package, the following requirements shall be fulfilled:

- (a) For any package it shall be ensured that all the requirements specified in the relevant provisions of ADR have been satisfied;
- (b) It shall be ensured that lifting attachments which do not meet the requirements of 6.4.2.2 have been removed or otherwise rendered incapable of being used for lifting the package, in accordance with 6.4.2.3;
- (c) For each package requiring competent authority approval, it shall be ensured that all the requirements specified in the approval certificates have been satisfied;

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- (d) Each Type B(U), Type B(M) and Type C package shall be held until equilibrium conditions have been approached closely enough to demonstrate compliance with the requirements for temperature and pressure unless an exemption from these requirements has received unilateral approval;
- (e) For each Type B(U), Type B(M) and Type C package, it shall be ensured by inspection and/or appropriate tests that all closures, valves, and other openings of the containment system through which the radioactive contents might escape are properly closed and, where appropriate, sealed in the manner for which the demonstrations of compliance with the requirements of 6.4.8.8 and 6.4.10.3 were made;
- (f) For each special form radioactive material, it shall be ensured that all the requirements specified in the approval certificate and the relevant provisions of ADR have been satisfied;
- (g) For packages containing fissile material the measurement specified in 6.4.11.4 (b) and the tests to demonstrate closure of each package as specified in 6.4.11.7 shall be performed where applicable;
- (h) For each low dispersible radioactive material, it shall be ensured that all the requirements specified in the approval certificate and the relevant provisions of ADR have been satisfied.

4.1.9.1.8 The consignor shall also have a copy of any instructions with regard to the proper closing of the package and any preparation for shipment before making any shipment under the terms of the certificates.

4.1.9.1.9 Except for consignments under exclusive use, the transport index of any package or overpack shall not exceed 10, nor shall the criticality safety index of any package or overpack exceed 50.

4.1.9.1.10 Except for packages or overpacks carried under exclusive use under the conditions specified in 7.5.11, CV33 (3.5)(a), the maximum radiation level at any point on any external surface of a package or overpack shall not exceed 2 mSv/h.

4.1.9.1.11 The maximum radiation level at any point on any external surface of a package or overpack under exclusive use shall not exceed 10 mSv/h.

4.1.9.2 *Requirements and controls for carriage of LSA material and SCO*

4.1.9.2.1 The quantity of LSA material or SCO in a single Type IP-1 package, Type IP-2 package, Type IP-3 package, or object or collection of objects, whichever is appropriate, shall be so restricted that the external radiation level at 3 m from the unshielded material or object or collection of objects does not exceed 10 mSv/h.

4.1.9.2.2 For LSA material and SCO which is or contains fissile material the applicable requirements of 6.4.11.1 and 7.5.11 CV33 (4.1) and (4.2) shall be met.

4.1.9.2.3 LSA material and SCO in groups LSA-I and SCO-I may be carried unpackaged under the following conditions:

- (a) All unpackaged material other than ores containing only naturally occurring radionuclides shall be carried in such a manner that under routine conditions of carriage there will be no escape of the radioactive contents from the vehicle nor will there be any loss of shielding;

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- (b) Each vehicle shall be under exclusive use, except when only carrying SCO-I on which the contamination on the accessible and the inaccessible surfaces is not greater than ten times the corresponding level according to the definition of "contamination" in 2.2.7.1.2; and
- (c) For SCO-I where it is suspected that non-fixed contamination exists on inaccessible surfaces in excess of the values specified in 2.2.7.2.3.2 (a)(i), measures shall be taken to ensure that the radioactive material is not released into the vehicle.

4.1.9.2.4 LSA material and SCO, except as otherwise specified in 4.1.9.2.3, shall be packaged in accordance with the table below:

Industrial package requirements for LSA material and SCO

Radioactive contents	Industrial package type	
	Exclusive use	Not under exclusive use
LSA-I		
Solid ^a	Type IP-1	Type IP-1
Liquid	Type IP-1	Type IP-2
LSA-II		
Solid	Type IP-2	Type IP-2
Liquid and gas	Type IP-2	Type IP-3
LSA-III	Type IP-2	Type IP-3
SCO-I ^a	Type IP-1	Type IP-1
SCO-II	Type IP-2	Type IP-2

^a Under the conditions specified in 4.1.9.2.3, LSA-I material and SCO-I may be carried unpackaged.

4.1.9.3 Packages containing fissile material

Unless not classified as fissile in accordance with 2.2.7.2.3.5, packages containing fissile material shall not contain:

- (a) A mass of fissile material (or mass of each fissile nuclide for mixtures when appropriate) different from that authorized for the package design;
- (b) Any radionuclide or fissile material different from those authorized for the package design; or
- (c) Contents in a form or physical or chemical state, or in a spatial arrangement, different from those authorized for the package design;

as specified in their certificates of approval where appropriate.

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4.1.10 Special provisions for mixed packing

4.1.10.1 When mixed packing is permitted in accordance with the provisions of this section, different dangerous goods or dangerous goods and other goods may be packed together in combination packagings conforming to 6.1.4.21, provided that they do not react dangerously with one another and that all other relevant provisions of this Chapter are complied with.

NOTE 1: See also 4.1.1.5 and 4.1.1.6.

NOTE 2: For goods of Class 7, see 4.1.9.

4.1.10.2 Except for packages containing Class 1 goods only or Class 7 goods only, if wooden or fibreboard boxes are used as outer packagings, a package containing different goods packed together shall not weigh more than 100 kg.

4.1.10.3 Unless otherwise prescribed by a special provision applicable according to 4.1.10.4, dangerous goods of the same class and the same classification code may be packed together.

4.1.10.4 When indicated for a given entry in Column (9b) of Table A of Chapter 3.2, the following special provisions shall apply to the mixed packing of the goods assigned to that entry with other goods in the same package.

MP 1 May only be packed together with goods of the same type within the same compatibility group.

MP 2 Shall not be packed together with other goods.

MP 3 Mixed packing of UN No. 1873 with UN No. 1802 is permitted.

MP 4 Shall not be packed together with goods of other classes or with goods which are not subject to the requirements of ADR. However, if this organic peroxide is a hardener or compound system for Class 3 substances, mixed packing is permitted with these substances of Class 3.

MP 5 UN No. 2814 and UN No. 2900 may be packed together in a combination packaging in conformity with P620. They shall not be packed together with other goods; this does not apply to UN No. 3373 Biological substance, Category B packed in accordance with P650 or to substances added as coolants, e.g. ice, dry ice or refrigerated liquid nitrogen.

MP 6 Shall not be packed together with other goods. This does not apply to substances added as coolants, e.g. ice, dry ice or refrigerated liquid nitrogen.

MP 7 May - in quantities not exceeding 5 litres per inner packaging - be packed together in a combination packaging conforming to 6.1.4.21:

- with goods of the same class covered by other classification codes when mixed packing is also permitted for these; or

- with goods which are not subject to the requirements of ADR,

provided they do not react dangerously with one another.

MP 8 May - in quantities not exceeding 3 litres per inner packaging - be packed together in a combination packaging conforming to 6.1.4.21:

- with goods of the same class covered by other classification codes when mixed packing is also permitted for these; or

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- with goods which are not subject to the requirements of ADR,
provided they do not react dangerously with one another.
- MP 9 May be packed together in an outer packaging for combination packagings in accordance with 6.1.4.21:
- with other goods of Class 2;
 - with goods of other classes, when the mixed packing is also permitted for these; or
 - with goods which are not subject to the requirements of ADR,
provided they do not react dangerously with one another.
- MP 10 May - in quantities not exceeding 5 kg per inner packaging - be packed together in a combination packaging conforming to 6.1.4.21:
- with goods of the same class covered by other classification codes or with goods of other classes, when mixed packing is also permitted for these; or
 - with goods which are not subject to the requirements of ADR,
provided they do not react dangerously with one another.
- MP 11 May - in quantities not exceeding 5 kg per inner packaging - be packed together in a combination packaging conforming to 6.1.4.21:
- with goods of the same class covered by other classification codes or with goods of other classes (except substances of packing group I or II of Class 5.1) when mixed packing is also permitted for these; or
 - with goods which are not subject to the requirements of ADR,
provided they do not react dangerously with one another.
- MP 12 May - in quantities not exceeding 5 kg per inner packaging - be packed together in a combination packaging conforming to 6.1.4.21:
- with goods of the same class covered by other classification codes or with goods of other classes (except substances of packing group I or II of Class 5.1) when mixed packing is also permitted for these; or
 - with goods which are not subject to the requirements of ADR,
provided they do not react dangerously with one another.
- Packagings shall not weigh more than 45 kg. If fibreboard boxes are used as outer packagings however, a package shall not weigh more than 27 kg.
- MP 13 May - in quantities not exceeding 3 kg per inner packaging and per package - be packed together in a combination packaging conforming to 6.1.4.21:
- with goods of the same class covered by other classification codes or with goods of other classes, when mixed packing is also permitted for these; or

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- with goods which are not subject to the requirements of ADR,
provided they do not react dangerously with one another.
- MP 14 May - in quantities not exceeding 6 kg per inner packaging - be packed together in a combination packaging conforming to 6.1.4.21:
- with goods of the same class covered by other classification codes or with goods of other classes, when mixed packing is also permitted for these; or
 - with goods which are not subject to the requirements of ADR,
provided they do not react dangerously with one another.
- MP 15 May - in quantities not exceeding 3 litres per inner packaging - be packed together in a combination packaging conforming to 6.1.4.21:
- with goods of the same class covered by other classification codes or with goods of other classes, when mixed packing is also permitted for these; or
 - with goods which are not subject to the requirements of ADR,
provided they do not react dangerously with one another.
- MP 16 May - in quantities not exceeding 3 litres per inner packaging and per package - be packed together in a combination packaging conforming to 6.1.4.21:
- with goods of the same class covered by other classification codes or with goods of other classes, when mixed packing is also permitted for these; or
 - with goods which are not subject to the requirements of ADR,
provided they do not react dangerously with one another.
- MP 17 May - in quantities not exceeding 0.5 litre per inner packaging and 1 litre per package - be packed together in a combination packaging conforming to 6.1.4.21:
- with goods of other classes, except Class 7, when mixed packing is also permitted for these; or
 - with goods which are not subject to the requirements of ADR,
provided they do not react dangerously with one another.
- MP 18 May - in quantities not exceeding 0.5 kg per inner packaging and 1 kg per package - be packed together in a combination packaging conforming to 6.1.4.21:
- with goods or articles of other classes, except Class 7, when mixed packing is also permitted for these; or
 - with goods which are not subject to the requirements of ADR,
provided they do not react dangerously with one another.

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- MP 19 May - in quantities not exceeding 5 litres per inner packaging - be packed together in a combination packaging conforming to 6.1.4.21:
- with goods of the same class covered by other classification codes or with goods of other classes, when mixed packing is also permitted for these; or
 - with goods which are not subject to the requirements of ADR, provided they do not react dangerously with one another.
- MP 20 May be packed together with substances covered by the same UN number.
- Shall not be packed together with goods and articles of Class 1 having different UN numbers, except if provided for by special provision MP 24.
- Shall not be packed together with goods of other classes or with goods which are not subject to the requirements of ADR.
- MP 21 May be packed together with articles covered by the same UN number.
- Shall not be packed together with goods of Class 1 having different UN numbers, except for:
- (a) their own means of initiation, provided that
 - (i) the means of initiation will not function under normal conditions of carriage; or
 - (ii) such means have at least two effective protective features which prevent explosion of an article in the event of accidental functioning of the means of initiation; or
 - (iii) when such means do not have two effective protective features (i.e. means of initiation assigned to compatibility group B), in the opinion of the competent authority of the country of origin³, the accidental functioning of the means of initiation does not cause the explosion of an article under normal conditions of carriage;
 - (b) articles of compatibility groups C, D and E.
- Shall not be packed together with goods of other classes or with goods which are not subject to the requirements of ADR.
- When goods are packed together in accordance with this special provision, account shall be taken of a possible amendment of the classification of packages in accordance with 2.2.1.1. For the description of the goods in the transport document, see 5.4.1.2.1 (b).

³ *If the country of origin is not a Contracting Party to ADR, the approval shall require validation by the competent authority of the first country Contracting Party to ADR reached by the consignment.*

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- MP 22 May be packed together with articles covered by the same UN number.
- Shall not be packed together with goods of Class 1 having different UN numbers, except
- (a) With their own means of initiation, provided that the means of initiation will not function under normal conditions of carriage; or
 - (b) With articles of compatibility groups C, D and E; or
 - (c) If provided for by special provision MP 24.
- Shall not be packed together with goods of other classes or with goods which are not subject to the requirements of ADR.
- When goods are packed together in accordance with this special provision, account shall be taken of a possible amendment of the classification of packages in accordance with 2.2.1.1. For the description of the goods in the transport document, see 5.4.1.2.1 (b).
- MP 23 May be packed together with articles covered by the same UN number.
- Shall not be packed together with goods and articles of Class 1 having different UN numbers, except
- (a) With their own means of initiation, provided that the means of initiation will not function under normal conditions of carriage; or
 - (b) If provided for by special provision MP 24.
- Shall not be packed together with goods of other classes or with goods which are not subject to the requirements of ADR.
- When goods are packed together in accordance with this special provision, account shall be taken of a possible amendment of the classification of packages in accordance with 2.2.1.1. For the description of the goods in the transport document, see 5.4.1.2.1 (b).
- MP 24 May be packed together with goods with the UN numbers shown in the table below, under the following conditions:
- if a letter A is indicated in the table, the goods with those UN numbers may be included in the same package without any special limitation of mass;
 - if a letter B is indicated in the table, the goods with those UN numbers may be included in the same package up to a total mass of 50 kg of explosive substances.
- When goods are packed together in accordance with this special provision, account shall be taken of a possible amendment of the classification of packages in accordance with 2.2.1.1. For the description of the goods in the transport document, see 5.4.1.2.1 (b).

UN No.	0012	0014	0027	0028	0044	0054	0160	0161	0186	0191	0194	0195	0197	0238	0240	0312	0333	0334	0335	0336	0337	0405	0428	0430	0431	0432	0505	0506	0507		
0012		A																													
0014	A																														
0027			B B																												
0028			B B						B B	B B	B B	B B	B B																		
0044			B B						B B	B B	B B	B B	B B																		
0054			B B						B B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0160			B B																												
0161			B B																												
0186						B				B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0191						B			B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0194						B			B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0195						B			B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0197						B			B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0238						B			B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0240						B			B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0312						B			B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0333																	A	A	A	A											
0334																A	A	A	A												
0335																A	A	A	A												
0336																A	A	A	A												
0337																A	A	A	A												
0373						B			B B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0405						B			B B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0428						B			B B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0429						B			B B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0430						B			B B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0431						B			B B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0432						B			B B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0505						B			B B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0506						B			B B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	
0507						B			B B	B B	B B	B B	B B									B B	B B	B B	B B	B B	B B	B B	B B	B B	

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CHAPTER 4.2

USE OF PORTABLE TANKS AND UN MULTIPLE-ELEMENT GAS CONTAINERS (MEGCs)

NOTE 1: *For fixed tanks (tank-vehicles), demountable tanks and tank-containers and tank swap bodies, with shells made of metallic materials, and battery-vehicles and multiple element gas containers (MEGCs), see Chapter 4.3; for fibre-reinforced plastics tanks, see Chapter 4.4; for vacuum operated waste tanks, see Chapter 4.5.*

NOTE 2: *Portable tanks and UN MEGCs marked in accordance with the applicable provisions of Chapter 6.7 but which were approved in a State which is not a Contracting Party to ADR may nevertheless be used for carriage under ADR.*

4.2.1 General provisions for the use of portable tanks for the carriage of substances of Class 1 and Classes 3 to 9

4.2.1.1 This section provides general provisions applicable to the use of portable tanks for the carriage of substances of Classes 1, 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 6.2, 7, 8 and 9. In addition to these general provisions, portable tanks shall conform to the design, construction, inspection and testing requirements detailed in 6.7.2. Substances shall be carried in portable tanks conforming to the applicable portable tank instruction identified in Column (10) of the Table A of Chapter 3.2 and described in 4.2.5.2.6 (T1 to T23) and the portable tank special provisions assigned to each substance in Column (11) of Table A of Chapter 3.2 and described in 4.2.5.3.

4.2.1.2 During carriage, portable tanks shall be adequately protected against damage to the shell and service equipment resulting from lateral and longitudinal impact and overturning. If the shell and service equipment are so constructed as to withstand impact or overturning it need not be protected in this way. Examples of such protection are given in 6.7.2.17.5.

4.2.1.3 Certain substances are chemically unstable. They are accepted for carriage only when the necessary steps have been taken to prevent their dangerous decomposition, transformation or polymerization during carriage. To this end, care shall in particular be taken to ensure that shells do not contain any substances liable to promote these reactions.

4.2.1.4 The temperature of the outer surface of the shell excluding openings and their closures or of the thermal insulation shall not exceed 70 °C during carriage. When necessary, the shell shall be thermally insulated.

4.2.1.5 Empty portable tanks not cleaned and not gas-free shall comply with the same provisions as portable tanks filled with the previous substance.

4.2.1.6 Substances shall not be carried in the same or in adjoining compartments of shells when they may react dangerously with each other (see definition for "dangerous reaction" in 1.2.1).

4.2.1.7 The design approval certificate, the test report and the certificate showing the results of the initial inspection and test for each portable tank issued by the competent authority or its authorized body shall be retained by the authority or body and the owner. Owners shall be able to provide this documentation upon the request of any competent authority.

4.2.1.8 Unless the name of the substance(s) being carried appears on the metal plate described in 6.7.2.20.2 a copy of the certificate specified in 6.7.2.18.1 shall be made available upon the request of a competent authority or its authorized body and readily provided by the consignor, consignee or agent, as appropriate.

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4.2.1.9 Degree of filling

4.2.1.9.1 Prior to filling, the consignor shall ensure that the appropriate portable tank is used and that the portable tank is not filled with substances which in contact with the materials of the shell, gaskets, service equipment and any protective linings, are likely to react dangerously with them to form dangerous products or appreciably weaken these materials. The consignor may need to consult the manufacturer of the substance in conjunction with the competent authority for guidance on the compatibility of the substance with the portable tank materials.

4.2.1.9.1.1 Portable tanks shall not be filled above the extent provided in 4.2.1.9.2 to 4.2.1.9.6. The applicability of 4.2.1.9.2, 4.2.1.9.3 or 4.2.1.9.5.1 to individual substances is specified in the applicable portable tank instruction or special provisions in 4.2.5.2.6 or 4.2.5.3 and Column (10) or (11) of Table A of Chapter 3.2.

4.2.1.9.2 The maximum degree of filling (in %) for general use is determined by the formula:

$$\text{Degree of filling} = \frac{97}{1 + \alpha(t_r - t_f)}$$

4.2.1.9.3 The maximum degree of filling (in %) for liquids of Class 6.1 and Class 8, in packing groups I and II, and liquids with an absolute vapour pressure of more than 175 kPa (1.75 bar) at 65 °C, is determined by the formula:

$$\text{Degree of filling} = \frac{95}{1 + \alpha(t_r - t_f)}$$

4.2.1.9.4 In these formulae, α is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (t_f) and the maximum mean bulk temperature during carriage (t_r) (both in °C). For liquids carried under ambient conditions α could be calculated by the formula:

$$\alpha = \frac{d_{15} - d_{50}}{35d_{50}}$$

in which d_{15} and d_{50} are the densities of the liquid at 15 °C and 50 °C, respectively.

4.2.1.9.4.1 The maximum mean bulk temperature (t_r) shall be taken as 50 °C except that, for journeys under temperate or extreme climatic conditions, the competent authorities concerned may agree to a lower or require a higher temperature, as appropriate.

4.2.1.9.5 The provisions of 4.2.1.9.2 to 4.2.1.9.4.1 do not apply to portable tanks which contain substances maintained at a temperature above 50 °C during carriage (e.g. by means of a heating device). For portable tanks equipped with a heating device, a temperature regulator shall be used to ensure the maximum degree of filling is not more than 95% full at any time during carriage.

4.2.1.9.5.1 The maximum degree of filling (in %) for solids carried above their melting point and for elevated temperature liquids shall be determined by the following formula:

$$\text{Degree of filling} = 95 \frac{d_r}{d_f}$$

in which d_f and d_r are the densities of the liquid at the mean temperature of the liquid during filling and the maximum mean bulk temperature during carriage respectively.

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- 4.2.1.9.6 Portable tanks shall not be offered for carriage:
- (a) With a degree of filling, for liquids having a viscosity less than 2 680 mm²/s at 20 °C or maximum temperature of the substance during carriage in the case of the heated substance, of more than 20% but less than 80% unless the shells of portable tanks are divided, by partitions or surge plates, into sections of not more than 7 500 litres capacity;
 - (b) With residue of substances previously carried adhering to the outside of the shell or service equipment;
 - (c) When leaking or damaged to such an extent that the integrity of the portable tank or its lifting or securing arrangements may be affected; and
 - (d) Unless the service equipment has been examined and found to be in good working order.
- 4.2.1.9.7 Forklift pockets of portable tanks shall be closed off when the tank is filled. This provision does not apply to portable tanks which according to 6.7.2.17.4 need not be provided with a means of closing off the forklift pockets.
- 4.2.1.10** *Additional provisions applicable to the carriage of Class 3 substances in portable tanks*
- 4.2.1.10.1 All portable tanks intended for the carriage of flammable liquids shall be closed and be fitted with relief devices in accordance with 6.7.2.8 to 6.7.2.15.
- 4.2.1.10.1.1 For portable tanks intended for use only on land, open venting systems may be used if allowed according to Chapter 4.3.
- 4.2.1.11** *Additional provisions applicable to the carriage of Classes 4.1, 4.2 or 4.3 substances (other than Class 4.1 self-reactive substances) in portable tanks*
- (Reserved)
- NOTE: For Class 4.1 self-reactive substances, see 4.2.1.13.1.*
- 4.2.1.12** *Additional provisions applicable to the carriage of Class 5.1 substances in portable tanks*
- (Reserved)
- 4.2.1.13** *Additional provisions applicable to the carriage of Class 5.2 substances and Class 4.1 self-reactive substances in portable tanks*
- 4.2.1.13.1 Each substance shall have been tested and a report submitted to the competent authority of the country of origin for approval. Notification thereof shall be sent to the competent authority of the country of destination. The notification shall contain relevant transport information and the report with test results. The tests undertaken shall include those necessary:
- (a) To prove the compatibility of all materials normally in contact with the substance during carriage;
 - (b) To provide data for the design of the pressure and emergency relief devices taking into account the design characteristics of the portable tank.
- Any additional provision necessary for safe carriage of the substance shall be clearly described in the report.

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- 4.2.1.13.2 The following provisions apply to portable tanks intended for the carriage of Type F organic peroxides or Type F self-reactive substances with a Self-Accelerating Decomposition Temperature (SADT) of 55 °C or more. In case of conflict these provisions prevail over those specified in Section 6.7.2. Emergencies to be taken into account are self-accelerating decomposition of the substance and fire-engulfment as described in 4.2.1.13.8.
- 4.2.1.13.3 The additional provisions for carriage of organic peroxides or self-reactive substances with a SADT less than 55 °C in portable tanks shall be specified by the competent authority of the country of origin. Notification thereof shall be sent to the competent authority of the country of destination.
- 4.2.1.13.4 The portable tank shall be designed for a test pressure of at least 0.4 MPa (4 bar).
- 4.2.1.13.5 Portable tanks shall be fitted with temperature sensing devices.
- 4.2.1.13.6 Portable tanks shall be fitted with pressure-relief devices and emergency-relief devices. Vacuum-relief devices may also be used. Pressure-relief devices shall operate at pressures determined according to both the properties of the substance and the construction characteristics of the portable tank. Fusible elements are not allowed in the shell.
- 4.2.1.13.7 The pressure-relief devices shall consist of spring-loaded valves fitted to prevent significant build-up within the portable tank of the decomposition products and vapours released at a temperature of 50 °C. The capacity and start-to-discharge pressure of the relief valves shall be based on the results of the tests specified in 4.2.1.13.1. The start-to-discharge pressure shall, however, in no case be such that liquid would escape from the valve(s) if the portable tank were overturned.
- 4.2.1.13.8 The emergency-relief devices may be of the spring-loaded or frangible types, or a combination of the two, designed to vent all the decomposition products and vapours evolved during a period of not less than one hour of complete fire-engulfment as calculated by the following formula:

$$q = 70961 \times F \times A^{0.82}$$

where:

- q = heat absorption [W]
 A = wetted area [m²]
 F = insulation factor
 = 1 for non-insulated shells, or

$$F = \frac{U(923 - T)}{47032} \text{ for insulated shells}$$

where:

- K = heat conductivity of insulation layer [W. m⁻¹. K⁻¹]
 L = thickness of insulation layer [m]
 U = K/L = heat transfer coefficient of the insulation [W. m⁻². K⁻¹]
 T = temperature of the substance at relieving conditions [K]

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The start-to-discharge pressure of the emergency-relief device(s) shall be higher than that specified in 4.2.1.13.7 and based on the results of the tests referred to in 4.2.1.13.1. The emergency-relief devices shall be dimensioned in such a way that the maximum pressure in the portable tank never exceeds the test pressure of the tank.

NOTE: *An example of a method to determine the size of emergency-relief devices is given in Appendix 5 of the "Manual of Tests and Criteria".*

- 4.2.1.13.9 For insulated portable tanks the capacity and setting of emergency-relief device(s) shall be determined assuming a loss of insulation from 1% of the surface area.
- 4.2.1.13.10 Vacuum-relief devices and spring-loaded valves shall be provided with flame arresters. Due attention shall be paid to the reduction of the relief capacity caused by the flame arrester.
- 4.2.1.13.11 Service equipment such as valves and external piping shall be so arranged that no substance remains in them after filling the portable tank.
- 4.2.1.13.12 Portable tanks may be either insulated or protected by a sun-shield. If the SADT of the substance in the portable tank is 55 °C or less, or the portable tank is constructed of aluminium, the portable tank shall be completely insulated. The outer surface shall be finished in white or bright metal.
- 4.2.1.13.13 The degree of filling shall not exceed 90% at 15 °C.
- 4.2.1.13.14 The marking as required in 6.7.2.20.2 shall include the UN number and the technical name with the approved concentration of the substance concerned.
- 4.2.1.13.15 Organic peroxides and self-reactive substances specifically listed in portable tank instruction T23 in 4.2.5.2.6 may be carried in portable tanks.
- 4.2.1.14** *Additional provisions applicable to the carriage of Class 6.1 substances in portable tanks*
(Reserved)
- 4.2.1.15** *Additional provisions applicable to the carriage of Class 6.2 substances in portable tanks*
(Reserved)
- 4.2.1.16** *Additional provisions applicable to the carriage of Class 7 substances in portable tanks*
- 4.2.1.16.1 Portable tanks used for the carriage of radioactive material shall not be used for the carriage of other goods.
- 4.2.1.16.2 The degree of filling for portable tanks shall not exceed 90% or, alternatively, any other value approved by the competent authority.
- 4.2.1.17** *Additional provisions applicable to the carriage of Class 8 substances in portable tanks*
- 4.2.1.17.1 Pressure-relief devices of portable tanks used for the carriage of Class 8 substances shall be inspected at intervals not exceeding one year.
- 4.2.1.18** *Additional provisions applicable to the carriage of Class 9 substances in portable tanks*
(Reserved)

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4.2.1.19 *Additional provisions applicable to the carriage of solid substances carried above their melting point*

4.2.1.19.1 Solid substances carried or offered for carriage above their melting point which are not assigned a portable tank instruction in column (10) of the Table A of Chapter 3.2 or when the assigned portable tank instruction does not apply to carriage at temperatures above their melting point may be carried in portable tanks provided that the solid substances are classified in Classes 4.1, 4.2, 4.3, 5.1, 6.1, 8 or 9 and have no subsidiary risk other than that of Class 6.1 or Class 8 and are in packing group II or III.

4.2.1.19.2 Unless otherwise indicated in the Table A of Chapter 3.2, portable tanks used for the carriage of these solid substances above their melting point shall conform to the provisions of portable tank instruction T4 for solid substances of packing group III or T7 for solid substances of packing group II. A portable tank which affords an equivalent or greater level of safety may be selected according to 4.2.5.2.5. The maximum degree of filling (in %) shall be determined according to 4.2.1.9.5 (TP3).

4.2.2 **General provisions for the use of portable tanks for the carriage of non-refrigerated liquefied gases and chemicals under pressure**

4.2.2.1 This section provides general provisions applicable to the use of portable tanks for the carriage of non-refrigerated liquefied gases and chemicals under pressure.

4.2.2.2 Portable tanks shall conform to the design, construction, inspection and testing requirements detailed in 6.7.3. Non-refrigerated liquefied gases and chemicals under pressure shall be carried in portable tanks conforming to portable tank instruction T50 as described in 4.2.5.2.6 and any portable tank special provisions assigned to specific non-refrigerated liquefied gases in Column (11) of Table A of Chapter 3.2 and described in 4.2.5.3.

4.2.2.3 During carriage, portable tanks shall be adequately protected against damage to the shell and service equipment resulting from lateral and longitudinal impact and overturning. If the shell and service equipment are so constructed as to withstand impact or overturning it need not be protected in this way. Examples of such protection are given in 6.7.3.13.5.

4.2.2.4 Certain non-refrigerated liquefied gases are chemically unstable. They are accepted for carriage only when the necessary steps have been taken to prevent their dangerous decomposition, transformation or polymerization during carriage. To this end, care shall in particular be taken to ensure that portable tanks do not contain any non-refrigerated liquefied gases liable to promote these reactions.

4.2.2.5 Unless the name of the gas(es) being carried appears on the metal plate described in 6.7.3.16.2, a copy of the certificate specified in 6.7.3.14.1 shall be made available upon a competent authority request and readily provided by the consignor, consignee or agent, as appropriate.

4.2.2.6 Empty portable tanks not cleaned and not gas-free shall comply with the same provisions as portable tanks filled with the previous non-refrigerated liquefied gas.

4.2.2.7 **Filling**

4.2.2.7.1 Prior to filling the portable tank shall be inspected to ensure that it is authorized for the non-refrigerated liquefied gas or the propellant of the chemical under pressure to be carried and that the portable tank is not loaded with non-refrigerated liquefied gases, or with chemicals under pressure which in contact with the materials of the shell, gaskets, service equipment and any protective linings, are likely to react dangerously with them to form dangerous products or appreciably weaken these materials. During filling, the temperature of the non-

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refrigerated liquefied gas or propellant of chemicals under pressure shall fall within the limits of the design temperature range.

- 4.2.2.7.2 The maximum mass of non-refrigerated liquefied gas per litre of shell capacity (kg/l) shall not exceed the density of the non-refrigerated liquefied gas at 50 °C multiplied by 0.95. Furthermore, the shell shall not be liquid-full at 60 °C.
- 4.2.2.7.3 Portable tanks shall not be filled above their maximum permissible gross mass and the maximum permissible load mass specified for each gas to be carried.
- 4.2.2.8 Portable tanks shall not be offered for carriage:
- (a) In an ullage condition liable to produce an unacceptable hydraulic force due to surge within the shell;
 - (b) When leaking;
 - (c) When damaged to such an extent that the integrity of the tank or its lifting or securing arrangements may be affected; and
 - (d) Unless the service equipment has been examined and found to be in good working order.
- 4.2.2.9 Forklift pockets of portable tanks shall be closed off when the tank is filled. This provision does not apply to portable tanks which according to 6.7.3.13.4 need not be provided with a means of closing off the forklift pockets.

4.2.3 General provisions for the use of portable tanks for the carriage of refrigerated liquefied gases

- 4.2.3.1 This section provides general provisions applicable to the use of portable tanks for the carriage of refrigerated liquefied gases.
- 4.2.3.2 Portable tanks shall conform to the design, construction, inspection and testing requirements detailed in 6.7.4. Refrigerated liquefied gases shall be carried in portable tanks conforming to portable tank instruction T75 as described in 4.2.5.2.6 and the portable tank special provisions assigned to each substance in Column (11) of Table A of Chapter 3.2 and described in 4.2.5.3.
- 4.2.3.3 During carriage, portable tanks shall be adequately protected against damage to the shell and service equipment resulting from lateral and longitudinal impact and overturning. If the shell and service equipment are so constructed as to withstand impact or overturning it need not be protected in this way. Examples of such protection are provided in 6.7.4.12.5.
- 4.2.3.4 Unless the name of the gas(es) being carried appears on the metal plate described in 6.7.4.15.2, a copy of the certificate specified in 6.7.4.13.1 shall be made available upon a competent authority request and readily provided by the consignor, consignee or agent, as appropriate.
- 4.2.3.5 Empty portable tanks not cleaned and not gas-free shall comply with the same provisions as portable tanks filled with the previous substance.

4.2.3.6 Filling

- 4.2.3.6.1 Prior to filling the portable tank shall be inspected to ensure that it is authorized for the refrigerated liquefied gas to be carried and that the portable tank is not loaded with

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refrigerated liquefied gases which in contact with the materials of the shell, gaskets, service equipment and any protective linings, are likely to react dangerously with them to form dangerous products or appreciably weaken these materials. During filling, the temperature of the refrigerated liquefied gas shall be within the limits of the design temperature range.

4.2.3.6.2 In estimating the initial degree of filling the necessary holding time for the intended journey including any delays which might be encountered shall be taken into consideration. The initial degree of filling of the shell, except as provided for in 4.2.3.6.3 and 4.2.3.6.4, shall be such that if the contents, except helium, were to be raised to a temperature at which the vapour pressure is equal to the maximum allowable working pressure (MAWP) the volume occupied by liquid would not exceed 98%.

4.2.3.6.3 Shells intended for the carriage of helium can be filled up to but not above the inlet of the pressure-relief device.

4.2.3.6.4 A higher initial degree of filling may be allowed, subject to approval by the competent authority, when the intended duration of carriage is considerably shorter than the holding time.

4.2.3.7 *Actual holding time*

4.2.3.7.1 The actual holding time shall be calculated for each journey in accordance with a procedure recognized by the competent authority, on the basis of the following:

- (a) The reference holding time for the refrigerated liquefied gas to be carried (see 6.7.4.2.8.1) (as indicated on the plate referred to in 6.7.4.15.1);
- (b) The actual filling density;
- (c) The actual filling pressure;
- (d) The lowest set pressure of the pressure limiting device(s).

4.2.3.7.2 The actual holding time shall be marked either on the portable tank itself or on a metal plate firmly secured to the portable tank, in accordance with 6.7.4.15.2.

4.2.3.8 Portable tanks shall not be offered for carriage:

- (a) In an ullage condition liable to produce an unacceptable hydraulic force due to surge within the shell;
- (b) When leaking;
- (c) When damaged to such an extent that the integrity of the portable tank or its lifting or securing arrangements may be affected;
- (d) Unless the service equipment has been examined and found to be in good working order;
- (e) Unless the actual holding time for the refrigerated liquefied gas being carried has been determined in accordance with 4.2.3.7 and the portable tank is marked in accordance with 6.7.4.15.2; and
- (f) Unless the duration of carriage, after taking into consideration any delays which might be encountered, does not exceed the actual holding time.

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4.2.3.9 Forklift pockets of portable tanks shall be closed off when the tank is filled. This provision does not apply to portable tanks which according to 6.7.4.12.4, need not be provided with a means of closing off the forklift pockets.

4.2.4 General provisions for the use of UN multiple-element gas containers (MEGCs)

4.2.4.1 This section provides general requirements applicable to the use of multiple-element gas containers (MEGCs) for the carriage of non-refrigerated gases referred to in 6.7.5.

4.2.4.2 MEGCs shall conform to the design, construction, inspection and testing requirements detailed in 6.7.5. The elements of MEGCs shall be periodically inspected according to the provisions set out in packing instruction P200 of 4.1.4.1 and in 6.2.1.6.

4.2.4.3 During carriage, MEGCs shall be protected against damage to the elements and service equipment resulting from lateral and longitudinal impact and overturning. If the elements and service equipment are so constructed as to withstand impact or overturning, they need not be protected in this way. Examples of such protection are given in 6.7.5.10.4.

4.2.4.4 The periodic testing and inspection requirements for MEGCs are specified in 6.7.5.12. MEGCs or their elements shall not be charged or filled after they become due for periodic inspection but may be carried after the expiry of the time limit.

4.2.4.5 Filling

4.2.4.5.1 Prior to filling, the MEGC shall be inspected to ensure that it is authorized for the gas to be carried and that the applicable provisions of ADR have been met.

4.2.4.5.2 Elements of MEGCs shall be filled according to the working pressures, filling ratios and filling provisions specified in packing instruction P200 of 4.1.4.1 for the specific gas being filled into each element. In no case shall an MEGC or group of elements be filled as a unit in excess of the lowest working pressure of any given element.

4.2.4.5.3 MEGCs shall not be filled above their maximum permissible gross mass.

4.2.4.5.4 Isolation valves shall be closed after filling and remain closed during carriage. Toxic gases (gases of groups T, TF, TC, TO, TFC and TOC) shall only be carried in MEGCs where each element is equipped with an isolation valve.

4.2.4.5.5 The opening(s) for filling shall be closed by caps or plugs. The leakproofness of the closures and equipment shall be verified by the filler after filling.

4.2.4.5.6 MEGCs shall not be offered for filling:

- (a) when damaged to such an extent that the integrity of the pressure receptacles or its structural or service equipment may be affected;
- (b) unless the pressure receptacles and its structural and service equipment has been examined and found to be in good working order; and
- (c) unless the required certification, retest, and filling markings are legible.

4.2.4.6 Charged MEGCs shall not be offered for carriage;

- (a) when leaking;
- (b) when damaged to such an extent that the integrity of the pressure receptacles or its structural or service equipment may be affected;

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(c) unless the pressure receptacles and its structural and service equipment have been examined and found to be in good working order; and

(d) unless the required certification, retest, and filling markings are legible.

4.2.4.7 Empty MEGCs that have not been cleaned and purged shall comply with the same requirements as MEGCs filled with the previous substance.

4.2.5 Portable tank instructions and special provisions

4.2.5.1 General

4.2.5.1.1 This section includes the portable tank instructions and special provisions applicable to dangerous goods authorized to be carried in portable tanks. Each portable tank instruction is identified by an alpha-numeric code (e.g. T1). Column (10) of Table A of Chapter 3.2 indicates the portable tank instruction that shall be used for each substance permitted for carriage in a portable tank. When no portable tank instruction appears in Column (10) for a specific dangerous goods entry then carriage of the substance in portable tanks is not permitted unless a competent authority approval is granted as detailed in 6.7.1.3. Portable tank special provisions are assigned to specific dangerous goods in Column (11) of Table A of Chapter 3.2. Each portable tank special provision is identified by an alpha-numeric code (e.g. TP1). A listing of the portable tank special provisions is provided in 4.2.5.3.

NOTE: The gases authorized for carriage in MEGCs are indicated with the letter "(M)" in Column (10) of Table A of Chapter 3.2.

4.2.5.2 Portable tank instructions

4.2.5.2.1 Portable tank instructions apply to dangerous goods of Classes 1 to 9. Portable tank instructions provide specific information relevant to portable tanks provisions applicable to specific substances. These provisions shall be met in addition to the general provisions in this Chapter and the general requirements in Chapter 6.7.

4.2.5.2.2 For substances of Class 1 and Classes 3 to 9, the portable tank instructions indicate the applicable minimum test pressure, the minimum shell thickness (in reference steel), bottom opening requirements and pressure relief requirements. In portable tank instruction T23, self-reactive substances of Class 4.1 and Class 5.2 organic peroxides permitted to be carried in portable tanks are listed along with the applicable control and emergency temperatures.

4.2.5.2.3 Non-refrigerated liquefied gases are assigned to portable tank instruction T50. T50 provides the maximum allowable working pressures, the requirements for the openings below liquid level, pressure-relief requirements and maximum filling density requirements for non-refrigerated liquefied gases permitted for carriage in portable tanks.

4.2.5.2.4 Refrigerated liquefied gases are assigned to portable tank instruction T75.

4.2.5.2.5 Determination of the appropriate portable tank instructions

When a specific portable tank instruction is specified in Column (10) of Table A of Chapter 3.2 for a specific dangerous goods entry additional portable tanks which possess higher minimum test pressures, greater shell thicknesses, more stringent bottom opening and pressure-relief device arrangements may be used. The following guidelines apply to determining the appropriate portable tanks which may be used for carriage of particular substances:

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Portable tank instruction specified	Portable tank instructions also permitted
T1	T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22
T2	T4, T5, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22
T3	T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22
T4	T5, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22
T5	T10, T14, T19, T20, T22
T6	T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22
T7	T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22
T8	T9, T10, T13, T14, T19, T20, T21, T22
T9	T10, T13, T14, T19, T20, T21, T22
T10	T14, T19, T20, T22
T11	T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22
T12	T14, T16, T18, T19, T20, T22
T13	T14, T19, T20, T21, T22
T14	T19, T20, T22
T15	T16, T17, T18, T19, T20, T21, T22
T16	T18, T19, T20, T22
T17	T18, T19, T20, T21, T22
T18	T19, T20, T22
T19	T20, T22
T20	T22
T21	T22
T22	None
T23	None

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4.2.5.2.6 *Portable tank instructions*

Portable tank instructions specify the requirements applicable to a portable tank when used for the carriage of specific substances. Portable tank instructions T1 to T22 specify the applicable minimum test pressure, the minimum shell thickness (in mm reference steel), and the pressure-relief and bottom-opening requirements.

T1 - T22		PORTABLE TANK INSTRUCTIONS			T1 - T22
<i>These portable tank instructions apply to liquid and solid substances of Classes 3 to 9. The general provisions of Section 4.2.1 and the requirements of Section 6.7.2 shall be met.</i>					
Portable tank instruction	Minimum test pressure (bar)	Minimum shell thickness (in mm-reference steel) (see 6.7.2.4)	Pressure-relief requirements ^a (see 6.7.2.8)	Bottom opening requirements ^b (see 6.7.2.6)	
T1	1.5	See 6.7.2.4.2	Normal	See 6.7.2.6.2	
T2	1.5	See 6.7.2.4.2	Normal	See 6.7.2.6.3	
T3	2.65	See 6.7.2.4.2	Normal	See 6.7.2.6.2	
T4	2.65	See 6.7.2.4.2	Normal	See 6.7.2.6.3	
T5	2.65	See 6.7.2.4.2	See 6.7.2.8.3	Not allowed	
T6	4	See 6.7.2.4.2	Normal	See 6.7.2.6.2	
T7	4	See 6.7.2.4.2	Normal	See 6.7.2.6.3	
T8	4	See 6.7.2.4.2	Normal	Not allowed	
T9	4	6mm	Normal	Not allowed	
T10	4	6mm	See 6.7.2.8.3	Not allowed	
T11	6	See 6.7.2.4.2	Normal	See 6.7.2.6.3	
T12	6	See 6.7.2.4.2	See 6.7.2.8.3	See 6.7.2.6.3	
T13	6	6mm	Normal	Not allowed	
T14	6	6mm	See 6.7.2.8.3	Not allowed	
T15	10	See 6.7.2.4.2	Normal	See 6.7.2.6.3	
T16	10	See 6.7.2.4.2	See 6.7.2.8.3	See 6.7.2.6.3	
T17	10	6mm	Normal	See 6.7.2.6.3	
T18	10	6mm	See 6.7.2.8.3	See 6.7.2.6.3	
T19	10	6mm	See 6.7.2.8.3	Not allowed	
T20	10	8mm	See 6.7.2.8.3	Not allowed	
T21	10	10mm	Normal	Not allowed	
T22	10	10mm	See 6.7.2.8.3	Not allowed	

^a When the word "Normal" is indicated, all the requirements of 6.7.2.8 apply except for 6.7.2.8.3.

^b When this column indicates "Not allowed", bottom openings are not permitted when the substance to be carried is a liquid (see 6.7.2.6.1). When the substance to be carried is a solid at all temperatures encountered under normal conditions of carriage, bottom openings conforming to the requirements of 6.7.2.6.2 are authorized.

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T23		PORTABLE TANK INSTRUCTION						T23	
<p><i>This portable tank instruction applies to self-reactive substances of Class 4.1 and organic peroxides of Class 5.2. The general provisions of Section 4.2.1 and the requirements of Section 6.7.2 shall be met. The additional provisions specific to self-reactive substances of Class 4.1 and organic peroxides of Class 5.2 in 4.2.1.13 shall also be met.</i></p>									
UN No.	Substance	Minimum test pressure (bar)	Minimum shell thickness (mm-reference steel)	Bottom opening requirements	Pressure-relief requirements	Degree of filling	Control temperature	Emergency temperature	
3109	ORGANIC PEROXIDE, TYPE F, LIQUID tert-Butyl hydroperoxide ^a , not more than 72% with water Cumyl hydroperoxide, not more than 90% in diluent type A Di-tert-butyl peroxide, not more than 32% in diluent type A Isopropyl cumyl hydroperoxide, not more than 72% in diluent type A p-Menthyl hydroperoxide, not more than 72% in diluent type A Pinanyl hydroperoxide, not more than 56% in diluent type A	4	See 6.7.2.4.2	See 6.7.2.6.3	See 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	See 4.2.1.13.13			
3110	ORGANIC PEROXIDE TYPE F, SOLID Dicumyl peroxide ^b	4	See 6.7.2.4.2	See 6.7.2.6.3	See 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	See 4.2.1.13.13			
3119	ORGANIC PEROXIDE, TYPE F, LIQUID, TEMPERATURE CONTROLLED	4	See 6.7.2.4.2	See 6.7.2.6.3	See 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	See 4.2.1.13.13	^c	^c	
	tert-Amyl peroxyneodecanoate, not more than 47% in diluent type A						-10 °C	-5 °C	
	tert-Butyl peroxyacetate, not more than 32% in diluent type B						+30 °C	+35 °C	
	tert-Butyl peroxy-2-ethylhexanoate, not more than 32% in diluent type B						+15 °C	+20 °C	

^a Provided that steps have been taken to achieve the safety equivalence of 65% tert-Butyl hydroperoxide and 35% water.

^b Maximum quantity per portable tank: 2000 kg.

^c As approved by the competent authority.

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T23		PORTABLE TANK INSTRUCTION (cont'd)						T23	
<i>This portable tank instruction applies to self-reactive substances of Class 4.1 and organic peroxides of Class 5.2. The general provisions of Section 4.2.1 and the requirements of Section 6.7.2 shall be met. The additional provisions specific to self-reactive substances of Class 4.1 and organic peroxides of Class 5.2 in 4.2.1.13 shall also be met.</i>									
UN No.	Substance	Minimum test pressure (bar)	Minimum shell thickness (mm-reference steel)	Bottom opening requirements	Pressure-relief requirements	Degree of filling	Control temperature	Emergency temperature	
3119 (Cont'd)	tert-Butyl peroxy-pivalate, not more than 27% in diluent type B						+5 °C	+10 °C	
	tert-Butyl peroxy-3,5,5-trimethylhexanoate, not more than 32% in diluent type B						+35 °C	+40 °C	
	Di-(3,5,5-trimethylhexanoyl) peroxide, not more than 38% in diluent type A or type B						0 °C	+5 °C	
	Peroxyacetic acid, distilled, type F, stabilized ^a						+30 °C	+35 °C	
3120	ORGANIC PEROXIDE, TYPE F, SOLID, TEMPERATURE CONTROLLED	4	See 6.7.2.4.2	See 6.7.2.6.3	See 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	See 4.2.1.13.13	^c	^c	
3229	SELF-REACTIVE LIQUID TYPE F	4	See 6.7.2.4.2	See 6.7.2.6.3	See 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	See 4.2.1.13.13			
3230	SELF-REACTIVE SOLID TYPE F	4	See 6.7.2.4.2	See 6.7.2.6.3	See 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	See 4.2.1.13.13			
3239	SELF-REACTIVE LIQUID TYPE F, TEMPERATURE CONTROLLED	4	See 6.7.2.4.2	See 6.7.2.6.3	See 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	See 4.2.1.13.13	^c	^c	
3240	SELF-REACTIVE SOLID TYPE F, TEMPERATURE CONTROLLED	4	See 6.7.2.4.2	See 6.7.2.6.3	See 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	See 4.2.1.13.13	^c	^c	

^c As approved by the competent authority.^d Formulation derived from distillation of peroxyacetic acid originating from peroxyacetic acid in concentration of not more than 41% with water, total active oxygen (Peroxyacetic acid+H₂O₂) ≤ 9.5%, which fulfils the criteria of the Manual of Tests and Criteria, paragraph 20.4.3 (f).

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T50		PORTABLE TANK INSTRUCTION				T50
<i>This portable tank instruction applies to non-refrigerated liquefied gases and chemicals under pressure (UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505). The general provisions of Section 4.2.2 and the requirements of Section 6.7.3 shall be met.</i>						
UN No.	Non-refrigerated liquefied gases	Max. allowable working pressure (bar): Small; Bare; Sunshield; Insulated; respectively^a	Openings below liquid level	Pressure-relief requirements^b (see 6.7.3.7)	Maximum filling ratio	
1005	Ammonia, anhydrous	29.0 25.7 22.0 19.7	Allowed	See 6.7.3.7.3	0.53	
1009	Bromotrifluoromethane (Refrigerant gas R 13B1)	38.0 34.0 30.0 27.5	Allowed	Normal	1.13	
1010	Butadienes, stabilized	7.5 7.0 7.0 7.0	Allowed	Normal	0.55	
1010	Butadienes and hydrocarbon mixture, stabilized	See MAWP definition in 6.7.3.1	Allowed	Normal	See 4.2.2.7	
1011	Butane	7.0 7.0 7.0 7.0	Allowed	Normal	0.51	
1012	Butylene	8.0 7.0 7.0 7.0	Allowed	Normal	0.53	
1017	Chlorine	19.0 17.0 15.0 13.5	Not Allowed	See 6.7.3.7.3	1.25	
1018	Chlorodifluoromethane (Refrigerant gas R 22)	26.0 24.0 21.0 19.0	Allowed	Normal	1.03	
1020	Chloropentafluoroethane (Refrigerant gas R 115)	23.0 20.0 18.0 16.0	Allowed	Normal	1.06	
1021	1-Chloro-1,2,2,2-tetrafluoroethane (Refrigerant gas R 124)	10.3 9.8 7.9 7.0	Allowed	Normal	1.20	
1027	Cyclopropane	18.0 16.0 14.5 13.0	Allowed	Normal	0.53	

^a "Small" means tanks having a shell with a diameter of 1.5 m or less; "Bare" means tanks having a shell with a diameter of more than 1.5 m without insulation or sun shield (see 6.7.3.2.12); "Sunshield" means tanks having a shell with a diameter of more than 1.5 m with sun shield (see 6.7.3.2.12); "Insulated" means tanks having a shell with a diameter of more than 1.5 m with insulation (see 6.7.3.2.12); (See definition of "Design reference temperature" in 6.7.3.1).

^b The word "Normal" in the pressure relief requirements column indicates that a frangible disc as specified in 6.7.3.7.3 is not required.

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T50 PORTABLE TANK INSTRUCTION (cont'd) T50					
<i>This portable tank instruction applies to non-refrigerated liquefied gases and chemicals under pressure (UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505). The general provisions of Section 4.2.2 and the requirements of Section 6.7.3 shall be met.</i>					
UN No.	Non-refrigerated liquefied gases	Max. allowable working pressure (bar): Small; Bare; Sunshield; Insulated; respectively ^a	Openings below liquid level	Pressure-relief requirements ^b (see 6.7.3.7)	Maximum filling ratio
1028	Dichlorodifluoromethane (Refrigerant gas R 12)	16.0 15.0 13.0 11.5	Allowed	Normal	1.15
1029	Dichlorofluoromethane (Refrigerant gas R 21)	7.0 7.0 7.0 7.0	Allowed	Normal	1.23
1030	1,1-Difluoroethane (Refrigerant gas R 152a)	16.0 14.0 12.4 11.0	Allowed	Normal	0.79
1032	Dimethylamine, anhydrous	7.0 7.0 7.0 7.0	Allowed	Normal	0.59
1033	Dimethyl ether	15.5 13.8 12.0 10.6	Allowed	Normal	0.58
1036	Ethylamine	7.0 7.0 7.0 7.0	Allowed	Normal	0.61
1037	Ethyl chloride	7.0 7.0 7.0 7.0	Allowed	Normal	0.80
1040	Ethylene oxide with nitrogen up to a total pressure of 1MPa (10 bar) at 50 °C	- - - 10.0	Not Allowed	See 6.7.3.7.3	0.78
1041	Ethylene oxide and carbon dioxide mixture with more than 9% but not more than 87% ethylene oxide	See MAWP definition in 6.7.3.1	Allowed	Normal	See 4.2.2.7
1055	Isobutylene	8.1 7.0 7.0 7.0	Allowed	Normal	0.52

^a "Small" means tanks having a shell with a diameter of 1.5 m or less; "Bare" means tanks having a shell with a diameter of more than 1.5 m without insulation or sun shield (see 6.7.3.2.12); "Sunshield" means tanks having a shell with a diameter of more than 1.5 m with sun shield (see 6.7.3.2.12); "Insulated" means tanks having a shell with a diameter of more than 1.5 m with insulation (see 6.7.3.2.12); (See definition of "Design reference temperature" in 6.7.3.1).

^b The word "Normal" in the pressure relief requirements column indicates that a frangible disc as specified in 6.7.3.7.3 is not required.

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T50 PORTABLE TANK INSTRUCTION (cont'd) T50					
<i>This portable tank instruction applies to non-refrigerated liquefied gases and chemicals under pressure (UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505). The general provisions of Section 4.2.2 and the requirements of Section 6.7.3 shall be met.</i>					
UN No.	Non-refrigerated liquefied gases	Max. allowable working pressure (bar): Small; Bare; Sunshield; Insulated respectively ^a	Openings below liquid level	Pressure-relief requirements ^b (see 6.7.3.7)	Maximum filling ratio
1060	Methylacetylene and propadiene mixture, stabilized	28.0 24.5 22.0 20.0	Allowed	Normal	0.43
1061	Methylamine, anhydrous	10.8 9.6 7.8 7.0	Allowed	Normal	0.58
1062	Methyl bromide with not more than 2% chloropicrin	7.0 7.0 7.0 7.0	Not Allowed	See 6.7.3.7.3	1.51
1063	Methyl chloride (Refrigerant gas R 40)	14.5 12.7 11.3 10.0	Allowed	Normal	0.81
1064	Methyl mercaptan	7.0 7.0 7.0 7.0	Not Allowed	See 6.7.3.7.3	0.78
1067	Dinitrogen tetroxide	7.0 7.0 7.0 7.0	Not Allowed	See 6.7.3.7.3	1.30
1075	Petroleum gases, liquefied	See MAWP definition in 6.7.3.1	Allowed	Normal	See 4.2.2.7
1077	Propylene	28.0 24.5 22.0 20.0	Allowed	Normal	0.43
1078	Refrigerant gas, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	Normal	See 4.2.2.7
1079	Sulphur dioxide	11.6 10.3 8.5 7.6	Not Allowed	See 6.7.3.7.3	1.23
1082	Trifluorochloroethylene, stabilized (Refrigerant gas R 1113)	17.0 15.0 13.1 11.6	Not Allowed	See 6.7.3.7.3	1.13

^a "Small" means tanks having a shell with a diameter of 1.5 m or less; "Bare" means tanks having a shell with a diameter of more than 1.5 m without insulation or sun shield (see 6.7.3.2.12); "Sunshield" means tanks having a shell with a diameter of more than 1.5 m with sun shield (see 6.7.3.2.12); "Insulated" means tanks having a shell with a diameter of more than 1.5 m with insulation (see 6.7.3.2.12); (See definition of "Design reference temperature" in 6.7.3.1).

^b The word "Normal" in the pressure relief requirements column indicates that a frangible disc as specified in 6.7.3.7.3 is not required.

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T50		PORTABLE TANK INSTRUCTION (cont'd)				T50
<i>This portable tank instruction applies to non-refrigerated liquefied gases and chemicals under pressure (UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505). The general provisions of Section 4.2.2 and the requirements of Section 6.7.3 shall be met.</i>						
UN No.	Non-refrigerated liquefied gases	Max. allowable working pressure (bar): Small; Bare; Sunshield; Insulated respectively ^a	Openings below liquid level	Pressure-relief requirements ^b (see 6.7.3.7)	Maximum filling ratio	
1083	Trimethylamine, anhydrous	7.0 7.0 7.0 7.0	Allowed	Normal	0.56	
1085	Vinyl bromide, stabilized	7.0 7.0 7.0 7.0	Allowed	Normal	1.37	
1086	Vinyl chloride, stabilized	10.6 9.3 8.0 7.0	Allowed	Normal	0.81	
1087	Vinyl methyl ether, stabilized	7.0 7.0 7.0 7.0	Allowed	Normal	0.67	
1581	Chloropicrin and methyl bromide mixture with more than 2% chloropicrin	7.0 7.0 7.0 7.0	Not Allowed	See 6.7.3.7.3	1.51	
1582	Chloropicrin and methyl chloride mixture	19.2 16.9 15.1 13.1	Not Allowed	See 6.7.3.7.3	0.81	
1858	Hexafluoropropylene (Refrigerant gas R 1216)	19.2 16.9 15.1 13.1	Allowed	Normal	1.11	
1912	Methyl chloride and methylene chloride mixture	15.2 13.0 11.6 10.1	Allowed	Normal	0.81	
1958	1,2-Dichloro-1,1,2,2-tetrafluoroethane (Refrigerant gas R 114)	7.0 7.0 7.0 7.0	Allowed	Normal	1.30	
1965	Hydrocarbon gas, mixture liquefied, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	Normal	See 4.2.2.7	
1969	Isobutane	8.5 7.5 7.0 7.0	Allowed	Normal	0.49	

^a "Small" means tanks having a shell with a diameter of 1.5 m or less; "Bare" means tanks having a shell with a diameter of more than 1.5 m without insulation or sun shield (see 6.7.3.2.12); "Sunshield" means tanks having a shell with a diameter of more than 1.5 m with sun shield (see 6.7.3.2.12); "Insulated" means tanks having a shell with a diameter of more than 1.5 m with insulation (see 6.7.3.2.12); (See definition of "Design reference temperature" in 6.7.3.1).

^b The word "Normal" in the pressure relief requirements column indicates that a frangible disc as specified in 6.7.3.7.3 is not required.

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T50 PORTABLE TANK INSTRUCTION (cont'd) T50					
<i>This portable tank instruction applies to non-refrigerated liquefied gases and chemicals under pressure (UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505). The general provisions of Section 4.2.2 and the requirements of Section 6.7.3 shall be met.</i>					
UN No.	Non-refrigerated liquefied gases	Max. allowable working pressure (bar): Small; Bare; Sunshield; Insulated respectively ^a	Openings below liquid level	Pressure-relief requirements ^b (see 6.7.3.7)	Maximum filling ratio
1973	Chlorodifluoromethane and chloropentafluoroethane mixture with fixed boiling point, with approximately 49% chlorodifluoromethane (Refrigerant gas R 502)	28.3 25.3 22.8 20.3	Allowed	Normal	1.05
1974	Chlorodifluorobromomethane (Refrigerant gas R 12B1)	7.4 7.0 7.0 7.0	Allowed	Normal	1.61
1976	Octafluorocyclobutane (Refrigerant gas RC 318)	8.8 7.8 7.0 7.0	Allowed	Normal	1.34
1978	Propane	22.5 20.4 18.0 16.5	Allowed	Normal	0.42
1983	1-Chloro-2,2,2-trifluoroethane (Refrigerant gas R 133a)	7.0 7.0 7.0 7.0	Allowed	Normal	1.18
2035	1,1,1-Trifluoroethane (Refrigerant gas R 143a)	31.0 27.5 24.2 21.8	Allowed	Normal	0.76
2424	Octafluoropropane (Refrigerant gas R 218)	23.1 20.8 18.6 16.6	Allowed	Normal	1.07
2517	1-Chloro-1,1-difluoroethane (Refrigerant gas R 142b)	8.9 7.8 7.0 7.0	Allowed	Normal	0.99
2602	Dichlorodifluoromethane and 1,1-difluoroethane azeotropic mixture with approximately 74% dichlorodifluoromethane (Refrigerant gas R 500)	20.0 18.0 16.0 14.5	Allowed	Normal	1.01

^a "Small" means tanks having a shell with a diameter of 1.5 m or less; "Bare" means tanks having a shell with a diameter of more than 1.5 m without insulation or sun shield (see 6.7.3.2.12); "Sunshield" means tanks having a shell with a diameter of more than 1.5 m with sun shield (see 6.7.3.2.12); "Insulated" means tanks having a shell with a diameter of more than 1.5 m with insulation (see 6.7.3.2.12); (See definition of "Design reference temperature" in 6.7.3.1).

^b The word "Normal" in the pressure relief requirements column indicates that a frangible disc as specified in 6.7.3.7.3 is not required.

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T50 PORTABLE TANK INSTRUCTION (cont'd) T50					
<i>This portable tank instruction applies to non-refrigerated liquefied gases and chemicals under pressure (UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505). The general provisions of Section 4.2.2 and the requirements of Section 6.7.3 shall be met.</i>					
UN No.	Non-refrigerated liquefied gases	Max. allowable working pressure (bar): Small; Bare; Sunshield; Insulated; respectively ^a	Openings below liquid level	Pressure-relief requirements ^b (see 6.7.3.7)	Maximum filling ratio
3057	Trifluoroacetyl chloride	14.6 12.9 11.3 9.9	Not allowed	See 6.7.3.7.3	1.17
3070	Ethylene oxide and dichlorodifluoromethane mixture with not more than 12.5% ethylene oxide	14.0 12.0 11.0 9.0	Allowed	See 6.7.3.7.3	1.09
3153	Perfluoro (methyl vinyl ether)	14.3 13.4 11.2 10.2	Allowed	Normal	1.14
3159	1,1,1,2-Tetrafluoroethane (Refrigerant gas R 134a)	17.7 15.7 13.8 12.1	Allowed	Normal	1.04
3161	Liquefied gas, flammable, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	Normal	See 4.2.2.7
3163	Liquefied gas, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	Normal	See 4.2.2.7
3220	Pentafluoroethane (Refrigerant gas R 125)	34.4 30.8 27.5 24.5	Allowed	Normal	0.87
3252	Difluoromethane (Refrigerant gas R 32)	43.0 39.0 34.4 30.5	Allowed	Normal	0.78
3296	Heptafluoropropane (Refrigerant gas R 227)	16.0 14.0 12.5 11.0	Allowed	Normal	1.20
3297	Ethylene oxide and chlorotetrafluoroethane mixture, with not more than 8.8% ethylene oxide	8.1 7.0 7.0 7.0	Allowed	Normal	1.16

^a "Small" means tanks having a shell with a diameter of 1.5 m or less; "Bare" means tanks having a shell with a diameter of more than 1.5 m without insulation or sun shield (see 6.7.3.2.12); "Sunshield" means tanks having a shell with a diameter of more than 1.5 m with sun shield (see 6.7.3.2.12); "Insulated" means tanks having a shell with a diameter of more than 1.5 m with insulation (see 6.7.3.2.12); (See definition of "Design reference temperature" in 6.7.3.1).

^b The word "Normal" in the pressure relief requirements column indicates that a frangible disc as specified in 6.7.3.7.3 is not required.

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T50 PORTABLE TANK INSTRUCTION (cont'd) T50					
<i>This portable tank instruction applies to non-refrigerated liquefied gases and chemicals under pressure (UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505). The general provisions of Section 4.2.2 and the requirements of Section 6.7.3 shall be met.</i>					
UN No.	Non-refrigerated liquefied gases	Max. allowable working pressure (bar): Small; Bare; Sunshield; Insulated; respectively ^a	Openings below liquid level	Pressure-relief requirements ^b (see 6.7.3.7)	Maximum filling ratio
3298	Ethylene oxide and pentafluoroethane mixture, with not more than 7.9% ethylene oxide	25.9 23.4 20.9 18.6	Allowed	Normal	1.02
3299	Ethylene oxide and tetrafluoroethane mixture, with not more than 5.6% ethylene oxide	16.7 14.7 12.9 11.2	Allowed	Normal	1.03
3318	Ammonia solution, relative density less than 0.880 at 15 °C in water, with more than 50% ammonia	See MAWP definition in 6.7.3.1	Allowed	See 6.7.3.7.3	See 4.2.2.7
3337	Refrigerant gas R 404A	31.6 28.3 25.3 22.5	Allowed	Normal	0.84
3338	Refrigerant gas R 407A	31.3 28.1 25.1 22.4	Allowed	Normal	0.95
3339	Refrigerant gas R 407B	33.0 29.6 26.5 23.6	Allowed	Normal	0.95
3340	Refrigerant gas R 407C	29.9 26.8 23.9 21.3	Allowed	Normal	0.95
3500	Chemical under pressure, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	See 6.7.3.7.3	TP4 ^c
3501	Chemical under pressure, flammable, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	See 6.7.3.7.3	TP4 ^c
3502	Chemical under pressure, toxic, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	See 6.7.3.7.3	TP4 ^c
3503	Chemical under pressure, corrosive, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	See 6.7.3.7.3	TP4 ^c
3504	Chemical under pressure, flammable, toxic, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	See 6.7.3.7.3	TP4 ^c
3505	Chemical under pressure, flammable, corrosive, n.o.s.	See MAWP definition in 6.7.3.1	Allowed	See 6.7.3.7.3	TP4 ^c

^a "Small" means tanks having a shell with a diameter of 1.5 m or less; "Bare" means tanks having a shell with a diameter of more than 1.5 m without insulation or sun shield (see 6.7.3.2.12); "Sunshield" means tanks having a shell with a diameter of more than 1.5 m with sun shield (see 6.7.3.2.12); "Insulated" means tanks having a shell with a diameter of more than 1.5 m with insulation (see 6.7.3.2.12); (See definition of "Design reference temperature" in 6.7.3.1).

^b The word "Normal" in the pressure relief requirements column indicates that a frangible disc as specified in 6.7.3.7.3 is not required.

^c For UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505, the degree of filling shall be considered instead of the maximum filling ratio.

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4.2.5.3 *Portable tank special provisions*

Portable tank special provisions are assigned to certain substances to indicate provisions which are in addition to or in lieu of those provided by the portable tank instructions or the requirements in Chapter 6.7. Portable tank special provisions are identified by an alpha numeric code beginning with the letters "TP" (tank provision) and are assigned to specific substances in Column (11) of Table A of Chapter 3.2. The following is a list of the portable tank special provisions:

TP1 The degree of filling prescribed in 4.2.1.9.2 shall not be exceeded.

$$\left(\text{Degree of filling} = \frac{97}{1 + \alpha(t_r - t_f)}\right)$$

TP2 The degree of filling prescribed in 4.2.1.9.3 shall not be exceeded.

$$\left(\text{Degree of filling} = \frac{95}{1 + \alpha(t_r - t_f)}\right)$$

TP3 The maximum degree of filling (in %) for solids carried above their melting point and for elevated temperature liquids shall be determined in accordance with 4.2.1.9.5.

$$\left(\text{Degree of filling} = 95 \frac{d_r}{d_f}\right)$$

TP4 The degree of filling shall not exceed 90% or, alternatively, any other value approved by the competent authority (see 4.2.1.16.2).

TP5 The degree of filling prescribed in 4.2.3.6 shall be met.

TP6 To prevent the tank bursting in any event, including fire engulfment, it shall be provided with pressure-relief devices which are adequate in relation to the capacity of the tank and to the nature of the substance carried. The device shall also be compatible with the substance.

TP7 Air shall be eliminated from the vapour space by nitrogen or other means.

TP8 The test pressure may be reduced to 1.5 bar when the flash point of the substances carried is greater than 0 °C.

TP9 A substance under this description shall only be carried in a portable tank under an approval granted by the competent authority.

TP10 A lead lining, not less than 5 mm thick, which shall be tested annually, or another suitable lining material approved by the competent authority is required.

TP12 *(Deleted)*

TP13 *(Reserved)*

TP16 The tank shall be fitted with a special device to prevent under-pressure and excess pressure during normal carriage conditions. This device shall be approved by the competent authority.

Pressure-relief requirements are as indicated in 6.7.2.8.3 to prevent crystallization of the product in the pressure-relief valve.

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- TP17 Only inorganic non-combustible materials shall be used for thermal insulation of the tank.
- TP18 Temperature shall be maintained between 18 °C and 40 °C. Portable tanks containing solidified methacrylic acid shall not be reheated during carriage.
- TP19 The calculated shell thickness shall be increased by 3 mm. Shell thickness shall be verified ultrasonically at intervals midway between periodic hydraulic tests.
- TP20 This substance shall only be carried in insulated tanks under a nitrogen blanket.
- TP21 The shell thickness shall be not less than 8 mm. Tanks shall be hydraulically tested and internally inspected at intervals not exceeding 2.5 years.
- TP22 Lubricant for joints or other devices shall be oxygen compatible.
- TP23 Carriage permitted under special conditions prescribed by the competent authorities.
- TP24 The portable tank may be fitted with a device located under maximum filling conditions in the vapour space of the shell to prevent the build up of excess pressure due to the slow decomposition of the substance carried. This device shall also prevent an unacceptable amount of leakage of liquid in the case of overturning or entry of foreign matter into the tank. This device shall be approved by the competent authority or its authorized body.
- TP25 Sulphur trioxide 99.95% pure and above may be carried in tanks without an inhibitor provided that it is maintained at a temperature equal to or above 32.5 °C.
- TP26 When carried under heated conditions, the heating device shall be fitted outside the shell. For UN 3176 this requirement only applies when the substance reacts dangerously with water.
- TP27 A portable tank having a minimum test pressure of 4 bar may be used if it is shown that a test pressure of 4 bar or less is acceptable according to the test pressure definition in 6.7.2.1.
- TP28 A portable tank having a minimum test pressure of 2.65 bar may be used if it is shown that a test pressure of 2.65 bar or less is acceptable according to the test pressure definition in 6.7.2.1.
- TP29 A portable tank having a minimum test pressure of 1.5 bar may be used if it is shown that a test pressure of 1.5 bar or less is acceptable according to the test pressure definition in 6.7.2.1.
- TP30 This substance shall be carried in insulated tanks.
- TP31 This substance may only be carried in tanks in the solid state.
- TP32 For UN Nos. 0331, 0332 and 3375, portable tanks may be used subject to the following conditions:
- (a) To avoid unnecessary confinement, each portable tank constructed of metal shall be fitted with a pressure-relief device that may be of the reclosing spring-loaded type, a frangible disc or a fusible element. The set to discharge or burst pressure, as applicable, shall not be greater than

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2.65 bar for portable tanks with minimum test pressures greater than 4 bar.

- (b) The suitability for carriage in tanks shall be demonstrated. One method to evaluate this suitability is test 8 (d) in Test Series 8 (see Manual of Tests and Criteria, Part 1, Sub-section 18.7).
- (c) Substances shall not be allowed to remain in the portable tank for any period that could result in caking. Appropriate measures shall be taken to avoid accumulation and packing of substances in the tank (e.g. cleaning, etc).

- TP33 The portable tank instruction assigned for this substance applies to granular and powdered solids and to solids which are filled and discharged at temperatures above their melting point which are cooled and carried as a solid mass. For solids which are carried above their melting point, see 4.2.1.19.
- TP34 Portable tanks need not be subjected to the impact test in 6.7.4.14.1 if the portable tank is marked "NOT FOR RAIL TRANSPORT" on the plate specified in 6.7.4.15.1 and also in letters of at least 10 cm high on both sides of the outer jacket.
- TP35 Portable tank instruction T14 prescribed in ADR applicable up to 31 December 2008 may continue to be applied until 31 December 2014.
- TP36 Fusible elements in the vapour space may be used on portable tanks.
- TP37 Portable tank instruction T14 may continue to be applied until 31 December 2016 except that until that date:
- (a) For UN Nos. 1810, 2474 and 2668, T7 may be applied;
 - (b) For UN No. 2486, T8 may be applied; and
 - (c) For UN No. 1838, T10 may be applied.
- TP38 Portable tank instruction T9 prescribed in ADR applicable up to 31 December 2012 may continue to be applied until 31 December 2018.
- TP39 Portable tank instruction T4 prescribed in ADR applicable up to 31 December 2012 may continue to be applied until 31 December 2018.
- TP40 Portable tanks shall not be carried when connected with spray application equipment.

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CHAPTER 4.3**USE OF FIXED TANKS (TANK-VEHICLES), DEMOUNTABLE TANKS, TANK-CONTAINERS AND TANK SWAP BODIES WITH SHELLS MADE OF METALLIC MATERIALS, AND BATTERY-VEHICLES AND MULTIPLE-ELEMENT GAS CONTAINERS (MEGCs)**

NOTE: *For portable tanks and UN multiple-element gas containers (MEGCs) see Chapter 4.2; for fibre-reinforced plastics tanks, see Chapter 4.4; for vacuum operated waste tanks, see Chapter 4.5.*

4.3.1 Scope

4.3.1.1 Provisions which take up the whole width of the page apply both to fixed tanks (tank-vehicles), demountable tanks and battery-vehicles, and to tank-containers, tank swap bodies and MEGCs. Provisions contained in a single column apply only to:

- fixed tanks (tank-vehicles), demountable tanks and battery-vehicles (left-hand column);
- tank-containers, tank swap bodies and MEGCs (right-hand column).

4.3.1.2 These provisions apply to:

fixed tanks (tank-vehicles), demountable tanks and battery-vehicles	tank-containers, tank swap bodies and MEGCs
---	---

used for the carriage of gaseous, liquid, powdery or granular substances.

4.3.1.3 Section 4.3.2 lists the provisions applicable to fixed tanks (tank-vehicles), demountable tanks, tank-containers and tank swap bodies, intended for the carriage of substances of all classes, and to battery-vehicles and MEGCs intended for the carriage of gases of Class 2. Sections 4.3.3 and 4.3.4 contain special provisions adding to or amending the provisions of Section 4.3.2.

4.3.1.4 For requirements concerning the construction, equipment, type approval, tests and marking, see Chapter 6.8.

4.3.1.5 For transitional measures concerning the application of this Chapter, see:

1.6.3.	1.6.4.
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4.3.2 Provisions applicable to all classes**4.3.2.1 Use**

4.3.2.1.1 A substance subject to ADR may be carried in fixed tanks (tank-vehicles), demountable tanks, battery-vehicles, tank-containers, tank swap bodies and MEGCs only when provision is made for a tank code according to 4.3.3.1.1 and 4.3.4.1.1 in Column (12) of Table A in Chapter 3.2.

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- 4.3.2.1.2 The required type of tank, battery-vehicle and MEGC is given in code form in Column (12) of Table A in Chapter 3.2. The explanations for reading the four parts of the code are given in 4.3.3.1.1 (when the substance to be carried belongs to Class 2) and in 4.3.4.1.1 (when the substance to be carried belongs to Classes 1 and 3 to 9)¹.
- 4.3.2.1.3 The required type according to 4.3.2.1.2 corresponds to the least stringent construction requirements which are acceptable for the dangerous substance in question unless otherwise prescribed in this Chapter or in Chapter 6.8. It is possible to use tanks corresponding to codes prescribing a higher minimum calculation pressure, or more stringent requirements for filling or discharge openings or for safety valves/devices (see 4.3.3.1.1 for Class 2 and 4.3.4.1.1 for Classes 3 to 9).
- 4.3.2.1.4 For certain substances, tanks, battery-vehicles or MEGCs are subject to additional provisions which are included as special provisions in Column (13) of Table A in Chapter 3.2.
- 4.3.2.1.5 Tanks, battery-vehicles and MEGCs shall not be loaded with any dangerous substances other than those for the carriage of which they have been approved according to 6.8.2.3.1 and which, in contact with the materials of the shell, gaskets, equipment and protective linings, are not liable to react dangerously with them (see "dangerous reaction" in 1.2.1), to form dangerous products or appreciably to weaken these materials².
- 4.3.2.1.6 Foodstuffs shall not be carried in tanks used for dangerous substances unless the necessary steps have been taken to prevent any harm to public health.
- 4.3.2.1.7 The tank record shall be retained by the owner or the operator who shall be able to provide this documentation at the request of the competent authority. The tank record shall be maintained throughout the life of the tank and retained for 15 months after the tank is taken out of service.

Should a change of owner or operator occur during the life of the tank the tank record shall be transferred to the new owner or operator.

Copies of the tank record or all necessary documents shall be made available to the expert for tests, inspections and checks on tanks in accordance with 6.8.2.4.5 or 6.8.3.4.16, on the occasion of periodic inspections or exceptional checks.

4.3.2.2 *Degree of filling*

4.3.2.2.1 The following degrees of filling shall not be exceeded in tanks intended for the carriage of liquids at ambient temperatures:

- (a) for flammable substances without additional risks (e.g. toxicity or corrosivity), in tanks with a breather device or with safety valves (even where preceded by a bursting disc):

$$\text{Degree of filling} = \frac{100}{1 + \alpha (50 - t_F)} \% \text{ of capacity}$$

¹ An exception is made for tanks intended for the carriage of substances of classes 1, 5.2 or 7 (see 4.3.4.1.3).

² It may be necessary to consult the manufacturer of the substance and the competent authority for guidance on the compatibility of the substance with the materials of the tank, battery-vehicle or MEGC.

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- (b) for toxic or corrosive substances (whether flammable or not) in tanks with a breather device or with safety valves (even where preceded by a bursting disc):

$$\text{Degree of filling} = \frac{98}{1 + \alpha (50 - t_F)} \% \text{ of capacity}$$

- (c) for flammable substances and for slightly toxic or corrosive substances (whether flammable or not) in hermetically closed tanks without a safety device:

$$\text{Degree of filling} = \frac{97}{1 + \alpha (50 - t_F)} \% \text{ of capacity}$$

- (d) for highly toxic, toxic, highly corrosive or corrosive substances (whether flammable or not) in hermetically closed tanks without a safety device:

$$\text{Degree of filling} = \frac{95}{1 + \alpha (50 - t_F)} \% \text{ of capacity}$$

4.3.2.2.2 In these formulae, α is the mean coefficient of cubical expansion of the liquid between 15 °C and 50 °C, i.e. for a maximum variation in temperature of 35 °C.

α is calculated by the formula:

$$\alpha = \frac{d_{15} - d_{50}}{35d_{50}}$$

where d_{15} and d_{50} are the relative densities of the liquid at 15 °C and 50 °C respectively. t_F is the mean temperature of the liquid during filling.

4.3.2.2.3 The provisions of 4.3.2.2.1 (a) to (d) above shall not apply to tanks whose contents are, by means of a heating device, maintained at a temperature above 50 °C during carriage. In this case the degree of filling at the outset shall be such, and the temperature so regulated, that the tank is not full to more than 95% of its capacity and that the filling temperature is not exceeded, at any time during carriage.

4.3.2.2.4 Shells intended for the carriage of substances in the liquid state or liquefied gases or refrigerated liquefied gases, which are not divided by partitions or surge plates into sections of not more than 7 500 litres capacity, shall be filled to not less than 80% or not more than 20% of their capacity.

This provision is not applicable to:

- liquids with a kinematic viscosity at 20 °C of at least 2 680 mm²/s;
- molten substances with a kinematic viscosity at the temperature of filling of at least 2 680 mm²/s;
- UN 1963 HELIUM, REFRIGERATED, LIQUID and UN 1966 HYDROGEN, REFRIGERATED, LIQUID.

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4.3.2.3 Operation

4.3.2.3.1 The thickness of the walls of the shell shall not, throughout its use, fall below the minimum figure prescribed in:

6.8.2.1.17 to 6.8.2.1.21.

| 6.8.2.1.17 to 6.8.1.20.

4.3.2.3.2

During carriage tank-containers/MEGCs shall be loaded on the carrying vehicle in such a way as to be adequately protected by the fittings of the carrying vehicle or of the tank-container/MEGC itself against lateral and longitudinal impact and against overturning³. If the tank-containers/MEGCs, including the service equipment, are so constructed as to withstand impact or overturning they need not be protected in this way.

4.3.2.3.3 During filling and discharge of tanks, battery-vehicles and MEGCs, appropriate measures shall be taken to prevent the release of dangerous quantities of gases and vapours. Tanks, battery-vehicles and MEGCs shall be closed so that the contents cannot spill out uncontrolled. The openings of bottom-discharge tanks shall be closed by means of screw-threaded plugs, blank flanges or other equally effective devices. After filling, the filler shall ensure that all the closures of the tanks, battery-vehicles and MEGCs are in the closed position and there is no leakage. This also applies to the upper part of the dip tube.

4.3.2.3.4 Where several closure systems are fitted in series, that nearest to the substance being carried shall be closed first.

4.3.2.3.5 No dangerous residue of the filling substance shall adhere to the outside of the tank during carriage.

4.3.2.3.6 Substances which may react dangerously with each other shall not be carried in adjoining compartments of tanks.

Substances which may react dangerously with each other may be carried in adjoining compartments of tanks, when these compartments are separated by a partition with a wall thickness equal to or greater than that of the tank itself. They may also be carried separated by an empty space or an empty compartment between loaded compartments.

4.3.2.4 Empty tanks, battery-vehicles and MEGCs, uncleaned

NOTE: For empty tanks, battery-vehicles and MEGCs, uncleaned, special provisions TU1, TU2, TU4, TU16 and TU35 of 4.3.5 may apply.

4.3.2.4.1 No dangerous residue of the filling substance shall adhere to the outside of the tank during carriage.

³ Examples of protection of shells:

- protection against lateral impact may, for example, consist of longitudinal bars protecting the shell on both sides at the level of the median line;
- protection against overturning may, for example, consist of reinforcing rings or bars fixed transversally in relation to the frame;
- protection against rear impact, may, for example, consist of a bumper or frame.

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4.3.2.4.2 To be accepted for carriage, empty tanks, battery-vehicles and MEGCs, uncleaned, shall be closed in the same manner and be leakproof to the same degree as if they were full.

4.3.2.4.3 Where empty tanks, battery-vehicles and MEGCs, uncleaned, are not closed in the same manner and are not leakproof to the same degree as if they were full and where the provisions of ADR cannot be complied with, they shall be carried, with due regard to adequate safety, to the nearest suitable place where cleaning or repair can be carried out. Carriage is adequately safe if suitable measures have been taken to ensure equivalent safety commensurate with the provisions of ADR and to prevent the uncontrolled release of the dangerous goods.

4.3.2.4.4 Empty fixed tanks (tank-vehicles), demountable tanks, battery-vehicles, tank-containers, tank swap bodies and MEGCs, uncleaned, may also be carried after the expiry of the periods established in 6.8.2.4.2 and 6.8.2.4.3 for undergoing the inspection.

4.3.3 Special provisions applicable to Class 2

4.3.3.1 Coding and hierarchy of tanks

4.3.3.1.1 Coding of tanks, battery-vehicles and MEGCs

The four parts of the codes (tank codes) given in Column (12) of Table A in Chapter 3.2 have the following meanings:

Part	Description	Tank Code
1	Types of tank, battery-vehicle or MEGC	C = tank, battery-vehicle or MEGC for compressed gases; P = tank, battery-vehicle or MEGC for liquefied gases or dissolved gases; R = tank for refrigerated liquefied gases.
2	Calculation pressure	X = value of the minimum relevant test pressure according to the table in 4.3.3.2.5; or 22 = minimum calculation pressure in bar.
3	Openings (see 6.8.2.2 and 6.8.3.2)	B = tank with bottom filling or discharge openings with 3 closures; or battery-vehicle or MEGC with openings below the surface of the liquid or for compressed gases; C = tank with top filling or discharge openings with 3 closures with only cleaning openings below the surface of the liquid; D = tank with top filling or discharge openings with 3 closures; or battery-vehicle or MEGC with no openings below the surface of the liquid.
4	Safety valves/devices	N = tank, battery-vehicle or MEGC with safety valve according to 6.8.3.2.9 or 6.8.3.2.10 which is not hermetically closed; H = hermetically closed tank, battery-vehicle or MEGC (see 1.2.1);

NOTE 1: The special provision TU17 indicated in Column (13) of Table A in Chapter 3.2 for certain gases means that the gas may only be carried in a battery-vehicle or MEGC the elements of which are composed of receptacles.

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NOTE 2: The special provision TU40 indicated in Column (13) of Table A in Chapter 3.2 for certain gases means that the gas may only be carried in a battery-vehicle or MEGC, the elements of which are composed of seamless receptacles.

NOTE 3: The pressures indicated on the tank itself or on the panel shall be not less than the value of "X" or the minimum calculation pressure.

4.3.3.1.2 Hierarchy of tanks

Tank code	Other tank code(s) permitted for the substances under this code
C*BN	C#BN, C#CN, C#DN, C#BH, C#CH, C#DH
C*BH	C#BH, C#CH, C#DH
C*CN	C#CN, C#DN, C#CH, C#DH
C*CH	C#CH, C#DH
C*DN	C#DN, C#DH
C*DH	C#DH
P*BN	P#BN, P#CN, P#DN, P#BH, P#CH, P#DH
P*BH	P#BH, P#CH, P#DH
P*CN	P#CN, P#DN, P#CH, P#DH
P*CH	P#CH, P#DH
P*DN	P#DN, P#DH
P*DH	P#DH
R*BN	R#BN, R#CN, R#DN
R*CN	R#CN, R#DN
R*DN	R#DN

The figure represented by "#" shall be equal to or greater than the figure represented by "*".

NOTE: This hierarchy does not take any special provisions into account (see 4.3.5 and 6.8.4) for each entry.

4.3.3.2 Filling conditions and test pressures

4.3.3.2.1 The test pressure for tanks intended for the carriage of compressed gases shall be at least 1.5 times the working pressure as defined in 1.2.1 for pressure receptacles.

4.3.3.2.2 The test pressure for tanks intended for the carriage of:

- high pressure liquefied gases; and
- dissolved gases

shall be such that, when the shell is filled to the maximum filling ratio, the pressure reached in the shell by the substance at 55 °C for tanks with thermal insulation or 65 °C for tanks without thermal insulation does not exceed the test pressure.

4.3.3.2.3 The test pressure for tanks intended for the carriage of low pressure liquefied gases will be:

- (a) If the tank is equipped with thermal insulation, at least equal to the vapour pressure, reduced by 0.1 MPa (1 bar) of the liquid at 60 °C, but not less than 1 MPa (10 bar);
- (b) If the tank is not equipped with thermal insulation, at least equal to the vapour pressure, reduced by 0.1 MPa (1 bar), of the liquid at 65 °C, but not less than 1 MPa (10 bar).

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The maximum permissible mass of contents per litre of capacity is calculated as follows:

Maximum permissible mass of contents per litre of capacity = 0.95 × density of the liquid phase at 50 °C (in kg/l)

Moreover the vapour phase shall not disappear below 60 °C.

If the shells are not more than 1.5 m in diameter, the values of the test pressure and maximum filling ratio conforming to packing instruction P200 in 4.1.4.1 shall be applicable.

4.3.3.2.4 The test pressure for tanks intended for the carriage of refrigerated liquefied gases shall be not less than 1.3 times the maximum allowable working pressure and indicated on the tank but not less than 300 kPa (3 bar) (gauge pressure); for tanks with vacuum insulation the test pressure shall be not less than 1.3 times the maximum allowable working pressure increased by 100 kPa (1 bar).

4.3.3.2.5 *Table of gases and gas mixtures which may be carried in fixed tanks (tank-vehicles), battery-vehicles, demountable tanks, tank-containers or MEGCs indicating the minimum test pressure for tanks and as far as applicable the filling ratio*

In the case of gases and gas mixtures classified under n.o.s. entries, the values of the test pressure and the filling ratio shall be prescribed by the expert approved by the competent authority.

When tanks for compressed or high pressure liquefied gases have been subjected to a test pressure lower than shown in the table, and the tanks are fitted with thermal insulation, a lower maximum load may be prescribed by the expert approved by the competent authority, provided that the pressure reached in the tank by the substance at 55 °C does not exceed the test pressure stamped on the tank.

UN No.	Name	Classification code	Minimum test pressure for tanks				Maximum permissible mass of contents per litre of capacity
			With thermal insulation		Without thermal insulation		
			MPa	bar	MPa	bar	kg
1001	Acetylene, dissolved	4 F	only in battery-vehicles and MEGCs composed of receptacles				
1002	Air, compressed	1 A	see 4.3.3.2.1				
1003	Air, refrigerated liquid	3 O	see 4.3.3.2.4				
1005	Ammonia, anhydrous	2 TC	2.6	26	2.9	29	0.53
1006	Argon, compressed	1 A	see 4.3.3.2.1				
1008	Boron trifluoride	2 TC	22.5	225	22.5	225	0.715
			30	300	30	300	0.86
1009	Bromotrifluoromethane (Refrigerant gas R13B1)	2 A	12	120			1.50
					4.2	42	1.13
					12	120	1.44
					25	250	1.60
1010	BUTADIENES, STABILIZED (1,2-butadiene) or	2 F	1	10	1	10	0.59
1010	BUTADIENES, STABILIZED (1,3-butadiene) or	2 F	1	10	1	10	0.55
1010	BUTADIENES AND HYDROCARBON, MIXTURE, STABILIZED	2 F	1	10	1	10	0.50
1011	Butane	2 F	1	10	1	10	0.51
1012	1-butylene or	2 F	1	10	1	10	0.53
1012	trans-2-butylene or	2 F	1	10	1	10	0.54
1012	cis-2-butylene or	2 F	1	10	1	10	0.55
1012	butylenes mixture	2 F	1	10	1	10	0.50
1013	Carbon dioxide	2 A	19	190			0.73

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UN No.	Name	Classification code	Minimum test pressure for tanks				Maximum permissible mass of contents per litre of capacity
			With thermal insulation		Without thermal insulation		
			MPa	bar	MPa	bar	
			22.5	225	19	190	
				25	250	0.75	
1016	Carbon monoxide, compressed	1 TF	see 4.3.3.2.1				
1017	Chlorine	2 TOC	1.7	17	1.9	19	1.25
1018	Chlorodifluoromethane (Refrigerant gas R22)	2 A	2.4	24	2.6	26	1.03
1020	Chloropentafluoroethane (Refrigerant gas R115)	2 A	2	20	2.3	23	1.08
1021	1-chloro-1,2,2,2- tetrafluoroethane (Refrigerant gas R124)	2 A	1	10	1.1	11	1.2
1022	Chlorotrifluoromethane (Refrigerant gas R13)	2 A	12	120			0.96
			22.5	225			1.12
					10	100	0.83
					12	120	0.90
					19	190	1.04
				25	250	1.10	
1023	Coal gas, compressed	TF	see 4.3.3.2.1				
1026	Cyanogen	2 TF	10	100	10	100	0.70
1027	Cyclopropane	2 F	1.6	16	1.8	18	0.53
1028	Dichlorodifluoromethane (Refrigerant gas R12)	2 A	1.5	15	1.6	16	1.15
1029	Dichlorofluoromethane (Refrigerant gas R21)	2 A	1	10	1	10	1.23
1030	1,1-difluoroethane (Refrigerant gas R152a)	2 F	1.4	14	1.6	16	0.79
1032	Dimethylamine, anhydrous	2 F	1	10	1	10	0.59
1033	Dimethyl ether	2 F	1.4	14	1.6	16	0.58
1035	Ethane	2 F	12	120			0.32
					9.5	95	0.25
					12	120	0.29
					30	300	0.39
1036	Ethylamine	2 F	1	10	1	10	0.61
1037	Ethyl chloride	2 F	1	10	1	10	0.8
1038	Ethylene, refrigerated liquid	3 F	see 4.3.3.2.4				
1039	Ethyl methyl ether	2 F	1	10	1	10	0.64
1040	Ethylene oxide with nitrogen up to a total pressure of 1MPa (10 bar) at 50 °C	2 TF	1.5	15	1.5	15	0.78
1041	Ethylene oxide and carbon dioxide mixture, with more than 9% but not more than 87% ethylene oxide	2 F	2.4	24	2.6	26	0.73
1046	Helium, compressed	1 A	see 4.3.3.2.1				
1048	Hydrogen bromide, anhydrous	2 TC	5	50	5.5	55	1.54
1049	Hydrogen, compressed	1 F	see 4.3.3.2.1				
1050	Hydrogen chloride, anhydrous	2 TC	12	120			0.69
					10	100	0.30
					12	120	0.56
					15	150	0.67
					20	200	0.74
1053	Hydrogen sulphide	2 TF	4.5	45	5	50	0.67
1055	Isobutylene	2 F	1	10	1	10	0.52
1056	Krypton, compressed	1 A	see 4.3.3.2.1				
1058	Liquefied gases, non flammable, charged with nitrogen, carbon dioxide or air	2 A	1.5 × filling pressure see 4.3.3.2.2 or 4.3.3.2.3				

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UN No.	Name	Classification code	Minimum test pressure for tanks				Maximum permissible mass of contents per litre of capacity kg
			With thermal insulation		Without thermal insulation		
			MPa	bar	MPa	bar	
1060	Methylacetylene and propadiene mixture, stabilized:	2 F	see 4.3.3.2.2 or 4.3.3.2.3				
	mixture P1	2 F	2.5	25	2.8	28	0.49
	mixture P2	2 F	2.2	22	2.3	23	0.47
	propadiene with 1% to 4% methylacetylene	2 F	2.2	22	2.2	22	0.50
1061	Methylamine, anhydrous	2 F	1	10	1.1	11	0.58
1062	Methyl bromide with not more than 2% chloropicrin	2 T	1	10	1	10	1.51
1063	Methyl chloride (Refrigerant gas R40)	2 F	1.3	13	1.5	15	0.81
1064	Methyl mercaptan	2 TF	1	10	1	10	0.78
1065	Neon, compressed	1 A	see 4.3.3.2.1				
1066	Nitrogen, compressed	1 A	see 4.3.3.2.1				
1067	Dinitrogen tetroxide (nitrogen dioxide)	2 TOC	only in battery-vehicles and MEGCs composed of receptacles				
1070	Nitrous oxide	2 O	22.5	225			0.78
					18	180	0.68
					22.5	225	0.74
					25	250	0.75
1071	Oil gas, compressed	1 TF	see 4.3.3.2.1				
1072	Oxygen, compressed	1 O	see 4.3.3.2.1				
1073	Oxygen, refrigerated liquid	3 O	see 4.3.3.2.4				
1075	Petroleum gases, liquefied	2 F	See 4.3.3.2.2 or 4.3.3.2.3				
1076	Phosgene	2 TC	only in battery-vehicles and MEGCs composed of receptacles				
1081	Tetrafluoroethylene, stabilized	2 F	only in battery-vehicles and MEGCs composed of seamless receptacles				
1077	Propylene	2 F	2.5	25	2.7	27	0.43
1078	Refrigerant gases, n.o.s. such as:	2 A					
	mixture F1	2 A	1	10	1.1	11	1.23
	mixture F2	2 A	1.5	15	1.6	16	1.15
	mixture F3	2 A	2.4	24	2.7	27	1.03
	other mixtures	2 A	see 4.3.3.2.2 or 4.3.3.2.3				
1079	Sulphur dioxide	2 TC	1	10	1.2	12	1.23
1080	Sulphur hexafluoride	2 A	12	120			1.34
					7	70	1.04
					14	140	1.33
					16	160	1.37
1082	Trifluorochloroethylene, stabilized	2 TF	1.5	15	1.7	17	1.13
1083	Trimethylamine, anhydrous	2 F	1	10	1	10	0.56
1085	Vinyl bromide, stabilized	2 F	1	10	1	10	1.37
1086	Vinyl chloride, stabilized	2 F	1	10	1.1	11	0.81
1087	Vinyl methyl ether, stabilized	2 F	1	10	1	10	0.67
1581	Chloropicrin and methyl bromide mixture with more than 2% chloropicrin	2 T	1	10	1	10	1.51
1582	Chloropicrin and methyl chloride mixture	2 T	1.3	13	1.5	15	0.81
1612	Hexaethyl tetraphosphate and compressed gas mixture	1 T	see 4.3.3.2.1				
1749	Chlorine trifluoride	2 TOC	3	30	3	30	1.40
1858	Hexafluoropropylene (Refrigerant gas R 1216)	2A	1.7	17	1.9	19	1.11
1859	Silicon tetrafluoride	2 TC	20	200	20	200	0.74
			30	300	30	300	1.10
1860	Vinyl fluoride, stabilized	2 F	12	120			0.58

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UN No.	Name	Classification code	Minimum test pressure for tanks				Maximum permissible mass of contents per litre of capacity kg
			With thermal insulation		Without thermal insulation		
			MPa	bar	MPa	bar	
			22.5	225			0.65
					25	250	0.64
1912	Methyl chloride and methylene chloride mixture	2 F	1.3	13	1.5	15	0.81
1913	Neon, refrigerated liquid	3 A	see 4.3.3.2.4				
1951	Argon, refrigerated liquid	3 A	see 4.3.3.2.4				
1952	Ethylene oxide and carbon dioxide mixture, with not more than 9% ethylene oxide	2 A	19	190	19	190	0.66
			25	250	25	250	0.75
1953	Compressed gas, toxic, flammable, n.o.s. ^a	1 TF	see 4.3.3.2.1 or 4.3.3.2.2				
1954	Compressed gas, flammable n.o.s.	1 F	see 4.3.3.2.1 or 4.3.3.2.2				
1955	Compressed gas, toxic, n.o.s. ^a	1 T	see 4.3.3.2.1 or 4.3.3.2.2				
1956	Compressed gas, n.o.s.	1 A	see 4.3.3.2.1 or 4.3.3.2.2				
1957	Deuterium, compressed	1 F	see 4.3.3.2.1				
1958	1,2-dichloro-1,1,2,2-tetrafluoroethane (Refrigerant gas R114)	2 A	1	10	1	10	1.3
1959	1,1-difluoroethylene (Refrigerant gas R1132a)	2 F	12	120			0.66
			22.5	225			0.78
					25	250	0.77
1961	Ethane, refrigerated liquid	3 F	see 4.3.3.2.4				
1962	Ethylene	2 F	12	120			0.25
			22.5	225			0.36
					22.5	225	0.34
					30	300	0.37
1963	Helium, refrigerated liquid	3 A	see 4.3.3.2.4				
1964	Hydrocarbon gas mixture, compressed, n.o.s.	1 F	see 4.3.3.2.1 or 4.3.3.2.2				
1965	Hydrocarbon gas mixture, liquefied, n.o.s.:	2 F					
	Mixture A	2 F	1	10	1	10	0.50
	Mixture A01	2 F	1.2	12	1.4	14	0.49
	Mixture A02	2 F	1.2	12	1.4	14	0.48
	Mixture A0	2 F	1.2	12	1.4	14	0.47
	Mixture A1	2 F	1.6	16	1.8	18	0.46
	Mixture B1	2 F	2	20	2.3	23	0.45
	Mixture B2	2 F	2	20	2.3	23	0.44
	Mixture B	2 F	2	20	2.3	23	0.43
	Mixture C	2 F	2.5	25	2.7	27	0.42
	Other mixtures	2 F	see 4.3.3.2.2 or 4.3.3.2.3				
1966	Hydrogen, refrigerated liquid	3 F	see 4.3.3.2.4				
1967	Insecticide gas, toxic, n.o.s. ^a	2 T	see 4.3.3.2.2 or 4.3.3.2.3				
1968	Insecticide gas, n.o.s.	2 A	see 4.3.3.2.2 or 4.3.3.2.3				
1969	Isobutane	2 F	1	10	1	10	0.49
1970	Krypton, refrigerated liquid	3 A	see 4.3.3.2.4				
1971	Methane, compressed or natural gas, compressed with high methane content	1 F	see 4.3.3.2.1				
1972	Methane, refrigerated liquid or natural gas, refrigerated liquid with high methane content	3 F	see 4.3.3.2.4				
1973	Chlorodifluoromethane and chloropentafluoroethane mixture with fixed boiling point, with approximately 49% chlorodifluoromethane (Refrigerant gas R502)	2 A	2.5	25	2.8	28	1.05

^a Allowed if LC₅₀ equal to or greater than 200 ppm.

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UN No.	Name	Classification code	Minimum test pressure for tanks				Maximum permissible mass of contents per litre of capacity kg	
			With thermal insulation		Without thermal insulation			
			MPa	bar	MPa	bar		
1974	Chlorodifluorobromomethane (Refrigerant gas R12B1)	2 A	1	10	1	10	1.61	
1976	Octafluorocyclobutane (Refrigerant gas RC318)	2 A	1	10	1	10	1.34	
1977	Nitrogen, refrigerated liquid	3 A	see 4.3.3.2.4					
1978	Propane	2 F	2.1	21	2.3	23	0.42	
1982	Tetrafluoromethane (Refrigerant gas R14)	2 A	20	200	20	200	0.62	
			30	300	30	300	0.94	
1983	1-chloro-2,2,2-trifluoroethane (Refrigerant gas R133a)	2 A	1	10	1	10	1.18	
1984	Trifluoromethane (Refrigerant gas R23)	2 A	19	190			0.92	
			25	250			0.99	
					19	190		0.87
					25	250		0.95
2034	Hydrogen and methane mixture, compressed	1 F	see 4.3.3.2.1					
2035	1,1,1-trifluoroethane (Refrigerant gas R143a)	2 F	2.8	28	3.2	32	0.79	
2036	Xenon	2 A	12	120			1.30	
					13	130	1.24	
2044	2,2-dimethylpropane	2 F	1	10	1	10	0.53	
2073	Ammonia solutions, relative density less than 0.880 at 15 °C in water:	4 A						
	with more than 35% and not more than 40% ammonia	4 A	1	10	1	10	0.80	
	with more than 40% and not more than 50% ammonia	4 A	1.2	12	1.2	12	0.77	
2187	Carbon dioxide, refrigerated liquid	3 A	see 4.3.3.2.4					
2189	Dichlorosilane	2 TFC	1	10	1	10	0.90	
2191	Sulfuryl fluoride	2 T	5	50	5	50	1.1	
2193	Hexafluoroethane (Refrigerant gas R116)	2 A	16	160			1.28	
			20	200			1.34	
					20	200	1.10	
2197	Hydrogen iodide, anhydrous	2 TC	1.9	19	2.1	21	2.25	
2200	Propadiene, stabilized	2 F	1.8	18	2.0	20	0.50	
2201	Nitrous oxide, refrigerated liquid	3 O	see 4.3.3.2.4					
2203	Silane ^b	2 F	22.5	225	22.5	225	0.32	
			25	250	25	250	0.36	
2204	Carbonyl sulphide	2 TF	2.7	27	3.0	30	0.84	
2417	Carbonyl fluoride	2 TC	20	200	20	200	0.47	
			30	300	30	300	0.70	
2419	Bromotrifluoroethylene	2 F	1	10	1	10	1.19	
2420	Hexafluoroacetone	2 TC	1.6	16	1.8	18	1.08	
2422	Octafluorobut-2-ene (Refrigerant gas R1318)	2 A	1	10	1	10	1.34	
2424	Octafluoropropane (Refrigerant gas R218)	2 A	2.1	21	2.3	23	1.07	
2451	Nitrogen trifluoride	2 O	20	200	20	200	0.50	
			30	300	30	300	0.75	
2452	Ethylacetylene, stabilized	2 F	1	10	1	10	0.57	
2453	Ethyl fluoride (Refrigerant gas R161)	2 F	2.1	21	2.5	25	0.57	
2454	Methyl fluoride (Refrigerant gas R41)	2 F	30	300	30	300	0.36	

^b Considered as pyrophoric.

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UN No.	Name	Classification code	Minimum test pressure for tanks				Maximum permissible mass of contents per litre of capacity kg
			With thermal insulation		Without thermal insulation		
			MPa	bar	MPa	bar	
2517	1-chloro-1,1-difluoroethane (Refrigerant gas R142b)	2 F	1	10	1	10	0.99
2591	Xenon, refrigerated liquid	3 A	see 4.3.3.2.4				
2599	Chlorotrifluoromethane and trifluoromethane, azeotropic mixture with approximately 60% chlorotrifluoromethane (Refrigerant gas R503)	2 A	3.1	31	3.1	31	0.11
			4.2	42			0.21
			10	100			0.76
					4.2	42	0.20
				10	100	0.66	
2601	Cyclobutane	2 F	1	10	1	10	0.63
2602	Dichlorodifluoromethane and difluoro-1,1 ethane, azeotropic mixture with approximately 74% dichlorodifluoromethane (Refrigerant gas R500)	2 A	1.8	18	2	20	1.01
2901	Bromine chloride	2 TOC	1	10	1	10	1.50
3057	Trifluoroacetyl chloride	2 TC	1.3	13	1.5	15	1.17
3070	Ethylene oxide and dichlorodifluoromethane mixture with not more than 12.5% ethylene oxide	2 A	1.5	15	1.6	16	1.09
3083	Perchloryl fluoride	2 TO	2.7	27	3.0	30	1.21
3136	Trifluoromethane, refrigerated liquid	3 A	See 4.3.3.2.4				
3138	Ethylene, acetylene propylene in mixture, refrigerated liquid, containing at least 71.5% ethylene with not more than 22.5% acetylene and not more than 6% propylene	3 F	see 4.3.3.2.4				
3153	Perfluoro(methyl vinyl ether)	2 F	1.4	14	1.5	15	1.14
3154	Perfluoro(ethyl vinyl ether)	2 F	1	10	1	10	0.98
3156	Compressed gas, oxidizing, n.o.s.	1 O	see 4.3.3.2.1 or 4.3.3.2.2				
3157	Liquefied gas, oxidizing, n.o.s.	2 O	see 4.3.3.2.2 or 4.3.3.2.3				
3158	Gas, refrigerated liquid, n.o.s.	3 A	see 4.3.3.2.4				
3159	1,1,1,2-tetrafluoroethane (Refrigerant gas R134a)	2 A	1.6	16	1.8	18	1.04
3160	Liquefied gas, toxic, flammable, n.o.s. ^a	2 TF	see 4.3.3.2.2 or 4.3.3.2.3				
3161	Liquefied gas, flammable, n.o.s.	2 F	see 4.3.3.2.2 or 4.3.3.2.3				
3162	Liquefied gas, toxic, n.o.s. ^a	2 T	see 4.3.3.2.2 or 4.3.3.2.3				
3163	Liquefied gas, n.o.s.	2 A	see 4.3.3.2.2 or 4.3.3.2.3				
3220	Pentafluoroethane (Refrigerant gas R125)	2 A	4.1	41	4.9	49	0.95
3252	Difluoromethane (Refrigerant gas R32)	2 F	3.9	39	4.3	43	0.78
3296	Heptafluoropropane (Refrigerant gas R227)	2 A	1.4	14	1.6	16	1.20
3297	Ethylene oxide and chlorotetrafluoroethane mixture, with not more than 8.8% ethylene oxide	2 A	1	10	1	10	1.16
3298	Ethylene oxide and pentafluoroethane mixture, with not more than 7.9% ethylene oxide	2 A	2.4	24	2.6	26	1.02
3299	Ethylene oxide and tetrafluoroethane mixture, with not more than 5.6% ethylene oxide	2 A	1.5	15	1.7	17	1.03

^a Allowed if LC₅₀ equal to or greater than 200 ppm.

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UN No.	Name	Classification code	Minimum test pressure for tanks				Maximum permissible mass of contents per litre of capacity kg
			With thermal insulation		Without thermal insulation		
			MPa	bar	MPa	bar	
3300	Ethylene oxide and carbon dioxide mixture, with more than 87% ethylene oxide	2 TF	2.8	28	2.8	28	0.73
3303	Compressed gas, toxic, oxidizing, n.o.s. ^a	1 TO	see 4.3.3.2.1 or 4.3.3.2.2				
3304	Compressed gas, toxic, corrosive, n.o.s. ^a	1 TC	see 4.3.3.2.1 or 4.3.3.2.2				
3305	Compressed gas, toxic, flammable, corrosive, n.o.s. ^a	1 TFC	see 4.3.3.2.1 or 4.3.3.2.2				
3306	Compressed gas, toxic, oxidizing, corrosive, n.o.s. ^a	1 TOC	see 4.3.3.2.1 or 4.3.3.2.2				
3307	Liquefied gas, toxic, oxidizing, n.o.s. ^a	2 TO	see 4.3.3.2.2 or 4.3.3.2.3				
3308	Liquefied gas, toxic, corrosive, n.o.s. ^a	2 TC	see 4.3.3.2.2 or 4.3.3.2.3				
3309	Liquefied gas, toxic, flammable, corrosive, n.o.s. ^a	2 TFC	see 4.3.3.2.2 or 4.3.3.2.3				
3310	Liquefied gas, toxic, oxidizing, corrosive, n.o.s. ^a	2 TOC	see 4.3.3.2.2 or 4.3.3.2.3				
3311	Gas, refrigerated liquid, oxidizing, n.o.s.	3 O	see 4.3.3.2.4				
3312	Gas, refrigerated liquid, flammable, n.o.s.	3 F	see 4.3.3.2.4				
3318	Ammonia solutions, relative density less than 0.880 at 15 °C in water, with more than 50% ammonia	4 TC	see 4.3.3.2.2				
3337	Refrigerant gas R404A	2 A	2.9	29	3.2	32	0.84
3338	Refrigerant gas R407A	2 A	2.8	28	3.2	32	0.95
3339	Refrigerant gas R407B	2 A	3.0	30	3.3	33	0.95
3340	Refrigerant gas R407C	2 A	2.7	27	3.0	30	0.95
3354	Insecticide gas, flammable, n.o.s.	2 F	see 4.3.3.2.2 or 4.3.3.2.3				
3355	Insecticide gas, toxic, flammable, n.o.s. ^a	2 TF	see 4.3.3.2.2 or 4.3.3.2.3				

4.3.3.3 *Operation*

- 4.3.3.3.1 When tanks, battery-vehicles or MEGCs are approved for different gases, the change of use shall include emptying, purging and evacuation operations to the extent necessary for safe operation.
- 4.3.3.3.2 When tanks, battery-vehicles or MEGCs are handed over for carriage, only the particulars specified in 6.8.3.5.6 applicable to the gas loaded or just discharged shall be visible; all particulars concerning other gases shall be covered up.
- 4.3.3.3.3 All the elements of a battery-vehicle or MEGC shall contain only one and the same gas.
- 4.3.3.3.4 When the external overpressure could be greater than the tank resistance to external pressure (e.g. due to low ambient temperatures), adequate measures shall be taken to protect tanks carrying low pressure liquefied gases against the risk of deformation, e.g. by filling them with nitrogen or another inert gas in order to maintain sufficient pressure inside the tank.

4.3.3.4 *(Reserved)*

^a Allowed if LC₅₀ equal to or greater than 200 ppm.

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4.3.4 Special provisions applicable to Classes 1 and 3 to 9**4.3.4.1 Coding, rationalized approach and hierarchy of tanks**4.3.4.1.1 *Coding of tanks*

The four parts of the codes (tank codes) given in Column (12) of Table A in Chapter 3.2 have the following meanings:

Part	Description	Tank code
1	Types of tank	L = tank for substances in the liquid state (liquids or solids handed over for carriage in the molten state); S = tank for substances in the solid state (powdery or granular).
2	Calculation pressure	G = minimum calculation pressure according to the general requirements of 6.8.2.1.14; or 1.5; 2.65; 4; 10; 15 or 21 = minimum calculation pressure in bar (see 6.8.2.1.14).
3	Openings (see 6.8.2.2.2)	A = tank with bottom-filling or bottom-discharge openings with 2 closures; B = tank with bottom-filling or bottom-discharge openings with 3 closures; C = tank with top-filling and discharge openings with only cleaning openings below the surface of the liquid; D = tank with top-filling and discharge openings with no openings below the surface of the liquid.
4	Safety valves/devices	V = tank with a breather device, according to 6.8.2.2.6, but no device protecting against the propagation of a flame; or non-explosion-pressure proof tank; F = tank with a breather device, according to 6.8.2.2.6, fitted with a device protecting against the propagation of a flame; or explosion-pressure proof tank; N = tank without a breather device according to 6.8.2.2.6 and not hermetically closed; H = hermetically closed tank (see 1.2.1).

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4.3.4.1.2 Rationalized approach for assignment of ADR tank codes to groups of substances and hierarchy of tanks

NOTE: Certain substances and groups of substances are not included in the rationalized approach, see 4.3.4.1.3.

Rationalized approach			
Tank code	Group of permitted substances		
	Class	Classification code	Packing group
<i>LIQUIDS</i>	3	F2	III
LGAV	9	M9	III
LGBV	4.1	F2	II, III
	5.1	O1	III
	9	M6	III
		M11	III
and groups of permitted substances for tank code LGAV			
LGBF	3	F1	II vapour pressure at 50 °C ≤ 1.1 bar
		F1	III
		D	II vapour pressure at 50 °C ≤ 1.1 bar
		D	III
and groups of permitted substances for tank codes LGAV and LGBV			
L1.5BN	3	F1	II vapour pressure at 50 °C > 1.1 bar
		F1	III flash-point < 23 °C, viscous, vapour pressure at 50 °C > 1.1 bar boiling point > 35 °C
		D	II vapour pressure at 50 °C > 1.1 bar
		and groups of permitted substances for tank codes LGAV, LGBV and LGBF	
L4BN	3	F1	I, III boiling point ≤ 35 °C
		FC	III
		D	I
		5.1	O1
	8	OT1	I
		C1	II, III
		C3	II, III
		C4	II, III
		C5	II, III
		C7	II, III
		C8	II, III
		C9	II, III
		C10	II, III
		CF1	II
		CF2	II
		CS1	II
		CW1	II
		CW2	II
		CO1	II
		CO2	II
CT1	II, III		
CT2	II, III		
CFT	II		
9	M11	III	
and groups of permitted substances for tank codes LGAV, LGBV, LGBF and L1.5BN			

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Rationalized approach			
Tank code	Group of permitted substances		
	Class	Classification code	Packing group
L4BH	3	FT1	II, III
		FT2	II
		FC	II
		FTC	II
	6.1	T1	II, III
		T2	II, III
		T3	II, III
		T4	II, III
		T5	II, III
		T6	II, III
		T7	II, III
		TF1	II
		TF2	II, III
		TF3	II
		TS	II
		TW1	II
		TW2	II
		TO1	II
		TO2	II
		TC1	II
	TC2	II	
	TC3	II	
	TC4	II	
TFC	II		
6.2	I3	II	
	I4		
9	M2	II	
and groups of permitted substances for tank codes LGAV, LGBV, LGBF, L1.5BN and L4BN			
L4DH	4.2	S1	II, III
		S3	II, III
		ST1	II, III
		ST3	II, III
		SC1	II, III
		SC3	II, III
	4.3	W1	II, III
		WF1	II, III
		WT1	II, III
		WC1	II, III
8	CT1	II, III	
and groups of permitted substances for tank codes LGAV, LGBV, LGBF, L1.5BN, L4BN and L4BH			
L10BH	8	C1	I
		C3	I
		C4	I
		C5	I
		C7	I
		C8	I
		C9	I
		C10	I
		CF1	I
		CF2	I
		CS1	I
		CW1	I
		CW2	I
		CO1	I
		CO2	I
		CT1	I
		CT2	I
COT	I		
and groups of permitted substances for tank codes LGAV, LGBV, LGBF, L1.5BN, L4BN, and L4BH			

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Rationalized approach			
Tank code	Group of permitted substances		
	Class	Classification code	Packing group
L10CH	3	FT1	I
		FT2	I
		FC	I
		FTC	I
	6.1*	T1	I
		T2	I
		T3	I
		T4	I
		T5	I
		T6	I
		T7	I
		TF1	I
		TF2	I
		TF3	I
		TS	I
		TW1	I
		TO1	I
		TC1	I
		TC2	I
		TC3	I
	TC4	I	
	TFC	I	
	TFW	I	
and groups of permitted substances for tank codes LGAV, LGBV, LGBF, L1.5BN, L4BN, L4BH, and L10BH			
* Substances with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀ shall be assigned to tank code L15CH.			
L10DH	4.3	W1	I
		WF1	I
		WT1	I
		WC1	I
		WFC	I
	5.1	OTC	I
8	CT1	I	
and groups of permitted substances for tank codes LGAV, LGBV, LGBF, L1.5BN, L4BN, L4BH, L4DH, L10BH and L10CH			
L15CH	3	FT1	I
	6.1**	T1	I
		T4	I
		TF1	I
		TW1	I
		TO1	I
		TC1	I
		TC3	I
		TFC	I
	TFW	I	
and groups of permitted substances for tank codes LGAV, LGBV, LGBF, L1.5BN, L4BN, L4BH, L10BH and L10CH			
** Substances with an LC ₅₀ lower than or equal to 200 ml/m ³ and saturated vapour concentration greater than or equal to 500 LC ₅₀ shall be assigned to this tank code.			
L21DH	4.2	S1	I
		S3	I
		SW	I
		ST3	I
and groups of permitted substances for tank codes LGAV, LGBV, LGBF, L1.5BN, L4BN, L4BH, L4DH, L10BH, L10CH, L10DH and L15CH			

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Rationalized approach			
Tank code	Group of permitted substances		
	Class	Classification code	Packing group
<i>SOLIDS</i> SGAV	4.1	F1	III
		F3	III
	4.2	S2	II, III
		S4	III
	5.1	O2	II, III
	8	C2	II, III
		C4	III
		C6	III
		C8	III
		C10	II, III
		CT2	III
	9	M7	III
		M11	II, III
SGAN	4.1	F1	II
		F3	II
		FT1	II, III
		FT2	II, III
		FC1	II, III
		FC2	II, III
	4.2	S2	II
		S4	II, III
		ST2	II, III
		ST4	II, III
		SC2	II, III
		SC4	II, III
	4.3	W2	II, III
		WF2	II
		WS	II, III
		WT2	II, III
		WC2	II, III
	5.1	O2	II, III
		OT2	II, III
		OC2	II, III
	8	C2	II
		C4	II
		C6	II
		C8	II
		C10	II
		CF2	II
		CS2	II
		CW2	II
		CO2	II
		CT2	II
	9	M3	III
	and groups of permitted substances for tank codes SGAV		
SGAH	6.1	T2	II, III
		T3	II, III
		T5	II, III
		T7	II, III
		T9	II
		TF3	II
		TS	II
		TW2	II
		TO2	II
		TC2	II
	TC4	II	
	9	M1	II, III
	and groups of permitted substances for tanks codes SGAV and SGAN		

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Rationalized approach			
Tank code	Group of permitted substances		
	Class	Classification code	Packing group
S4AH	6.2	I3	II
	9	M2	II
and groups of permitted substances for tank codes SGAV, SGAN and SGAH			
S10AN	8	C2	I
		C4	I
		C6	I
		C8	I
		C10	I
		CF2	I
		CS2	I
		CW2	I
		CO2	I
		CT2	I
and groups of permitted substances for tank codes SGAV and SGAN			
S10AH	6.1	T2	I
		T3	I
		T5	I
		T7	I
		TS	I
		TW2	I
		TO2	I
		TC2	I
		TC4	I
and groups of permitted substances for tank codes SGAV, SGAN, SGAH and S10AN			

Hierarchy of tanks

Tanks with tank codes different from those indicated in this table or in Table A of Chapter 3.2 may also be used provided that any element (number or letter) of parts 1 to 4 of these tank codes correspond to a level of safety at least equivalent to the corresponding element of the tank code indicated in Table A of Chapter 3.2, according to the following increasing order:

Part 1: Types of tanks

S → L

Part 2: Calculation pressure

G → 1.5 → 2.65 → 4 → 10 → 15 → 21 bar

Part 3: Openings

A → B → C → D

Part 4: Safety valves/devices

V → F → N → H

For example:

- A tank with the tank code L10CN is authorized for the carriage of a substance to which the tank code L4BN has been assigned;
- A tank with the tank code L4BN is authorized for the carriage of a substance to which the tank code SGAN has been assigned.

NOTE: The hierarchy does not take account of any special provisions for each entry (see 4.3.5 and 6.8.4).

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- 4.3.4.1.3 The following substances and groups of substances in respect of which a "(+)" is given after the tank code in Column (12) of Table A in Chapter 3.2 are subject to special provisions. In that case the alternate use of the tanks for other substances and groups of substances is permitted only where this is specified in the certificate of type approval. Higher value tanks according to the provisions at the end of the table in 4.3.4.1.2 may be used with due regard to the special provisions indicated in Column (13) of Table A in Chapter 3.2.
- (a) Class 1
Division 1.5, UN No 0331 explosive, blasting, type B: code S2.65AN;
- (b) Class 4.1:
UN No. 2448 sulphur, molten: code LGBV;
- (c) Class 4.2:
UN No. 1381 phosphorus, white or yellow, dry, or under water or in solution and UN No. 2447 phosphorus, white molten: code L10DH;
- (d) Class 4.3:
UN No. 1389 alkali metal amalgam, liquid, UN No. 1391 alkali metal dispersion or alkaline earth metal dispersion, UN No. 1392 alkaline earth metal amalgam, liquid, UN No. 1415 lithium, UN No. 1420 potassium metal alloys, liquid, UN No. 1421 alkali metal alloy, liquid, n.o.s, UN No. 1422 potassium sodium alloys, liquid, UN No. 1428 sodium, UN No. 2257 potassium, UN No. 3401 alkali metal amalgam, solid, UN No. 3402 alkaline earth metal amalgam, solid, 3403 potassium metal alloys, solid, UN No. 3404 potassium sodium alloys, solid and UN No. 3482 alkali metal dispersion, flammable or UN No. 3482 alkaline earth metal dispersion, flammable: code L10BN;
UN No. 1407 caesium and UN No. 1423 rubidium: code L10CH;
UN No. 1402 calcium carbide, packing group I: code S2.65AN;
- (e) Class 5.1:
UN No. 1873 perchloric acid 50-72%: code L4DN;
UN No. 2015 hydrogen peroxide, aqueous solution, stabilized with more than 70% hydrogen peroxide: code L4DV;
UN No. 2014 hydrogen peroxide, aqueous solution with 20-60% hydrogen peroxide, UN No. 2015 hydrogen peroxide, aqueous solution, stabilized with 60-70% hydrogen peroxide, UN No. 2426 ammonium nitrate, liquid, hot concentrated solution with more than 80% but not more than 93% and UN No. 3149 hydrogen peroxide and peroxyacetic acid mixture, stabilized: code L4BV;
UN No. 3375 ammonium nitrate emulsion, suspension or gel, liquid: code LGAV;
UN No. 3375 ammonium nitrate emulsion, suspension or gel, solid: code SGAV;
- (f) Class 5.2:
UN No. 3109 organic peroxide type F, liquid and UN No. 3119 organic peroxide, type F, liquid temperature controlled: code L4BN;
UN No. 3110 organic peroxide, type F, solid and UN No. 3120 organic peroxide, type F, solid, temperature controlled: code S4AN;
- (g) Class 6.1:
UN No. 1613 hydrogen cyanide, aqueous solution and UN No. 3294 hydrogen cyanide solution in alcohol: code L15DH;

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(h) Class 7:

All substances: special tanks;

Minimum requirements for liquids: code L2.65CN; for solids: code S2.65AN

Notwithstanding the general requirements of this paragraph, tanks used for radioactive material may also be used for the carriage of other goods provided the requirements of 5.1.3.2 are complied with.

(i) Class 8:

UN No. 1052 hydrogen fluoride, anhydrous, UN No. 1744 bromine or bromine solution and UN No. 1790 hydrofluoric acid, solution, with more than 85% hydrofluoric acid: code L21DH;

UN No. 1791 hypochlorite solution and UN No. 1908 chlorite solution: code L4BV.

4.3.4.1.4 Tanks intended for the carriage of liquid wastes complying with the requirements of Chapter 6.10 and equipped with two closures in accordance with 6.10.3.2, shall be assigned to tank code L4AH. If the tanks concerned are equipped for the alternate carriage of liquid and solid substances, they shall be assigned to the combined codes L4AH+S4AH.

4.3.4.2 *General provisions*

4.3.4.2.1 Where hot substances are loaded, the temperature of the outer surface of the tank or of the thermal insulation shall not exceed 70 °C during carriage.

4.3.4.2.2 The connecting pipes between independent but interconnected tanks of a transport unit shall be empty during carriage. Flexible filling and discharge pipes which are not permanently connected to the shells shall be empty during carriage.

4.3.4.2.3 *(Reserved)*

4.3.5 *Special provisions*

When they are shown under an entry in Column (13) of Table of A in Chapter 3.2, the following special provisions apply:

TU1 The tanks shall not be handed over for carriage until the substance has solidified completely and been covered by an inert gas. Uncleaned empty tanks which have contained these substances shall be filled with an inert gas.

TU2 The substance shall be covered by an inert gas. Uncleaned empty tanks which have contained these substances shall be filled with an inert gas.

TU3 The inside of the shell and all parts liable to come into contact with the substance shall be kept clean. No lubricant capable of combining dangerously with the substance shall be used for pumps, valves or other devices.

TU4 During carriage, these substances shall be under a layer of inert gas, the gauge pressure of which shall not be less than 50 kPa (0.5 bar).

Uncleaned empty tanks which have contained these substances shall when handed over for carriage be filled with an inert gas at a gauge pressure of at least 50 kPa (0.5 bar).

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- TU5 *(Reserved)*
- TU6 Not authorized for carriage in tanks, battery-vehicles and MEGCs when having a LC₅₀ lower than 200 ppm.
- TU7 The materials used to ensure leakproofness of the joints or for the maintenance of the closures shall be compatible with the contents.
- TU8 An aluminium-alloy tank shall not be used for carriage unless the tank is reserved solely for such carriage and the acetaldehyde is free from acid.
- TU9 UN No.1203 petrol (gasoline) with a vapour pressure at 50 °C of more than 110 kPa (1.1 bar) but not above 150 kPa (1.5 bar) may also be carried in tanks designed according to 6.8.2.1.14 (a) and having equipment conforming to 6.8.2.2.6.
- TU10 *(Reserved)*
- TU11 During filling, the temperature of this substance shall not exceed 60 °C. A maximum filling temperature of 80 °C is allowed provided that smoulder spots are prevented and that the following conditions are met. After filling, the tanks shall be pressurized (e.g. with compressed air) to check tightness. It shall be ensured that no depressurization takes place during carriage. Before discharge, it shall be checked if pressure in the tanks is still above atmospheric. If this is not the case, an inert gas shall be introduced into the tanks prior to discharge.
- TU12 In the event of a change of use, shells and equipment shall be thoroughly cleansed of all residues before and after the carriage of this substance.
- TU13 Tanks shall be free from impurities at the time of filling. Service equipment such as valves and external piping shall be emptied after filling or discharging.
- TU14 The protective caps of closures shall be locked during carriage.
- TU15 Tanks shall not be used for the carriage of foodstuffs, articles of consumption or animal feeds.
- TU16 Uncleaned empty tanks, shall, when handed over for carriage, either:
- be filled with nitrogen; or
 - be filled with water to not less than 96% and not more than 98% of their capacity; between 1 October and 31 March, this water shall contain sufficient anti-freeze agent to make it impossible for the water to freeze during carriage; the anti-freeze agent shall be free from corrosive action and not liable to react with phosphorus.
- TU17 Only to be carried in battery-vehicles or MEGCs the elements of which are composed of receptacles.
- TU18 The degree of filling shall remain below the level at which, if the contents were raised to a temperature at which the vapour pressure equalled the opening pressure of the safety valve, the volume of the liquid would reach 95% of the tank's capacity at that temperature. The provision in 4.3.2.3.4 shall not apply.
- TU19 Tanks may be filled to 98% at the filling temperature and pressure. The provision in 4.3.2.3.4 shall not apply.
- TU20 *(Reserved)*

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- TU21 The substance shall, if water is used as a protective agent, be covered with a depth of not less than 12 cm of water at the time of filling; the degree of filling at a temperature of 60 °C shall not exceed 98%. If nitrogen is used as a protective agent, the degree of filling at a temperature of 60 °C shall not exceed 96%. The remaining space shall be filled with nitrogen in such a way that, even after cooling, the pressure at no time falls below atmospheric pressure. The tank shall be closed in such a way that no leakage of gas occurs.
- TU22 Tanks shall be filled to not more than 90% of their capacity; for liquids, a space of 5% shall remain empty when the liquid is at an average temperature of 50 °C.
- TU23 The degree of filling shall not exceed 0.93 kg per litre of capacity, if filling is by mass. If filling is by volume, the degree of filling shall not exceed 85%.
- TU24 The degree of filling shall not exceed 0.95 kg per litre of capacity, if filling is by mass. If filling is by volume, the degree of filling shall not exceed 85%.
- TU25 The degree of filling shall not exceed 1.14 kg per litre of capacity, if filling is by mass. If filling is by volume, the degree of filling shall not exceed 85%.
- TU26 The degree of filling shall not exceed 85%.
- TU27 Tanks shall not be filled to more than 98% of their capacity.
- TU28 Tanks shall be filled to not more than 95% of their capacity at a reference temperature of 15 °C.
- TU29 Tanks shall be filled to not more than 97% of their capacity and the maximum temperature after filling shall not exceed 140 °C.
- TU30 Tanks shall be filled as set out in the test report for the type approval of the tank but shall be filled to not more than 90% of their capacity.
- TU31 Tanks shall not be filled to more than 1 kg per litre of capacity.
- TU32 Tanks shall not be filled to more than 88% of their capacity.
- TU33 Tanks shall be filled to not less than 88% and not more than 92% of their capacity or to 2.86 kg per litre of capacity.
- TU34 Tanks shall not be filled to more than 0.84 kg per litre of capacity.
- TU35 Empty fixed tanks (tank-vehicles), empty demountable tanks and empty tank-containers, uncleaned, which have contained these substances are not subject to the requirements of ADR if adequate measures have been taken to nullify any hazard.
- TU36 The degree of filling according to 4.3.2.2, at the reference temperature of 15 °C, shall not exceed 93% of the capacity.
- TU37 Carriage in tanks is limited to substances containing pathogens which are unlikely to be a serious hazard, and for which, while capable of causing serious infection on exposure, effective treatment and preventive measures are available and the risk of spread of infection is limited (i.e. moderate individual risk and low community risk).
- TU38 *(Reserved)*

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TU39 The suitability of the substance for carriage in tanks shall be demonstrated. The method to evaluate this suitability shall be approved by the competent authority. One method is test 8(d) in Test Series 8 (see Manual of Tests and Criteria, Part 1, sub-section 18.7).

Substances shall not be allowed to remain in the tank for any period that could result in caking. Appropriate measures shall be taken to avoid accumulation and packing of substances in the tank (e.g. cleaning etc.).

TU40 Only to be carried in battery-vehicles or MEGCs, the elements of which are composed of seamless receptacles.

TU41 The suitability of the substance for carriage in tanks shall be demonstrated to the satisfaction of the competent authority of every country through or into which the carriage is performed.

The method to evaluate this suitability shall be approved by the competent authority of any ADR Contracting Party who may also recognize an approval granted by the competent authority of a country which is not an ADR Contracting Party provided that this approval has been granted in accordance with the procedures applicable according to ADR, RID, ADN or the IMDG Code.

Substances shall not be allowed to remain in the tank for any period that could result in caking. Appropriate measures shall be taken to avoid accumulation and packing of substances in the tank (e.g. cleaning etc.).

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CHAPTER 4.4

USE OF FIBRE-REINFORCED PLASTICS (FRP) TANKS, FIXED TANKS (TANK-VEHICLES), DEMOUNTABLE TANKS, TANK-CONTAINERS AND TANK SWAP BODIES

NOTE: *For portable tanks and UN multiple-element gas containers (MEGCs), see Chapter 4.2; for fixed tanks (tank-vehicles), demountable tanks, tank-containers and tank swap bodies, with shells made of metallic materials, and battery-vehicles and multiple elements gas containers (MEGCs) other than UN MEGCs, see Chapter 4.3; for vacuum operated waste containers, see Chapter 4.5.*

4.4.1 General

The carriage of dangerous substances in fibre-reinforced plastics (FRP) tanks is permitted only when the following conditions are met:

- (a) The substance is classified in Class 3, 5.1, 6.1, 6.2, 8 or 9;
- (b) The maximum vapour pressure (absolute pressure) at 50 °C of the substance does not exceed 110 kPa (1.1 bar);
- (c) The carriage of the substance in metallic tanks is authorized according to 4.3.2.1.1;
- (d) The calculation pressure specified for that substance in part 2 of the tank code given in Column (12) of Table A in Chapter 3.2 does not exceed 4 bar (see also 4.3.4.1.1); and
- (e) The tank complies with the provisions of Chapter 6.9 applicable for the carriage of the substance.

4.4.2 Operation

4.4.2.1 The provisions of 4.3.2.1.5 to 4.3.2.2.4, 4.3.2.3.3 to 4.3.2.3.6, 4.3.2.4.1, 4.3.2.4.2, 4.3.4.1 and 4.3.4.2 shall apply.

4.4.2.2 The temperature of the substance carried shall not exceed, at the time of filling, the maximum service temperature indicated on the tank plate referred to in 6.9.6.

4.4.2.3 When applicable to carriage in metallic tanks, the special provisions (TU) of 4.3.5 shall also apply, as indicated in Column (13) of Table A in Chapter 3.2.

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CHAPTER 4.5

USE OF VACUUM OPERATED WASTE TANKS

NOTE: *For portable tanks and UN multiple-element gas containers (MEGCs), see Chapter 4.2; for fixed tanks (tank-vehicles), demountable tanks, tank-containers and tank swap bodies, with shells made of metallic materials, and battery-vehicles and multiple elements gas containers (MEGCs) other than UN MEGCs, see Chapter 4.3; for fibre reinforced plastics tanks, see Chapter 4.4.*

4.5.1 Use

4.5.1.1 Wastes consisting of substances in Classes 3, 4.1, 5.1, 6.1, 6.2, 8 and 9 may be carried in vacuum-operated waste tanks conforming to Chapter 6.10 if their carriage in fixed tanks, demountable tanks, tank-containers or tank swap bodies is permitted according to Chapter 4.3. Substances assigned to tank code L4BH in Column (12) of Table A of Chapter 3.2 or to another tank code permitted under the hierarchy in 4.3.4.1.2 may be carried in vacuum operated waste tanks with the letter "A" or "B" in part 3 of the tank code, as indicated in No. 9.5 of the vehicle approval certificate conforming to 9.1.3.5.

4.5.2 Operation

4.5.2.1 The provisions of Chapter 4.3 except those of 4.3.2.2.4 and 4.3.2.3.3 apply to the carriage in vacuum operated waste tanks and are supplemented by the provisions of 4.5.2.2 to 4.5.2.4 below.

4.5.2.2 For carriage of liquids meeting the flash point criteria of Class 3, vacuum-operated waste tanks shall be filled through filling devices which discharge into the tank at a low level. Measures shall be taken to minimize the production of spray.

4.5.2.3 When discharging flammable liquids with a flash-point below 23 °C by using air pressure, the maximum allowed pressure is 100 kPa (1 bar).

4.5.2.4 The use of tanks fitted with an internal piston operating as a compartment wall is allowed only when the substances on either side of the wall (piston) do not react dangerously with each other (see 4.3.2.3.6).

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CHAPTER 4.6

(Reserved)

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CHAPTER 4.7

USE OF MOBILE EXPLOSIVES MANUFACTURING UNITS (MEMUs)

NOTE 1: *For packagings, see Chapter 4.1; for portable tanks, see Chapter 4.2; for fixed tanks (tank vehicles), demountable tanks, tank-containers and tank swap bodies with shells made of metallic materials, see Chapter 4.3; for fibre-reinforced plastics (FRP) tanks, see Chapter 4.4; for vacuum operated waste tanks, see Chapter 4.5.*

NOTE 2: *For requirements concerning construction, equipment, type approval, tests and marking, see Chapters 6.7, 6.8, 6.9, 6.11 and 6.12.*

4.7.1 Use

4.7.1.1 Substances of Classes 3, 5.1, 6.1 and 8 may be carried on MEMUs conforming to Chapter 6.12, in portable tanks if their carriage is permitted according to Chapter 4.2; or in fixed tanks, demountable tanks, tank containers or tank swap bodies if their carriage is permitted according to Chapter 4.3; or in fibre-reinforced plastics (FRP) tanks if their carriage is permitted according to Chapter 4.4; or in bulk containers, if their carriage is permitted according to Chapter 7.3.

4.7.1.2 Subject to the approval of the competent authority (see 7.5.5.2.3) explosive substances or articles of Class 1 may be carried in packages, in special compartments conforming to section 6.12.5, if their packaging is permitted according to Chapter 4.1 and their carriage is permitted according to Chapter 7.2 and 7.5.

4.7.2 Operation

4.7.2.1 The following provisions apply for operation of tanks according to Chapter 6.12:

- (a) For tanks with a capacity of 1 000 litres or more, the provisions of Chapter 4.2, Chapter 4.3, except 4.3.1.4, 4.3.2.3.1, 4.3.3 and 4.3.4, or Chapter 4.4 apply to the carriage on MEMUs, and are supplemented by the provisions of 4.7.2.2, 4.7.2.3 and 4.7.2.4 below.
- (b) For tanks with a capacity of less than 1 000 litres, the provisions of Chapter 4.2, Chapter 4.3, except 4.3.1.4, 4.3.2.1, 4.3.2.3.1, 4.3.3 and 4.3.4, or Chapter 4.4 apply to the carriage on MEMUs, and are supplemented by the provisions of 4.7.2.2, 4.7.2.3 and 4.7.2.4 below.

4.7.2.2 The thickness of the walls of the shell shall not, throughout its use, fall below the minimum figure prescribed in the appropriate construction requirements.

4.7.2.3 Flexible discharge pipes, whether permanently connected or not, and hoppers shall be empty of mixed or sensitised explosive substances during carriage.

4.7.2.4 When applicable to carriage in tanks, the special provisions (TU) of 4.3.5 shall also apply as indicated in Column (13) of Table A in Chapter 3.2.

4.7.2.5 Operators shall ensure that the locks specified in 9.8.8 are used during carriage.

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PART 5

Consignment procedures

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CHAPTER 5.1

GENERAL PROVISIONS

5.1.1 Application and general provisions

This Part sets forth the provisions for dangerous goods consignments relative to marking, labelling, and documentation, and, where appropriate, authorization of consignments and advance notifications.

5.1.2 Use of overpacks

5.1.2.1 (a) An overpack shall be:

- (i) marked with the word "OVERPACK"; and
- (ii) marked with the UN number preceded by the letters "UN" as required for packages in 5.2.1.1 and 5.2.1.2, labelled as required for packages in 5.2.2 and marked with the environmentally hazardous substance mark if required for packages in 5.2.1.8, for each item of dangerous goods contained in the overpack;

unless the UN numbers, the labels and the environmentally hazardous substance mark representative of all dangerous goods contained in the overpack are visible, except as required in 5.2.2.1.11. If the same UN number, the same label or the environmentally hazardous substance mark is required for different packages, it only needs to be applied once.

The marking of the word "OVERPACK", which shall be readily visible and legible, shall be in an official language of the country of origin and also, if that language is not English, French or German, in English, French or German, unless agreements, if any, concluded between the countries concerned in the transport operation provide otherwise.

(b) Orientation arrows illustrated in 5.2.1.9 shall be displayed on two opposite sides of the following overpacks:

- (i) overpacks containing packages which shall be marked in accordance with 5.2.1.9.1, unless the marking remains visible, and
- (ii) overpacks containing liquids in packages which need not be marked in accordance with 5.2.1.9.2, unless the closures remain visible.

5.1.2.2 Each package of dangerous goods contained in an overpack shall comply with all applicable provisions of ADR. The intended function of each package shall not be impaired by the overpack.

5.1.2.3 Each package bearing package orientation markings as prescribed in 5.2.1.9 and which is overpacked or placed in a large packaging shall be oriented in accordance with such markings.

5.1.2.4 The prohibitions on mixed loading also apply to these overpacks.

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5.1.3 Empty uncleaned packagings (including IBCs and large packagings), tanks, MEMUs, vehicles and containers for carriage in bulk

5.1.3.1 Empty uncleaned packagings (including IBCs and large packagings), tanks (including tank-vehicles, battery-vehicles, demountable tanks, portable tanks, tank-containers, MEGCs), MEMUs, vehicles and containers for carriage in bulk having contained dangerous goods of the different classes other than Class 7, shall be marked and labelled as if they were full.

NOTE: For documentation, see Chapter 5.4.

5.1.3.2 Packagings, including IBCs, and tanks used for the carriage of radioactive material shall not be used for the storage or carriage of other goods unless decontaminated below the level of 0.4 Bq/cm² for beta and gamma emitters and low toxicity alpha emitters and 0.04 Bq/cm² for all other alpha emitters.

5.1.4 Mixed packing

When two or more dangerous goods are packed within the same outer packaging, the package shall be labelled and marked as required for each substance or article. If the same label is required for different goods, it only needs to be applied once.

5.1.5 General provisions for Class 7

5.1.5.1 Approval of shipments and notification

5.1.5.1.1 General

In addition to the approval for package designs described in Chapter 6.4, multilateral shipment approval is also required in certain circumstances (5.1.5.1.2 and 5.1.5.1.3). In some circumstances it is also necessary to notify competent authorities of a shipment (5.1.5.1.4).

5.1.5.1.2 Shipment approvals

Multilateral approval shall be required for:

- (a) the shipment of Type B(M) packages not conforming with the requirements of 6.4.7.5 or designed to allow controlled intermittent venting;
- (b) the shipment of Type B(M) packages containing radioactive material with an activity greater than 3 000 A₁ or 3 000 A₂, as appropriate, or 1 000 TBq, whichever is the lower; and
- (c) The shipment of packages containing fissile materials if the sum of the criticality safety indexes of the packages in a single vehicle or container exceeds 50;

except that a competent authority may authorize carriage into or through its country without shipment approval, by a specific provision in its design approval (see 5.1.5.2.1).

5.1.5.1.3 Shipment approval by special arrangement

Provisions may be approved by a competent authority under which a consignment, which does not satisfy all of the applicable requirements of ADR may be carried under special arrangement (see 1.7.4).

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5.1.5.1.4 *Notifications*

Notification to competent authorities is required as follows:

- (a) Before the first shipment of any package requiring competent authority approval, the consignor shall ensure that copies of each applicable competent authority certificate applying to that package design have been submitted to the competent authority of the country of origin of the shipment and to the competent authority of each country through or into which the consignment is to be carried. The consignor is not required to await an acknowledgement from the competent authority, nor is the competent authority required to make such acknowledgement of receipt of the certificate;
- (b) For each of the following types of shipments:
 - (i) Type C packages containing radioactive material with an activity greater than 3 000 A₁ or 3 000 A₂, as appropriate, or 1 000 TBq, whichever is the lower;
 - (ii) Type B(U) packages containing radioactive material with an activity greater than 3 000 A₁ or 3 000 A₂, as appropriate, or 1 000 TBq, whichever is the lower;
 - (iii) Type B(M) packages;
 - (iv) Shipment under special arrangement;

The consignor shall notify the competent authority of the country of origin of the shipment and the competent authority of each country through or into which the consignment is to be carried. This notification shall be in the hands of each competent authority prior to the commencement of the shipment, and preferably at least 7 days in advance;

- (c) The consignor is not required to send a separate notification if the required information has been included in the application for shipment approval;
- (d) The consignment notification shall include:
 - (i) sufficient information to enable the identification of the package or packages including all applicable certificate numbers and identification marks;
 - (ii) information on the date of shipment, the expected date of arrival and proposed routing;
 - (iii) the name(s) of the radioactive material(s) or nuclide(s);
 - (iv) descriptions of the physical and chemical forms of the radioactive material, or whether it is special form radioactive material or low dispersible radioactive material; and
 - (v) the maximum activity of the radioactive contents during carriage expressed in becquerels (Bq) with an appropriate SI prefix symbol (see 1.2.2.1). For fissile material, the mass of fissile material (or of each fissile nuclide for mixtures when appropriate) in grams (g), or multiples thereof, may be used in place of activity.

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5.1.5.2 *Certificates issued by the competent authority*

5.1.5.2.1 Certificates issued by the competent authority are required for the following:

- (a) Designs for:
 - (i) special form radioactive material;
 - (ii) low dispersible radioactive material;
 - (iii) packages containing 0.1 kg or more of uranium hexafluoride;
 - (iv) all packages containing fissile material unless excepted by 6.4.11.2;
 - (v) Type B(U) packages and Type B(M) packages;
 - (vi) Type C packages;
- (b) Special arrangements;
- (c) Certain shipments (see 5.1.5.1.2).

The certificates shall confirm that the applicable requirements are met, and for design approvals shall attribute to the design an identification mark.

The package design and shipment approval certificates may be combined into a single certificate.

Certificates and applications for these certificates shall be in accordance with the requirements in 6.4.23.

5.1.5.2.2 The consignor shall be in possession of a copy of each applicable certificate.

5.1.5.2.3 For package designs where a competent authority issued certificate is not required, the consignor shall, on request, make available for inspection by the competent authority, documentary evidence of the compliance of the package design with all the applicable requirements.

5.1.5.3 *Determination of transport index (TI) and criticality safety index (CSI)*

5.1.5.3.1 The transport index (TI) for a package, overpack or container, or for unpackaged LSA-I or SCO-I, shall be the number derived in accordance with the following procedure:

- (a) Determine the maximum radiation level in units of millisieverts per hour (mSv/h) at a distance of 1 m from the external surfaces of the package, overpack, container, or unpackaged LSA-I and SCO-I. The value determined shall be multiplied by 100 and the resulting number is the transport index. For uranium and thorium ores and their concentrates, the maximum radiation level at any point 1 m from the external surface of the load may be taken as:

0.4 mSv/h	for ores and physical concentrates of uranium and thorium;
0.3 mSv/h	for chemical concentrates of thorium;
0.02 mSv/h	for chemical concentrates of uranium, other than uranium hexafluoride;

- (b) For tanks, containers and unpackaged LSA-I and SCO-I, the value determined in step (a) above shall be multiplied by the appropriate factor from Table 5.1.5.3.1;

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- (c) The value obtained in steps (a) and (b) above shall be rounded up to the first decimal place (e.g. 1.13 becomes 1.2), except that a value of 0.05 or less may be considered as zero.

Table 5.1.5.3.1: Multiplication factors for tanks, containers and unpackaged LSA-I and SCO-I

Size of load ^a	Multiplication factor
size of load $\leq 1 \text{ m}^2$	1
$1 \text{ m}^2 < \text{size of load} \leq 5 \text{ m}^2$	2
$5 \text{ m}^2 < \text{size of load} \leq 20 \text{ m}^2$	3
$20 \text{ m}^2 < \text{size of load}$	10

^a *Largest cross-sectional area of the load being measured.*

- 5.1.5.3.2 The transport index for each overpack, container or vehicle shall be determined as either the sum of the TIs of all the packages contained, or by direct measurement of radiation level, except in the case of non-rigid overpacks for which the transport index shall be determined only as the sum of the TIs of all the packages.
- 5.1.5.3.3 The criticality safety index for each overpack or container shall be determined as the sum of the CSIs of all the packages contained. The same procedure shall be followed for determining the total sum of the CSIs in a consignment or aboard a vehicle.
- 5.1.5.3.4 Packages and overpacks shall be assigned to either category I-WHITE, II-YELLOW or III-YELLOW in accordance with the conditions specified in Table 5.1.5.3.4 and with the following requirements:
- For a package or overpack, both the transport index and the surface radiation level conditions shall be taken into account in determining which is the appropriate category. Where the transport index satisfies the condition for one category but the surface radiation level satisfies the condition for a different category, the package or overpack shall be assigned to the higher category. For this purpose, category I-WHITE shall be regarded as the lowest category;
 - The transport index shall be determined following the procedures specified in 5.1.5.3.1 and 5.1.5.3.2;
 - If the surface radiation level is greater than 2 mSv/h, the package or overpack shall be carried under exclusive use and under the provisions of 7.5.11, CV33 (1.3) and (3.5) (a);
 - A package carried under a special arrangement shall be assigned to category III-YELLOW except under the provisions of 5.1.5.3.5;
 - An overpack which contains packages carried under special arrangement shall be assigned to category III-YELLOW except under the provisions of 5.1.5.3.5.

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Table 5.1.5.3.4: Categories of packages and overpacks

Conditions		
Transport index	Maximum radiation level at any point on external surface	Category
0 ^a	Not more than 0.005 mSv/h	I-WHITE
More than 0 but not more than 1 ^a	More than 0.005 mSv/h but not more than 0.5 mSv/h	II-YELLOW
More than 1 but not more than 10	More than 0.5 mSv/h but not more than 2 mSv/h	III-YELLOW
More than 10	More than 2 mSv/h but not more than 10 mSv/h	III-YELLOW ^b

^a If the measured TI is not greater than 0.05, the value quoted may be zero in accordance with 5.1.5.3.1 (c).

^b Shall also be carried under exclusive use.

5.1.5.3.5 In all cases of international carriage of packages requiring competent authority design or shipment approval, for which different approval types apply in the different countries concerned by the shipment, the categorization shall be in accordance with the certificate of the country of origin of design.

5.1.5.4 Specific provisions for excepted packages

5.1.5.4.1 Excepted packages shall be legibly and durably marked on the outside of the packaging with:

- (a) The UN number preceded by the letters "UN";
- (b) An identification of either the consignor or consignee, or both; and
- (c) The permissible gross mass if this exceeds 50 kg.

5.1.5.4.2 The documentation requirements of Chapter 5.4 do not apply to excepted packages of radioactive material, except that the UN number preceded by the letters "UN" and the name and address of the consignor and the consignee shall be shown on a transport document such as a bill of lading, air waybill or CMR or CIM consignment note.

5.1.5.5 Summary of approval and prior notification requirements

NOTE 1: Before first shipment of any package requiring competent authority approval of the design, the consignor shall ensure that a copy of the approval certificate for that design has been submitted to the competent authority of each country en route (see 5.1.5.1.4 (a)).

NOTE 2: Notification required if contents exceed $3 \times 10^3 A_1$, or $3 \times 10^3 A_2$, or 1 000 TBq; (see 5.1.5.1.4 (b)).

NOTE 3: Multilateral approval of shipment required if contents exceed $3 \times 10^3 A_1$, or $3 \times 10^3 A_2$, or 1 000 TBq, or if controlled intermittent venting is allowed (see 5.1.5.1).

NOTE 4: See approval and prior notification provisions for the applicable package for carrying this material.

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Subject	UN Number	Competent Authority approval required		Consignor required to notify the competent authorities of the country of origin and of the countries en route ^a before each shipment	Reference
		Country of origin	Countries en route ^a		
Calculation of unlisted A ₁ and A ₂ values	-	Yes	Yes	No	---
Excepted packages - package design - shipment	2908, 2909, 2910, 2911	No No	No No	No No	---
LSA material ^b and SCO ^b Industrial packages types 1, 2 or 3, non fissile and fissile excepted - package design - shipment	2912, 2913, 3321, 3322	No No	No No	No No	---
Type A packages ^b , non fissile and fissile excepted - package design - shipment	2915, 3332	No No	No No	No No	--
Type B(U) packages ^b , non fissile and fissile excepted - package design - shipment	2916	Yes No	No No	See Note 1 See Note 2	5.1.5.1.4 (b), 5.1.5.2.1 (a), 6.4.22.2
Type B(M) packages ^b , non fissile and fissile excepted - package design - shipment	2917	Yes See Note 3	Yes See Note 3	No Yes	5.1.5.1.4 (b), 5.1.5.2.1 (a), 5.1.5.1.2, 6.4.22.3
Type C packages ^b , non fissile and fissile excepted - package design - shipment	3323	Yes No	No No	See Note 1 See Note 2	5.1.5.1.4 (b), 5.1.5.2.1 (a), 6.4.22.2
Packages for fissile material - package design - shipment : - sum of criticality safety indexes not more than 50 - sum of criticality safety indexes greater than 50	2977, 3324, 3325, 3326, 3327, 3328, 3329, 3330, 3331, 3333	Yes ^c No ^d Yes	Yes ^c No ^d Yes	No See Note 2 See Note 2	5.1.5.2.1 (a), 5.1.5.1.2, 6.4.22.4, 6.4.22.5
Special form radioactive material - design - shipment	- See Note 4	Yes See Note 4	No See Note 4	No See Note 4	1.6.6.3, 5.1.5.2.1 (a) 6.4.22.5

^a Countries from, through or into which the consignment is carried.

^b If the radioactive contents are fissile material which is not excepted from the provisions for packages containing fissile material, then the provisions for fissile material packages apply (see 6.4.11).

^c Designs of packages for fissile material may also require approval in respect of one of the other items in the table.

^d Shipments may, however, require approval in respect of one of the other items in the table.

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Subject	UN Number	Competent Authority approval required		Consignor required to notify the competent authorities of the country of origin and of the countries en route ^a before each shipment	Reference
		Country of origin	Countries en route ^a		
Low dispersable radioactive material - design - shipment	- See Note 4	Yes See Note 4	No See Note 4	No See Note 4	5.1.5.2.1 (a), 6.4.22.3
Packages containing 0.1 kg or more of uranium hexafluoride - design - shipment	- See Note 4	Yes See Note 4	No See Note 4	No See Note 4	5.1.5.2.1 (a), 6.4.22.1
Special Arrangement - shipment	2919, 3331	Yes	Yes	Yes	1.7.4.2, 5.1.5.2.1 (b), 5.1.5.1.4 (b)
Approved packages designs subjected to transitional measures	-	See 1.6.6	See 1.6.6	See Note 1	1.6.6.1, 1.6.6.2, 5.1.5.1.4 (b), 5.1.5.2.1 (a), 5.1.5.1.2.

^a *Countries from, through or into which the consignment is carried.*

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CHAPTER 5.2

MARKING AND LABELLING

5.2.1 Marking of packages

NOTE: For markings related to the construction, testing and approval of packagings, large packagings, gas receptacles and IBCs, see Part 6.

5.2.1.1 Unless provided otherwise in ADR, the UN number corresponding to the dangerous goods contained, preceded by the letters "UN" shall be clearly and durably marked on each package. The UN number and the letters "UN" shall be at least 12 mm high, except for packages of 30 litres capacity or less or of 30 kg maximum net mass and for cylinders of 60 litres water capacity or less, when they shall be at least 6 mm in height and except for packages of 5 litres or 5 kg or less when they shall be of an appropriate size. In the case of unpackaged articles the marking shall be displayed on the article, on its cradle or on its handling, storage or launching device.

5.2.1.2 All package markings required by this Chapter:

- (a) shall be readily visible and legible;
- (b) shall be able to withstand open weather exposure without a substantial reduction in effectiveness.

5.2.1.3 Salvage packagings and salvage pressure receptacles shall additionally be marked with the word "**SALVAGE**".

5.2.1.4 Intermediate bulk containers of more than 450 litres capacity and large packagings shall be marked on two opposite sides.

5.2.1.5 *Additional provisions for goods of Class 1*

For goods of Class 1, packages shall, in addition, bear the proper shipping name as determined in accordance with 3.1.2. The marking, which shall be clearly legible and indelible, shall be in an official language of the country of origin and also, if that language is not English, French or German, in English, French or German unless any agreements concluded between the countries concerned in the transport operation provide otherwise.

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5.2.1.6 Additional provisions for goods of Class 2

Refillable receptacles shall bear the following particulars in clearly legible and durable characters:

- (a) the UN number and the proper shipping name of the gas or mixture of gases, as determined in accordance with 3.1.2.
In the case of gases classified under an N.O.S. entry, only the technical name¹ of the gas has to be indicated in addition to the UN number.
In the case of mixtures, not more than the two constituents which most predominantly contribute to the hazards have to be indicated;
- (b) for compressed gases filled by mass and for liquefied gases, either the maximum filling mass and the tare of the receptacle with fittings and accessories as fitted at the time of filling, or the gross mass;
- (c) the date (year) of the next periodic inspection.

These marks can either be engraved or indicated on a durable information disk or label attached on the receptacle or indicated by an adherent and clearly visible marking such as by printing or by any equivalent process.

NOTE 1: See also 6.2.2.7.

NOTE 2: For non refillable receptacles, see 6.2.2.8.

5.2.1.7 Special marking provisions for goods of Class 7

5.2.1.7.1 Each package shall be legibly and durably marked on the outside of the packaging with an identification of either the consignor or consignee, or both.

5.2.1.7.2 For each package, other than excepted packages, the UN number preceded by the letters "UN" and the proper shipping name shall be legibly and durably marked on the outside of the packaging. The marking of excepted packages shall be as required by 5.1.5.4.1.

5.2.1.7.3 Each package of gross mass exceeding 50 kg shall have its permissible gross mass legibly and durably marked on the outside of the packaging.

5.2.1.7.4 Each package which conforms to:

- (a) a Type IP-1 package, a Type IP-2 package or a Type IP-3 package design shall be legibly and durably marked on the outside of the packaging with "TYPE IP-1", "TYPE IP-2" or "TYPE IP-3" as appropriate;
- (b) a Type A package design shall be legibly and durably marked on the outside of the packaging with "TYPE A";
- (c) a Type IP-2 package, a Type IP-3 package or a Type A package design shall be legibly and durably marked on the outside of the packaging with the international

¹ Instead of the technical name the use of one of the following names is permitted:

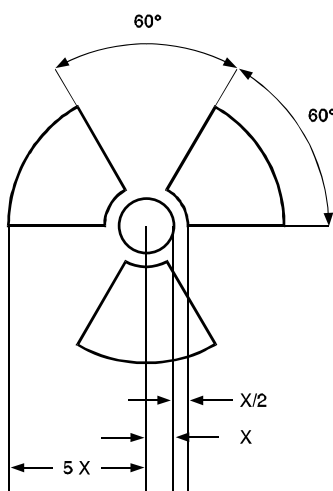
- for UN No. 1078 refrigerant gas, n.o.s.: mixture F1, mixture F2, mixture F3;
- for UN No. 1060 methylacetylene and propadiene mixtures, stabilized: mixture P1, mixture P2;
- for UN No. 1965 hydrocarbon gas mixture, liquefied, n.o.s.: mixture A or butane, mixture A01 or butane, mixture A02 or butane, mixture A0 or butane, mixture A1, mixture B1, mixture B2, mixture B, mixture C or propane;
- for UN No. 1010 Butadienes, stabilized: 1,2-Butadiene, stabilized, 1,3-Butadiene, stabilized.

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vehicle registration code (VRI Code)² of the country of origin of design and either the name of the manufacturer or other identification of the packaging specified by the competent authority of the country of origin of design.

- 5.2.1.7.5 Each package which conforms to a design approved by the competent authority shall be legibly and durably marked on the outside of the packaging with:
- (a) the identification mark allocated to that design by the competent authority;
 - (b) a serial number to uniquely identify each packaging which conforms to that design;
 - (c) in the case of a Type B(U) or Type B(M) package design, with "TYPE B(U)" or "TYPE B(M)"; and
 - (d) in the case of a Type C package design, with "TYPE C".
- 5.2.1.7.6 Each package which conforms to a Type B(U), Type B(M) or Type C package design shall have the outside of the outermost receptacle which is resistant to the effects of fire and water plainly marked by embossing, stamping or other means resistant to the effects of fire and water with the trefoil symbol shown in the figure below.

Basic trefoil symbol with proportions based on a central circle of radius X .
The minimum allowable size of X shall be 4 mm.



² Distinguishing sign for motor vehicles in international traffic prescribed in the Vienna Convention on Road Traffic (1968).

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5.2.1.7.7 Where LSA-I or SCO-I material is contained in receptacles or wrapping materials and is carried under exclusive use as permitted by 4.1.9.2.3, the outer surface of these receptacles or wrapping materials may bear the marking "RADIOACTIVE LSA-I" or "RADIOACTIVE SCO-I", as appropriate.

5.2.1.7.8 In all cases of international carriage of packages requiring competent authority design or shipment approval, for which different approval types apply in the different countries concerned by the shipment, marking shall be in accordance with the certificate of the country of origin of the design.

5.2.1.8 *Special marking provisions for environmentally hazardous substances*

5.2.1.8.1 Packages containing environmentally hazardous substances meeting the criteria of 2.2.9.1.10 shall be durably marked with the environmentally hazardous substance mark shown in 5.2.1.8.3 with the exception of single packagings and combination packagings where such single packagings or inner packagings of such combination packagings have:

- a quantity of 5 l or less for liquids; or
- a net mass of 5 kg or less for solids.

5.2.1.8.2 The environmentally hazardous substance mark shall be located adjacent to the markings required by 5.2.1.1. The requirements of 5.2.1.2 and 5.2.1.4 shall be met.

5.2.1.8.3 The environmentally hazardous substance mark shall be as shown below. The dimensions shall be 100 mm × 100 mm, except in the case of packages of such dimensions that they can only bear smaller marks.



Symbol (fish and tree): black on white or suitable contrasting background

NOTE: The labelling provisions of 5.2.2 apply in addition to any requirement for packages to bear the environmentally hazardous substance mark.

5.2.1.9 *Orientation arrows*

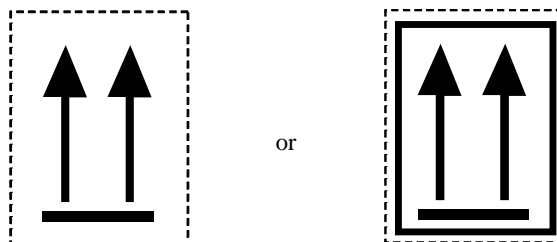
5.2.1.9.1 Except as provided in 5.2.1.9.2:

- Combination packagings having inner packagings containing liquids;
- Single packagings fitted with vents; and
- Cryogenic receptacles intended for the carriage of refrigerated liquefied gases,

shall be legibly marked with package orientation arrows which are similar to the illustration shown below or with those meeting the specifications of ISO 780:1997. The orientation arrows shall appear on two opposite vertical sides of the package with the arrows pointing in the correct upright direction. They shall be rectangular and of a size that is clearly visible

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commensurate with the size of the package. Depicting a rectangular border around the arrows is optional.



Two black or red arrows on white or suitable contrasting background.
The rectangular border is optional.

- 5.2.1.9.2 Orientation arrows are not required on:
- (a) Outer packagings containing pressure receptacles except cryogenic receptacles;
 - (b) Outer packagings containing dangerous goods in inner packagings each containing not more than 120 ml, with sufficient absorbent material between the inner and outer packagings to completely absorb the liquid contents;
 - (c) Outer packagings containing Class 6.2 infectious substances in primary receptacles each containing not more than 50 ml;
 - (d) Type IP-2, type IP-3, type A, type B(U), type B(M) or type C packages containing Class 7 radioactive material;
 - (e) Outer packagings containing articles which are leak-tight in all orientations (e.g. alcohol or mercury in thermometers, aerosols, etc.); or
 - (f) Outer packagings containing dangerous goods in hermetically sealed inner packagings each containing not more than 500 ml.
- 5.2.1.9.3 Arrows for purposes other than indicating proper package orientation shall not be displayed on a package marked in accordance with this sub-section.

5.2.2 Labelling of packages

5.2.2.1 Labelling provisions

- 5.2.2.1.1 For each article or substance listed in Table A of Chapter 3.2, the labels shown in Column (5) shall be affixed unless otherwise provided for by a special provision in Column (6).
- 5.2.2.1.2 Indelible danger markings corresponding exactly to the prescribed models may be used instead of labels.
- 5.2.2.1.3 to 5.2.2.1.5 (Reserved)

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5.2.2.1.6 Except as provided in 5.2.2.2.1.2, each label shall:

- (a) be affixed to the same surface of the package, if the dimensions of the package allow; for packages of Class 1 and 7, near the mark indicating the proper shipping name;
- (b) be so placed on the package that it is not covered or obscured by any part or attachment to the packaging or any other label or marking; and
- (c) be displayed next to each other when more than one label is required.

Where a package is of such an irregular shape or small size that a label cannot be satisfactorily affixed, the label may be attached to the package by a securely affixed tag or other suitable means.

5.2.2.1.7 Intermediate bulk containers of more than 450 litres capacity and large packagings shall be labelled on two opposite sides.

5.2.2.1.8 *(Reserved)*

5.2.2.1.9 *Special provisions for the labelling of self-reactive substances and organic peroxides*

- (a) The label conforming to model No. 4.1 also implies that the product may be flammable and hence no label conforming to model No. 3 is required. In addition, a label conforming to model No. 1 shall be applied for self-reactive substances Type B, unless the competent authority has permitted this label to be dispensed with for a specific packaging because test data have proven that the self-reactive substance in such a packaging does not exhibit explosive behaviour.
- (b) The label conforming to model No. 5.2 also implies that the product may be flammable and hence no label conforming to model No. 3 is required. In addition, the following labels shall be applied:
 - (i) A label conforming to model No. 1 for organic peroxides type B, unless the competent authority has permitted this label to be dispensed with for a specific packaging because test data have proven that the organic peroxide in such a packaging does not exhibit explosive behaviour;
 - (ii) A label conforming to model No. 8 is required when Packing Group I or II criteria of Class 8 are met.

For self-reactive substances and organic peroxides mentioned by name, the labels to be affixed are indicated in the list found in 2.2.41.4 and 2.2.52.4 respectively.

5.2.2.1.10 *Special provisions for the labelling of infectious substances packages*

In addition to the label conforming to model No. 6.2, infectious substances packages shall bear any other label required by the nature of the contents.

5.2.2.1.11 *Special provisions for the labelling of radioactive material*

5.2.2.1.11.1 Except when enlarged labels are used in accordance with 5.3.1.1.3, each package, overpack and container containing radioactive material shall bear at least two labels which conform to the models Nos. 7A, 7B, and 7C as appropriate according to the category (see 5.1.5.3.4) of that package, overpack or container. Labels shall be affixed to two opposite sides on the outside of the package or on the outside of all four sides of the container. Each overpack containing radioactive material shall bear at least two labels on opposite sides of the outside of the overpack. In addition, each package, overpack and container containing fissile

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material, other than fissile material excepted under 6.4.11.2 shall bear labels which conform to model No.7E; such labels, where applicable shall be affixed adjacent to the labels for radioactive material. Labels shall not cover the markings specified in 5.2.1. Any labels which do not relate to the contents shall be removed or covered.

5.2.2.1.11.2 Each label conforming to models Nos.7A, 7B, and 7C shall be completed with the following information.

(a) *Contents:*

(i) except for LSA-I material, the name(s) of the radionuclide(s) as taken from Table 2.2.7.2.2.1, using the symbols prescribed therein. For mixtures of radionuclides, the most restrictive nuclides shall be listed to the extent the space on the line permits. The group of LSA or SCO shall be shown following the name(s) of the radionuclide(s). The terms "LSA-II", "LSA-III", "SCO-I" and "SCO-II" shall be used for this purpose;

(ii) for LSA-I material, only the term "LSA-I" is necessary; the name of the radionuclide is not necessary;

(b) *Activity:* The maximum activity of the radioactive contents during carriage expressed in becquerels (Bq) with the appropriate SI prefix symbol (see 1.2.2.1). For fissile material, the mass of fissile material (or mass of each fissile nuclide for mixtures when appropriate) in grams (g), or multiples thereof, may be used in place of activity;

(c) For overpacks and containers the "contents" and "activity" entries on the label shall bear the information required in (a) and (b) above, respectively, totalled together for the entire contents of the overpack or container except that on labels for overpacks or containers containing mixed loads of packages containing different radionuclides, such entries may read "See Transport Documents";

(d) *Transport index:* The number determined in accordance with 5.1.5.3.1 and 5.1.5.3.2 (no transport index entry is required for category I-WHITE).

5.2.2.1.11.3 Each label conforming to the model No. 7E shall be completed with the criticality safety index (CSI) as stated in the certificate of approval for special arrangement or the certificate of approval for the package design issued by the competent authority.

5.2.2.1.11.4 For overpacks and containers, the criticality safety index (CSI) on the label shall bear the information required in 5.2.2.1.11.3 totalled together for the fissile contents of the overpack or container.

5.2.2.1.11.5 In all cases of international carriage of packages requiring competent authority design or shipment approval, for which different approval types apply in the different countries concerned by the shipment, labelling shall be in accordance with the certificate of the country of origin of design.

5.2.2.2 *Provisions for labels*

5.2.2.2.1 Labels shall satisfy the provisions below and conform, in terms of colour, symbols and general format, to the models shown in 5.2.2.2.2. Corresponding models required for other modes of transport, with minor variations which do not affect the obvious meaning of the label, are also acceptable.

NOTE: Where appropriate, labels in 5.2.2.2.2 are shown with a dotted outer boundary as provided for in 5.2.2.2.1.1. This is not required when the label is applied on a background of contrasting colour.

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5.2.2.2.1.1 Labels shall be in the form of a square set at an angle of 45° (diamond-shaped) with minimum dimensions of 100 mm by 100 mm. They shall have a line 5 mm inside the edge and running parallel with it. In the upper half of a label the line shall have the same colour as the symbol and in the lower half it shall have the same colour as the figure in the bottom corner. Labels shall be displayed on a background of contrasting colour, or shall have either a dotted or solid outer boundary line. If the size of the package so requires, the dimensions of the labels may be reduced, provided that they remain clearly visible.

5.2.2.2.1.2 Cylinders for Class 2 may, on account of their shape, orientation and securing mechanisms for carriage, bear labels representative of those specified in this section and the environmentally hazardous substance mark when appropriate, which have been reduced in size, according to the dimensions outlined in ISO 7225:2005, "*Gas cylinders - Precautionary labels*", for display on the non-cylindrical part (shoulder) of such cylinders.

Notwithstanding the provisions of 5.2.2.1.6, labels and the environmentally hazardous substance mark (see 5.2.1.8.3) may overlap to the extent provided for by ISO 7225:2005. However, in all cases, the primary risk label and the figures appearing on any label shall remain fully visible and the symbols recognizable.

Empty uncleaned pressure receptacles for gases of Class 2 may be carried with obsolete or damaged labels for the purposes of refilling or inspection as appropriate and the application of a new label in conformity with current regulations or for the disposal of the pressure receptacle.

5.2.2.2.1.3 With the exception of labels for Divisions 1.4, 1.5 and 1.6 of Class 1, the upper half of the label shall contain the pictorial symbol and the lower half shall contain:

- (a) For Classes 1, 2, 3, 5.1, 5.2, 7, 8 and 9, the class number;
- (b) For Classes 4.1, 4.2 and 4.3, the figure "4";
- (c) For Classes 6.1 and 6.2, the figure "6".

The labels may include text such as the UN number or words describing the hazard (e.g. "flammable") in accordance with 5.2.2.2.1.5 provided the text does not obscure or detract from the other required label elements.

5.2.2.2.1.4 In addition, except for Divisions 1.4, 1.5 and 1.6, labels for Class 1 shall show in the lower half, above the class number, the division number and the compatibility group letter for the substance or article. Labels for Divisions 1.4, 1.5 and 1.6 shall show in the upper half the division number, and in the lower half the class number and the compatibility group letter.

5.2.2.2.1.5 On labels other than those for material of Class 7, the optional insertion of any text (other than the class number) in the space below the symbol shall be confined to particulars indicating the nature of the risk and precautions to be taken in handling.

5.2.2.2.1.6 The symbols, text and numbers shall be clearly legible and indelible and shall be shown in black on all labels except for:

- (a) the Class 8 label, where the text (if any) and class number shall appear in white;
- (b) labels with entirely green, red or blue backgrounds where they may be shown in white;
- (c) the Class 5.2 label, where the symbol may be shown in white; and

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- (d) labels conforming to model No. 2.1 displayed on cylinders and gas cartridges for gases of UN Nos. 1011, 1075, 1965 and 1978, where they may be shown in the background colour of the receptacle if adequate contrast is provided.

5.2.2.2.1.7 All labels shall be able to withstand open weather exposure without a substantial reduction in effectiveness.

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5.2.2.2.2 Specimen labels

CLASS 1 HAZARD
Explosive substances or articles

(No. 1)

Divisions 1.1, 1.2 and 1.3

Symbol (exploding bomb): black; Background: orange; Figure '1' in bottom corner



(No. 1.4)

Division 1.4



(No. 1.5)

Division 1.5



(No. 1.6)

Division 1.6

Background: orange; Figures: black; Numerals shall be about 30 mm in height and be about 5 mm thick (for a label measuring 100 mm x 100 mm); Figure '1' in bottom corner

** Place for division - to be left blank if explosive is the subsidiary risk

* Place for compatibility group - to be left blank if explosive is the subsidiary risk

CLASS 2 HAZARD**Gases**

(No. 2.1)

Flammable gases

Symbol (flame): black or white;

(except as provided for in 5.2.2.2.1.6 (d))

Background: red; Figure '2' in bottom corner



(No. 2.2)

Non flammable, non-toxic gases

Symbol (gas cylinder): black or white;

Background: green; Figure '2' in bottom corner

**CLASS 3 HAZARD****Flammable liquids**

(No. 2.3)

Toxic gases

Symbol (skull and crossbones): black;

Background: white; Figure '2' in bottom corner



(No. 3)

Symbol (flame): black or white;

Background: red; Figure '3' in bottom corner



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CLASS 4.1 HAZARD
Flammable solids, self-reactive
substances and solid desensitized
explosives



(No. 4.1)
Symbol (flame): black;
Background: white with
seven vertical red stripes;
Figure '4' in bottom corner

CLASS 4.2 HAZARD
Substances liable to
spontaneous combustion



(No. 4.2)
Symbol (flame): black;
Background: upper half white,
lower half red;
Figure '4' in bottom corner

CLASS 4.3 HAZARD
Substances which, in contact with water,
emit flammable gases



(No. 4.3)
Symbol (flame): black or white;
Background: blue;
Figure '4' in bottom corner



CLASS 5.1 HAZARD
Oxidizing substances



(No. 5.1)
Symbol (flame over circle): black;
Background: yellow;
Figure '5.1' in bottom corner

CLASS 5.2 HAZARD
Organic peroxides



(No. 5.2)
Symbol (flame): black or white;
Background: upper half red; lower half yellow;
Figure '5.2' in bottom corner



CLASS 6.1 HAZARD
Toxic substances



(No. 6.1)
Symbol (skull and crossbones): black;
Background: white; Figure '6' in bottom corner

CLASS 6.2 HAZARD
Infectious substances



(No. 6.2)
The lower half of the label may bear the inscriptions: 'INFECTIOUS SUBSTANCE'
and 'In the case of damage or leakage immediately notify Public Health Authority';
Symbol (three crescents superimposed on a circle) and inscriptions: black;
Background: white; Figure '6' in bottom corner

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CLASS 7 HAZARD
Radioactive material

(No. 7A)

Category I - White
 Symbol (trefoil): black;
 Background: white;
 Text (mandatory): black in lower half of label:
 'RADIOACTIVE'
 'CONTENTS'
 'ACTIVITY'
 One red bar shall
 follow the word 'RADIOACTIVE';
 Figure '7' in bottom corner.

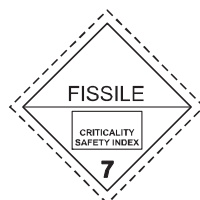


(No. 7B)

Category II - Yellow
 Symbol (trefoil): black;
 Background: upper half yellow with white border, lower half white;
 Text (mandatory): black in lower half of label:
 'RADIOACTIVE'
 'CONTENTS'
 'ACTIVITY'
 In a black outlined box: 'TRANSPORT INDEX';
 Two red vertical bars shall
 follow the word 'RADIOACTIVE';
 Figure '7' in bottom corner.



(No. 7C)



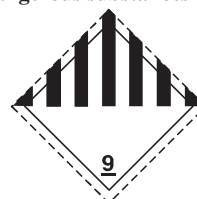
(No. 7E)

Class 7 fissile material
 Background: white;
 Text (mandatory): black in upper half of label: 'FISSILE';
 In a black outlined box in the lower half of the label:
 'CRITICALITY SAFETY INDEX'
 Figure '7' in bottom corner.

CLASS 8 HAZARD
Corrosive substances

(No. 8)

Symbol (liquids, spilling from two glass vessels
 and attacking a hand and a metal): black;
 Background: upper half white;
 lower half black with white border;
 Figure '8' in bottom corner

CLASS 9 HAZARD
Miscellaneous dangerous substances and articles

(No. 9)

Symbol (seven vertical stripes in upper half): black;
 Background: white;
 Figure '9' underlined in bottom corner

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CHAPTER 5.3

PLACARDING AND MARKING OF CONTAINERS, MEGCs, MEMUs, TANK-CONTAINERS, PORTABLE TANKS AND VEHICLES

NOTE: *For marking and placarding of containers, MEGCs, tank-containers and portable tanks for carriage in a transport chain including a maritime journey, see also 1.1.4.2.1. If the provisions of 1.1.4.2.1 (c) are applied, only 5.3.1.3 and 5.3.2.1.1 of this Chapter are applicable.*

5.3.1 Placarding

5.3.1.1 General provisions

5.3.1.1.1 As and when required in this section, placards shall be affixed to the exterior surface of containers, MEGCs, MEMUs, tank-containers, portable tanks and vehicles. Placards shall correspond to the labels required in Column (5) and, where appropriate, Column (6) of Table A of Chapter 3.2 for the dangerous goods contained in the container, MEGC, MEMU, tank-container, portable tank or vehicle and shall conform to the specifications given in 5.3.1.7. Placards shall be displayed on a background of contrasting colour, or shall have either a dotted or solid outer boundary line.

5.3.1.1.2 For Class 1, compatibility groups shall not be indicated on placards if the vehicle, container or special compartments of MEMUs are carrying substances or articles belonging to two or more compatibility groups. Vehicles, containers or special compartments of MEMUs carrying substances or articles of different divisions shall bear only placards conforming to the model of the most dangerous division in the order:

1.1 (most dangerous), 1.5, 1.2, 1.3, 1.6, 1.4 (least dangerous).

When 1.5 D substances are carried with substances or articles of Division 1.2, the vehicle or container shall be placarded as Division 1.1.

Placards are not required for the carriage of explosives of Division 1.4, compatibility group S.

5.3.1.1.3 For Class 7, the primary risk placard shall conform to model No. 7D as specified in 5.3.1.7.2. This placard is not required for vehicles or containers carrying excepted packages and for small containers.

Where both Class 7 labels and placards would be required to be affixed to vehicles, containers, MEGCs, tank-containers or portable tanks, an enlarged label corresponding to the label required may be displayed instead of placard No.7D to serve both purposes.

5.3.1.1.4 Containers, MEGCs, MEMUs, tank-containers, portable tanks or vehicles containing goods of more than one class need not bear a subsidiary risk placard if the hazard represented by that placard is already indicated by a primary or subsidiary risk placard.

5.3.1.1.5 Placards which do not relate to the dangerous goods being carried, or residues thereof, shall be removed or covered.

5.3.1.1.6 When the placarding is affixed to folding panels, they shall be designed and secured so that they cannot unfold or come loose from the holder during carriage (especially as a result of impacts or unintentional actions).

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5.3.1.2 *Placarding of containers, MEGCs, tank-containers and portable tanks*

NOTE: *This sub-section does not apply to swap bodies, except tank swap bodies or swap bodies carried in combined road/rail transport.*

The placards shall be affixed to both sides and at each end of the container, MEGC, tank-container or portable tank.

When the tank-container or portable tank has multiple compartments and carries two or more dangerous goods, the appropriate placards shall be displayed along each side at the position of the relevant compartments and one placard of each model shown on each side at both ends.

5.3.1.3 *Placarding of vehicles carrying containers, MEGCs, tank-containers or portable tanks*

NOTE: *This sub-section does not apply to the placarding of vehicles carrying swap bodies other than tank swap bodies or than swap bodies carried in combined road/rail transport; for such vehicles, see 5.3.1.5.*

If the placards affixed to the containers, MEGCs, tank-containers or portable tanks are not visible from outside the carrying vehicles, the same placards shall also be affixed to both sides and at the rear of the vehicle. Otherwise, no placard need be affixed on the carrying vehicle.

5.3.1.4 *Placarding of vehicles for carriage in bulk, tank-vehicles, battery-vehicles, MEMUs and vehicles with demountable tanks*

5.3.1.4.1 Placards shall be affixed to both sides and at the rear of the vehicle.

When the tank-vehicle or the demountable tank carried on the vehicle has multiple compartments and carries two or more dangerous goods, the appropriate placards shall be displayed along each side at the position of the relevant compartments and one placard of each model shown on each side at the rear of the vehicle. However, in such case, if all compartments have to bear the same placards, these placards need be displayed only once along each side and at the rear of the vehicle.

Where more than one placard is required for the same compartment, these placards shall be displayed adjacent to each other.

NOTE: *When, in the course of an ADR journey or at the end of an ADR journey, a tank semi-trailer is separated from its tractor to be loaded on board a ship or an inland navigation vessel, placards shall also be displayed at the front of the semi-trailer.*

5.3.1.4.2 MEMUs with tanks and bulk containers shall be placarded in accordance with 5.3.1.4.1 for the substances contained therein. For tanks with a capacity of less than 1 000 litres placards may be replaced by labels conforming to 5.2.2.2.

5.3.1.4.3 For MEMUs carrying packages containing substances or articles of Class 1 (other than of Division 1.4, Compatibility group S), placards shall be affixed to both sides and at the rear of the MEMU.

Special compartments for explosives shall be placarded in accordance with the provisions of 5.3.1.1.2. The last sentence of 5.3.1.1.2 does not apply.

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5.3.1.5 *Placarding of vehicles carrying packages only*

NOTE: *This sub-section applies also to vehicles carrying swap bodies loaded with packages, except for combined road/rail transport; for combined road/rail transport, see 5.3.1.2 and 5.3.1.3.*

5.3.1.5.1 For vehicles carrying packages containing substances or articles of Class 1 (other than of Division 1.4, compatibility group S), placards shall be affixed to both sides and at the rear of the vehicle.

5.3.1.5.2 For vehicles carrying radioactive material of Class 7 in packagings or IBCs (other than excepted packages), placards shall be affixed to both sides and at the rear of the vehicle.

5.3.1.6 *Placarding of empty tank-vehicles, battery-vehicles, MEGCs, MEMUs, tank-containers, portable tanks and empty vehicles and containers for carriage in bulk*

5.3.1.6.1 Empty tank-vehicles, vehicles with demountable tanks, battery-vehicles, MEGCs, MEMUs, tank-containers and portable tanks uncleaned and not degassed, and empty vehicles and containers for carriage in bulk, uncleaned, shall continue to display the placards required for the previous load.

5.3.1.7 *Specifications for placards*

5.3.1.7.1 Except as provided in 5.3.1.7.2 for the Class 7 placard, a placard shall:

- (a) Be not less than 250 mm by 250 mm and have a line 12.5 mm inside the edge and running parallel with it. In the upper half the line shall have the same colour as the symbol and in the lower half it shall have the same colour as the figure in the bottom corner;
- (b) Correspond to the label required for the dangerous goods in question with respect to colour and symbol (see 5.2.2.2); and
- (c) Display the numbers (and for goods of Class 1, the compatibility group letter) prescribed for the dangerous goods in question in 5.2.2.2 for the corresponding label, in digits not less than 25 mm high.

5.3.1.7.2 The Class 7 placard shall be not less than 250 mm by 250 mm with a black line running 5 mm inside the edge and parallel with it and is otherwise as shown below (Model No. 7D). The number "7" shall not be less than 25 mm high. The background colour of the upper half of the placard shall be yellow and of the lower half white, the colour of the trefoil and the printing shall be black. The use of the word "RADIOACTIVE" in the bottom half is optional to allow the use of this placard to display the appropriate UN number for the consignment.

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Placard for radioactive material of Class 7



(No.7D)

Symbol (trefoil): black; Background: upper half yellow with white border, lower half white;

The lower half shall show the word "RADIOACTIVE" or alternatively, the appropriate UN Number, and the figure "7" in the bottom corner.

5.3.1.7.3 For tanks with a capacity of not more than 3 m³ and for small containers, placards may be replaced by labels conforming to 5.2.2.2. If these labels are not visible from outside the carrying vehicle, placards according to 5.3.1.7.1 shall also be affixed to both sides and at the rear of the vehicle.

5.3.1.7.4 For Classes 1 and 7, if the size and construction of the vehicle are such that the available surface area is insufficient to affix the prescribed placards, their dimensions may be reduced to 100 mm on each side.

5.3.2 Orange-coloured plate marking

5.3.2.1 General orange-coloured plate marking provisions

5.3.2.1.1 Transport units carrying dangerous goods shall display two rectangular orange-coloured plates conforming to 5.3.2.2.1, set in a vertical plane. They shall be affixed one at the front and the other at the rear of the transport unit, both perpendicular to the longitudinal axis of the transport unit. They shall be clearly visible.

If a trailer containing dangerous goods is detached from its motor vehicle during carriage of dangerous goods, an orange-coloured plate shall remain affixed to the rear of the trailer.

5.3.2.1.2 When a hazard identification number is indicated in Column (20) of table A of Chapter 3.2, tank-vehicles, battery vehicles or transport units having one or more tanks carrying dangerous goods shall in addition display on the sides of each tank, each tank compartment or each element of battery vehicles, clearly visible and parallel to the longitudinal axis of the vehicle, orange-coloured plates identical with those prescribed in 5.3.2.1.1. These orange-coloured plates shall bear the hazard identification number and the UN number prescribed respectively in Columns (20) and (1) of table A of Chapter 3.2 for each of the substances carried in the tank, in a compartment of the tank or in an element of a battery vehicle. For MEMUs these requirements shall only apply to tanks with a capacity of 1 000 litres or more and bulk containers.

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- 5.3.2.1.3 For tank-vehicles or transport units having one or more tanks carrying substances with UN Nos. 1202, 1203 or 1223, or aviation fuel classed under UN Nos. 1268 or 1863, but no other dangerous substance, the orange-coloured plates prescribed in 5.3.2.1.2 need not be affixed if the plates affixed to the front and rear in accordance with 5.3.2.1.1 bear the hazard identification number and the UN number prescribed for the most hazardous substance carried, i.e. the substance with the lowest flash-point.
- 5.3.2.1.4 When a hazard identification number is indicated in Column (20) of Table A of Chapter 3.2, transport units and containers carrying unpackaged solids or articles or packaged radioactive material with a single UN number required to be carried under exclusive use and no other dangerous goods shall in addition display on the sides of each transport unit or container, clearly visible and parallel to the longitudinal axis of the vehicle, orange-coloured plates identical with those prescribed in 5.3.2.1.1. These orange-coloured plates shall bear the hazard identification number and the UN number prescribed respectively in Columns (20) and (1) of table A of Chapter 3.2 for each of the substances carried in bulk in the transport unit or in the container or for the packaged radioactive material when required to be carried under exclusive use in the transport unit or in the container.
- 5.3.2.1.5 If the orange-coloured plates prescribed in 5.3.2.1.2 and 5.3.2.1.4 affixed to the containers, tank-containers, MEGCs or portable tanks are not clearly visible from outside the carrying vehicle, the same plates shall also be affixed to both sides of the vehicle.

NOTE: This paragraph need not be applied to the marking with orange coloured plates of closed and sheeted vehicles, carrying tanks with a maximum capacity of 3 000 litres.

- 5.3.2.1.6 For transport units carrying only one dangerous substance and no non-dangerous substance, the orange-coloured plates prescribed in 5.3.2.1.2, 5.3.2.1.4 and 5.3.2.1.5 shall not be necessary provided that those displayed at the front and rear in accordance with 5.3.2.1.1 bear the hazard identification number and the UN number for that substance prescribed respectively in Columns (20) and (1) of Table A of Chapter 3.2.
- 5.3.2.1.7 The requirements of 5.3.2.1.1 to 5.3.2.1.5 are also applicable to empty fixed or demountable tanks, battery-vehicles, tank-containers, portable tanks and MEGCs, uncleaned, not degassed or not decontaminated, MEMUs, uncleaned as well as to empty vehicles and containers for carriage in bulk, uncleaned or not decontaminated.
- 5.3.2.1.8 Orange-coloured marking which does not relate to dangerous goods carried, or residues thereof, shall be removed or covered. If plates are covered, the covering shall be total and remain effective after 15 minutes' engulfment in fire.

5.3.2.2 *Specifications for the orange-coloured plates*

- 5.3.2.2.1 The orange-coloured plates shall be reflectorized and shall be of 40 cm base and of 30 cm high; they shall have a black border of 15 mm wide. The material used shall be weather-resistant and ensure durable marking. The plate shall not become detached from its mount in the event of 15 minutes' engulfment in fire. It shall remain affixed irrespective of the orientation of the vehicle. The orange-coloured plates may be separated in their middle with a black horizontal line of 15 mm thickness.

If the size and construction of the vehicle are such that the available surface area is insufficient to affix these orange-coloured plates, their dimensions may be reduced to 300 mm for the base, 120 mm for the height and 10 mm for the black border. In that case, for a packaged radioactive material carried under exclusive use, only the UN number is required, and the size of the digits stipulated in 5.3.2.2.2 may be reduced to 65 mm in height and 10 mm in stroke thickness.

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For containers carrying dangerous solid substances in bulk and for tank-containers, MEGCs and portable tanks, the plates prescribed in 5.3.2.1.2, 5.3.2.1.4 and 5.3.2.1.5 may be replaced by a self-adhesive sheet, by paint or by any other equivalent process. This alternative marking shall conform to the specifications set in this sub-section except for the provisions concerning resistance to fire mentioned in 5.3.2.2.1 and 5.3.2.2.2.

NOTE: The colour of the orange plates in conditions of normal use should have chromaticity co-ordinates lying within the area on the chromaticity diagram formed by joining the following co-ordinates:

Chromaticity co-ordinates of points at the corners of the area on the chromaticity diagram				
x	0.52	0.52	0.578	0.618
y	0.38	0.40	0.422	0.38

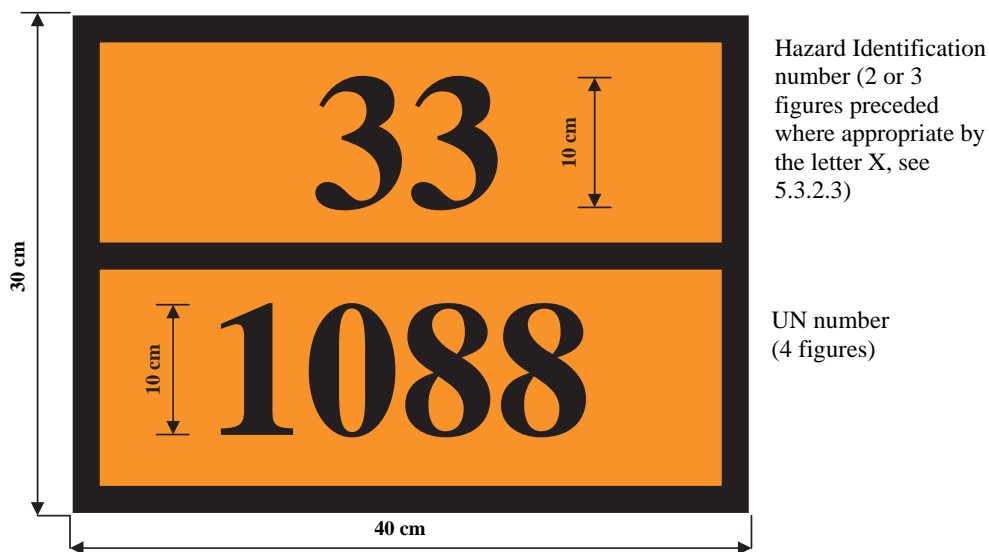
Luminance factor of reflectorized colour: $\beta > 0.12$.

Reference centre E, standard illuminant C, normal incidence 45°, viewed at 0°.

Co-efficient of reflex luminous intensity at an angle of illumination of 5°, viewed at 0.2°: not less than 20 candelas per lux per m².

- 5.3.2.2.2 The hazard identification number and the UN number shall consist of black digits 100 mm high and of 15 mm stroke thickness. The hazard-identification number shall be inscribed in the upper part of the plate and the UN number in the lower part; they shall be separated by a horizontal black line, 15 mm in stroke width, extending from side to side of the plate at mid-height (see 5.3.2.2.3). The hazard identification number and the UN number shall be indelible and shall remain legible after 15 minute' engulfment in fire. Interchangeable numbers and letters on plates presenting the hazard identification number and the UN number shall remain in place during carriage and irrespective of the orientation of the vehicle.

- 5.3.2.2.3 Example of orange-coloured plate with hazard identification number and UN number



Background orange.

Border, horizontal line and figures black, 15 mm thickness.

- 5.3.2.2.4 The permitted tolerances for dimensions specified in this sub-section are $\pm 10\%$.

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5.3.2.2.5 When the orange-coloured plate is affixed to folding panels, they shall be designed and secured so that they cannot unfold or come loose from the holder during carriage (especially as a result of impacts or unintentional actions).

5.3.2.3 *Meaning of hazard identification numbers*

5.3.2.3.1 The hazard identification number consists of two or three figures. In general, the figures indicate the following hazards:

- | | |
|---|--|
| 2 | Emission of gas due to pressure or to chemical reaction |
| 3 | Flammability of liquids (vapours) and gases or self-heating liquid |
| 4 | Flammability of solids or self-heating solid |
| 5 | Oxidizing (fire-intensifying) effect |
| 6 | Toxicity or risk of infection |
| 7 | Radioactivity |
| 8 | Corrosivity |
| 9 | Risk of spontaneous violent reaction |

NOTE: The risk of spontaneous violent reaction within the meaning of figure 9 include the possibility following from the nature of a substance of a risk of explosion, disintegration and polymerization reaction following the release of considerable heat or flammable and/or toxic gases.

Doubling of a figure indicates an intensification of that particular hazard.

Where the hazard associated with a substance can be adequately indicated by a single figure, this is followed by zero.

The following combinations of figures, however, have a special meaning: 22, 323, 333, 362, 382, 423, 44, 446, 462, 482, 539, 606, 623, 642, 823, 842, 90 and 99, see 5.3.2.3.2 below.

If a hazard identification number is prefixed by the letter "X", this indicates that the substance will react dangerously with water. For such substances, water may only be used by approval of experts.

For substances of Class 1, the classification code in accordance with Column (3 b) of Table A of Chapter 3.2, shall be used as the hazard identification number. The classification code consists of:

- the division number in accordance with 2.2.1.1.5; and
- the compatibility group letter in accordance with 2.2.1.1.6.

5.3.2.3.2 The hazard identification numbers listed in Column (20) of table A of Chapter 3.2 have the following meanings:

- | | |
|-----|---|
| 20 | asphyxiant gas or gas with no subsidiary risk |
| 22 | refrigerated liquefied gas, asphyxiant |
| 223 | refrigerated liquefied gas, flammable |
| 225 | refrigerated liquefied gas, oxidizing (fire-intensifying) |
| 23 | flammable gas |
| 238 | gas, flammable corrosive |
| 239 | flammable gas, which can spontaneously lead to violent reaction |
| 25 | oxidizing (fire-intensifying) gas |
| 26 | toxic gas |
| 263 | toxic gas, flammable |
| 265 | toxic gas, oxidizing (fire-intensifying) |
| 268 | toxic gas, corrosive |
| 28 | gas, corrosive |

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30	flammable liquid (flash-point between 23 °C and 60 °C, inclusive) or flammable liquid or solid in the molten state with a flash-point above 60 °C, heated to a temperature equal to or above its flash-point, or self-heating liquid
323	flammable liquid which reacts with water, emitting flammable gases
X323	flammable liquid which reacts dangerously with water, emitting flammable gases ¹
33	highly flammable liquid (flash-point below 23 °C)
333	pyrophoric liquid
X333	pyrophoric liquid which reacts dangerously with water ¹
336	highly flammable liquid, toxic
338	highly flammable liquid, corrosive
X338	highly flammable liquid, corrosive, which reacts dangerously with water ¹
339	highly flammable liquid which can spontaneously lead to violent reaction
36	flammable liquid (flash-point between 23 °C and 60 °C, inclusive), slightly toxic, or self-heating liquid, toxic
362	flammable liquid, toxic, which reacts with water, emitting flammable gases
X362	flammable liquid toxic, which reacts dangerously with water, emitting flammable gases ¹
368	flammable liquid, toxic, corrosive
38	flammable liquid (flash-point between 23 °C and 60 °C, inclusive), slightly corrosive or self-heating liquid, corrosive
382	flammable liquid, corrosive, which reacts with water, emitting flammable gases
X382	flammable liquid, corrosive, which reacts dangerously with water, emitting flammable gases ¹
39	flammable liquid, which can spontaneously lead to violent reaction
40	flammable solid, or self-reactive substance, or self-heating substance
423	solid which reacts with water, emitting flammable gases, or flammable solid which reacts with water, emitting flammable gases or self-heating solid which reacts with water, emitting flammable gases
X423	solid which reacts dangerously with water, emitting flammable gases, or flammable solid which reacts dangerously with water, emitting flammable gases, or self-heating solid which reacts dangerously with water, emitting flammable gases ¹
43	spontaneously flammable (pyrophoric) solid
X432	spontaneously flammable (pyrophoric) solid which reacts dangerously with water, emitting flammable gases ¹
44	flammable solid, in the molten state at an elevated temperature
446	flammable solid, toxic, in the molten state, at an elevated temperature
46	flammable or self-heating solid, toxic
462	toxic solid which reacts with water, emitting flammable gases
X462	solid which reacts dangerously with water, emitting toxic gases ¹
48	flammable or self-heating solid, corrosive
482	corrosive solid which reacts with water, emitting flammable gases
X482	solid which reacts dangerously with water, emitting corrosive gases ¹
50	oxidizing (fire-intensifying) substance
539	flammable organic peroxide
55	strongly oxidizing (fire-intensifying) substance
556	strongly oxidizing (fire-intensifying) substance, toxic
558	strongly oxidizing (fire-intensifying) substance, corrosive

¹ Water not to be used except by approval of experts.

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559	strongly oxidizing (fire-intensifying) substance, which can spontaneously lead to violent reaction
56	oxidizing substance (fire-intensifying), toxic
568	oxidizing substance (fire-intensifying), toxic, corrosive
58	oxidizing substance (fire-intensifying), corrosive
59	oxidizing substance (fire-intensifying) which can spontaneously lead to violent reaction
60	toxic or slightly toxic substance
606	infectious substance
623	toxic liquid, which reacts with water, emitting flammable gases
63	toxic substance, flammable (flash-point between 23 °C and 60 °C, inclusive)
638	toxic substance, flammable (flash-point between 23 °C and 60 °C, inclusive), corrosive
639	toxic substance, flammable (flash-point not above 60 °C) which can spontaneously lead to violent reaction
64	toxic solid, flammable or self-heating
642	toxic solid, which reacts with water, emitting flammable gases
65	toxic substance, oxidizing (fire-intensifying)
66	highly toxic substance
663	highly toxic substance, flammable (flash-point not above 60 °C)
664	highly toxic solid, flammable or self-heating
665	highly toxic substance, oxidizing (fire-intensifying)
668	highly toxic substance, corrosive
X668	highly toxic substance, corrosive, which reacts dangerously with water ¹
669	highly toxic substance which can spontaneously lead to violent reaction
68	toxic substance, corrosive
69	toxic or slightly toxic substance, which can spontaneously lead to violent reaction
70	radioactive material
78	radioactive material, corrosive
80	corrosive or slightly corrosive substance
X80	corrosive or slightly corrosive substance, which reacts dangerously with water ¹
823	corrosive liquid which reacts with water, emitting flammable gases
83	corrosive or slightly corrosive substance, flammable (flash-point between 23 °C and 60 °C, inclusive)
X83	corrosive or slightly corrosive substance, flammable, (flash-point between 23 °C and 60 °C, inclusive), which reacts dangerously with water ¹
839	corrosive or slightly corrosive substance, flammable (flash-point between 23 °C and 60 °C inclusive) which can spontaneously lead to violent reaction
X839	corrosive or slightly corrosive substance, flammable (flash-point between 23 °C and 60 °C inclusive), which can spontaneously lead to violent reaction and which reacts dangerously with water ¹
84	corrosive solid, flammable or self-heating
842	corrosive solid which reacts with water, emitting flammable gases
85	corrosive or slightly corrosive substance, oxidizing (fire-intensifying)
856	corrosive or slightly corrosive substance, oxidizing (fire-intensifying) and toxic
86	corrosive or slightly corrosive substance, toxic
88	highly corrosive substance
X88	highly corrosive substance, which reacts dangerously with water ¹
883	highly corrosive substance, flammable (flash-point between 23 °C and 60 °C inclusive)
884	highly corrosive solid, flammable or self-heating

¹ Water not to be used except by approval of experts.

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885	highly corrosive substance, oxidizing (fire-intensifying)
886	highly corrosive substance, toxic
X886	highly corrosive substance, toxic, which reacts dangerously with water ¹
89	corrosive or slightly corrosive substance, which can spontaneously lead to violent reaction
90	environmentally hazardous substance; miscellaneous dangerous substances
99	miscellaneous dangerous substance carried at an elevated temperature.

5.3.3 Mark for elevated temperature substances

Tank-vehicles, tank-containers, portable tanks, special vehicles or containers or especially equipped vehicles or containers for which a mark for elevated temperature substances is required according to special provision 580 in Column (6) of Table A of Chapter 3.2 shall bear on both sides and at the rear for vehicles, and on both sides and at each end for containers, tank-containers and portable tanks, a triangular shaped mark with sides of at least 250 mm, to be shown in red, as reproduced below.



5.3.4 *(Reserved)*

5.3.5 *(Reserved)*

5.3.6 Environmentally hazardous substance mark

When a placard is required to be displayed in accordance with the provisions of section 5.3.1, containers, MEGCs, tank-containers, portable tanks and vehicles containing environmentally hazardous substances meeting the criteria of 2.2.9.1.10 shall be marked with the environmentally hazardous substance mark shown in 5.2.1.8.3. The provisions of section 5.3.1 concerning placards shall apply mutatis mutandis to the mark.

¹ Water not to be used except by approval of experts.

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CHAPTER 5.4

DOCUMENTATION

5.4.0 General

5.4.0.1 Unless otherwise specified, any carriage of goods governed by ADR shall be accompanied by the documentation prescribed in this Chapter, as appropriate.

NOTE: For the list of documentation to be carried on board transport units, see 8.1.2.

5.4.0.2 The use of electronic data processing (EDP) or electronic data interchange (EDI) techniques as an aid to or instead of paper documentation is permitted, provided that the procedures used for the capture, storage and processing of electronics data meet the legal requirements as regards the evidential value and availability of data during transport in a manner at least equivalent to that of paper documentation.

5.4.0.3 When the dangerous goods transport information is given to the carrier by EDP or EDI techniques, the consignor shall be able to give the information to the carrier as a paper document, with the information in the sequence required by this Chapter.

5.4.1 Dangerous goods transport document and related information

5.4.1.1 General information required in the transport document

5.4.1.1.1 The transport document(s) shall contain the following information for each dangerous substance, material or article offered for carriage:

- (a) the UN number preceded by the letters "UN";
- (b) the proper shipping name supplemented, when applicable (see 3.1.2.8.1) with the technical name in brackets (see 3.1.2.8.1.1), as determined in accordance with 3.1.2;
- (c) - for substances and articles of Class 1: the classification code given in Column (3b) of Table A in Chapter 3.2.

When, in Column (5) of Table A in Chapter 3.2, label model numbers other than 1, 1.4, 1.5 and 1.6 are given, these label model numbers, in brackets, shall follow the classification code;

- for radioactive material of Class 7: the Class number: "7";

NOTE: For radioactive material with a subsidiary risk, see also special provision 172 in Chapter 3.3.

- for substances and articles of other classes: the label model numbers given in Column (5) of Table A in Chapter 3.2 or applicable according to a special provision referred to in Column (6). When more than one label model numbers are given, the numbers following the first one shall be given in brackets. For substances and articles for which no label model is given in Column (5) of Table A in Chapter 3.2, their class according to Column (3a) shall be given instead;

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- (d) where assigned, the packing group for the substance which may be preceded by the letters "PG" (e.g. "PG II"), or the initials corresponding to the words "Packing Group" in the languages used according to 5.4.1.4.1;

NOTE: For radioactive material of Class 7 with subsidiary risks, see special provision 172 (b) in Chapter 3.3.

- (e) the number and a description of the packages when applicable. UN packaging codes may only be used to supplement the description of the kind of package (e.g. one box (4G));

NOTE: The number, type and capacity of each inner packaging within the outer packaging of a combination packaging is not required to be indicated.

- (f) the total quantity of each item of dangerous goods bearing a different UN number, proper shipping name or, when applicable, packing group (as a volume or as a gross mass, or as a net mass as appropriate);

NOTE 1: In the case of intended application of 1.1.3.6, the total quantity of dangerous goods for each transport category shall be indicated in the transport document in accordance with 1.1.3.6.3.

NOTE 2: For dangerous goods in machinery or equipment specified in this Annex, the quantity indicated shall be the total quantity of dangerous goods contained therein in kilograms or litres as appropriate.

- (g) the name and address of the consignor;
- (h) the name and address of the consignee(s). With the agreement of the competent authorities of the countries concerned by the carriage, when dangerous goods are carried to be delivered to multiple consignees who cannot be identified at the start of the carriage, the words "Delivery Sale" may be given instead;
- (i) a declaration as required by the terms of any special agreement;
- (j) *(Reserved)*
- (k) where assigned, the tunnel restriction code given in Column (15) of Table A of Chapter 3.2, in capitals within parenthesis. The tunnel restriction code need not be added in the transport document where the carriage is known beforehand not to pass through a tunnel with restrictions for carriage of dangerous goods.

The location and order in which the elements of information required appear in the transport document is left optional, except that (a), (b), (c), (d) and (k) shall be shown in the order listed above (i.e. (a), (b), (c), (d), (k)) with no information interspersed, except as provided in ADR.

Examples of such permitted dangerous goods descriptions are:

**"UN 1098 ALLYL ALCOHOL, 6.1 (3), I, (C/D)" or
"UN 1098, ALLYL ALCOHOL, 6.1 (3), PG I, (C/D)"**

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5.4.1.1.2 The information required on a transport document shall be legible.

Although upper case is used in Chapter 3.1 and in Table A in Chapter 3.2 to indicate the elements which shall be part of the proper shipping name, and although upper and lower case are used in this Chapter to indicate the information required in the transport document, except for the provisions in 5.4.1.1.1 (k), the use of upper or of lower case for entering the information in the transport document is left optional.

5.4.1.1.3 *Special provisions for wastes*

If waste containing dangerous goods (other than radioactive wastes) is being carried, the proper shipping name shall be preceded by the word "**WASTE**", unless this term is part of the proper shipping name, e.g.:

"UN 1230 WASTE METHANOL, 3 (6.1), II, (D/E)", or
"UN 1230 WASTE METHANOL, 3 (6.1), PG II, (D/E)", or
"UN 1993 WASTE FLAMMABLE LIQUID, N.O.S. (toluene and ethyl alcohol), 3, II, (D/E)", or
"UN 1993 WASTE FLAMMABLE LIQUID, N.O.S. (toluene and ethyl alcohol), 3, PG II, (D/E)".

If the provision for waste as set out in 2.1.3.5.5 is applied, the following shall be added to the proper shipping name:

"WASTE IN ACCORDANCE WITH 2.1.3.5.5" (e.g. "UN 3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., 8, II, (E), WASTE IN ACCORDANCE WITH 2.1.3.5.5").

The technical name, as prescribed in Chapter 3.3, special provision 274, need not be added.

5.4.1.1.4 *(Deleted)*

5.4.1.1.5 *Special provisions for salvage packagings and salvage pressure receptacles*

When dangerous goods are carried in a salvage packaging or salvage pressure receptacle, the words "**SALVAGE PACKAGING**" or "**SALVAGE PRESSURE RECEPTACLE**" shall be added after the description of the goods in the transport document.

5.4.1.1.6 *Special provision for empty means of containment, uncleaned*

5.4.1.1.6.1 For empty means of containment, uncleaned, which contain the residue of dangerous goods of classes other than Class 7, the words "EMPTY, UNCLEANED" or "RESIDUE, LAST CONTAINED" shall be indicated before or after the dangerous goods description specified in 5.4.1.1.1 (a) to (d) and (k). Moreover, 5.4.1.1.1 (f) does not apply.

5.4.1.1.6.2 The special provision of 5.4.1.1.6.1 may be replaced with the provisions of 5.4.1.1.6.2.1, 5.4.1.1.6.2.2 or 5.4.1.1.6.2.3, as appropriate.

5.4.1.1.6.2.1 For empty packagings, uncleaned, which contain the residue of dangerous goods of classes other than Class 7, including empty uncleaned receptacles for gases with a capacity of not more than 1 000 litres, the particulars according to 5.4.1.1.1 (a), (b), (c), (d), (e) and (f) are replaced with "EMPTY PACKAGING", "EMPTY RECEPTACLE", "EMPTY IBC" or "EMPTY LARGE PACKAGING", as appropriate, followed by the information of the goods last loaded, as described in 5.4.1.1.1 (c).

See example as follows: "EMPTY PACKAGING, 6.1 (3)".

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In addition, in such a case, if the dangerous goods last loaded are goods of Class 2, the information prescribed in 5.4.1.1.1 (c) may be replaced by the number of the class "2".

- 5.4.1.1.6.2.2 For empty means of containment other than packagings, uncleaned, which contain the residue of dangerous goods of classes other than Class 7 and for empty uncleaned receptacles for gases with a capacity of more than 1 000 litres, the particulars according to 5.4.1.1.1 (a) to (d) and (k) are preceded by "EMPTY TANK-VEHICLE", "EMPTY DEMOUNTABLE TANK", "EMPTY TANK-CONTAINER", "EMPTY PORTABLE TANK", "EMPTY BATTERY-VEHICLE", "EMPTY MEGC", "EMPTY MEMU", "EMPTY VEHICLE", "EMPTY CONTAINER" or "EMPTY RECEPTACLE", as appropriate, followed by the words "LAST LOAD:". Moreover, paragraph 5.4.1.1.1 (f) does not apply.

See examples as follows:

"EMPTY TANK-VEHICLE, LAST LOAD: UN 1098 ALLYL ALCOHOL, 6.1 (3), I, (C/D)" or
"EMPTY TANK-VEHICLE, LAST LOAD: UN 1098 ALLYL ALCOHOL, 6.1 (3), PG I, (C/D)".

- 5.4.1.1.6.2.3 When empty means of containment, uncleaned, which contain the residue of dangerous goods of classes other than Class 7, are returned to the consignor, the transport documents prepared for the full-capacity carriage of these goods may also be used. In such cases, the indication of the quantity is to be eliminated (by effacing it, striking it out or any other means) and replaced by the words "EMPTY, UNCLEARED RETURN".

- 5.4.1.1.6.3 (a) If empty tanks, battery- vehicles and MEGCs, uncleaned, are carried to the nearest place where cleaning or repair can be carried out in accordance with the provisions of 4.3.2.4.3, the following additional entry shall be made in the transport document: "**Carriage in accordance with 4.3.2.4.3**".
- (b) If empty vehicles and containers, uncleaned, are carried to the nearest place where cleaning or repair can be carried out in accordance with the provisions of 7.5.8.1, the following additional entry shall be made in the transport document: "**Carriage in accordance with 7.5.8.1**".

- 5.4.1.1.6.4 For the carriage of fixed tanks (tank vehicles), demountable tanks, battery-vehicles, tank-containers and MEGCs under the conditions of 4.3.2.4.4, the following entry shall be included in the transport document: "Carriage in accordance with 4.3.2.4.4".

5.4.1.1.7 *Special provisions for carriage in a transport chain including maritime or air carriage*

For carriage in accordance with 1.1.4.2.1, a statement shall be included in the transport document, as follows: "**Carriage in accordance with 1.1.4.2.1**".

5.4.1.1.8 *(Reserved)*

5.4.1.1.9 *(Reserved)*

5.4.1.1.10 *(Deleted)*

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5.4.1.1.11 *Special provisions for the carriage of IBCs or portable tanks after the date of expiry of the last periodic test or inspection*

For carriage in accordance with 4.1.2.2 (b), 6.7.2.19.6 (b), 6.7.3.15.6 (b) or 6.7.4.14.6 (b), a statement to this effect shall be included in the transport document, as follows: "**Carriage in accordance with 4.1.2.2 (b)**", "**Carriage in accordance with 6.7.2.19.6 (b)**", "**Carriage in accordance with 6.7.3.15.6 (b)**" or "**Carriage in accordance with 6.7.4.14.6 (b)**" as appropriate.

5.4.1.1.12 *(Reserved)*

5.4.1.1.13 *Special provisions for carriage in multi-compartment tank-vehicles or transport units with more than one tank*

When by derogation from 5.3.2.1.2 a multi-compartment tank-vehicle or a transport unit with more than one tank is marked in accordance with 5.3.2.1.3, the substances contained in each tank or in each compartment of a tank shall be specified in the transport document.

5.4.1.1.14 *Special provisions for the carriage of substances carried under elevated temperature*

If the proper shipping name of a substance which is carried or offered for carriage in a liquid state at a temperature equal to or exceeding 100 °C, or in a solid state at a temperature equal to or exceeding 240 °C, does not convey the elevated temperature condition (for example, by using the term "MOLTEN" or "ELEVATED TEMPERATURE" as part of the proper shipping name), the word "**HOT**" shall immediately precede the proper shipping name.

5.4.1.1.15 *Special provisions for the carriage of substances stabilized by temperature control*

If the word "STABILIZED" is part of the proper shipping name (see also 3.1.2.6), when stabilization is by means of temperature control, the control and emergency temperatures (see 2.2.41.1.17) shall be indicated in the transport document, as follows:

"Control temperature:°C Emergency temperature: °C"

5.4.1.1.16 *Information required in accordance with special provision 640 in Chapter 3.3*

Where it is required by special provision 640 of Chapter 3.3, the transport document shall bear the inscription "**Special provision 640X**" where "X" is the capital letter appearing after the pertinent reference to special provision 640 in column (6) of Table A of Chapter 3.2.

5.4.1.1.17 *Special provisions for the carriage of solids in bulk containers conforming to 6.11.4*

When solid substances are carried in bulk containers conforming to 6.11.4, the following statement shall be shown on the transport document (see NOTE at the beginning of 6.11.4):

"Bulk container BK(x) approved by the competent authority of..."

5.4.1.1.18 *Special provisions for carriage of environmentally hazardous substances (aquatic environment)*

When a substance belonging to one of classes 1 to 9 meets the classification criteria of 2.2.9.1.10, the transport document shall bear the additional inscription "ENVIRONMENTALLY HAZARDOUS" or "MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS". This additional requirement does not apply to UN Nos. 3077 and 3082 or for the exceptions listed in 5.2.1.8.1.

The inscription "MARINE POLLUTANT" (according to 5.4.1.4.3 of the IMDG Code) is acceptable for carriage in a transport chain including maritime carriage.

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5.4.1.2 *Additional or special information required for certain classes*

5.4.1.2.1 *Special provisions for Class 1*

- (a) The transport document shall indicate, in addition to the requirements in 5.4.1.1.1 (f):
- the total net mass, in kg, of explosive contents ¹ for each substance or article bearing a different UN number;
 - the total net mass, in kg, of explosive contents ¹ for all substances and articles covered by the transport document;
- (b) For mixed packing of two different goods, the description of the goods in the transport document shall include the UN numbers and names printed in capitals in Columns (1) and (2) of Table A of Chapter 3.2 of both substances or articles. If more than two different goods are contained in the same package in conformity with the mixed packing provisions given in 4.1.10 special provisions MP1, MP2 and MP20 to MP24, the transport document shall indicate under the description of the goods the UN numbers of all the substances and articles contained in the package, in the form, "**Goods of UN Nos...**";
- (c) For the carriage of substances and articles assigned to an n.o.s. entry or the entry "0190 SAMPLES, EXPLOSIVE" or packed conforming to packing instruction P101 of 4.1.4.1, a copy of the competent authority approval with the conditions of carriage shall be attached to the transport document. It shall be drafted in an official language of the forwarding country and also, if that language is not English, French or German, in English, French or German unless agreements, if any, concluded between the countries concerned in the transport operation provide otherwise;
- (d) If packages containing substances and articles of compatibility groups B and D are loaded together in the same vehicle in accordance with the requirements of 7.5.2.2, a copy of the competent authority approval of the protective compartment or containment system in accordance with 7.5.2.2, note ^a under the table, shall be attached to the transport document. It shall be drafted in an official language of the forwarding country and also, if that language is not English, French or German, in English, French or German unless agreements, if any, concluded between the countries concerned in the transport operation provide otherwise;
- (e) When explosive substances or articles are carried in packagings conforming to packing instruction P101, the transport document shall bear the inscription "**Packaging approved by the competent authority of ...**" (see 4.1.4.1, packing instruction P101);
- (f) *(Reserved)*
- (g) When fireworks of UN Nos. 0333, 0334, 0335, 0336 and 0337 are carried, the transport document shall bear the inscription:

"Classification of fireworks by the competent authority of XX with the firework reference XX/YYZZZZ".

The classification approval certificate need not be carried with the consignment, but shall be made available by the consignor to the carrier or the competent authorities for control purposes. The classification approval certificate or a copy of it shall be in an official language of the forwarding country, and also, if that language is not German, English or French, in German, English or French.

¹ For articles, "explosive contents" means the explosive substance contained in the article.

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NOTE 1: *The commercial or technical name of the goods may be entered additionally to the proper shipping name in the transport document.*

NOTE 2: *The classification reference(s) shall consist of the ADR Contracting Party in which the classification code according to special provision 645 of 3.3.1 was approved, indicated by the distinguishing sign for motor vehicles in international traffic (XX)², the competent authority identification (YY) and a unique serial reference (ZZZZ). Examples of such classification references are:*

*GB/HSE123456
D/BAM1234.*

5.4.1.2.2 *Additional provisions for Class 2*

- (a) For the carriage of mixtures (see 2.2.2.1.1) in tanks (demountable tanks, fixed tanks, portable tanks, tank-containers or elements of battery-vehicles or of MEGCs), the composition of the mixture as a percentage of the volume or as a percentage of the mass shall be given. Constituents below 1% need not be indicated (see also 3.1.2.8.1.2). The composition of the mixture need not be given when the technical names authorized by special provisions 581, 582 or 583 are used to supplement the proper shipping name;
- (b) For the carriage of cylinders, tubes, pressure drums, cryogenic receptacles and bundles of cylinders under the conditions of 4.1.6.10, the following entry shall be included in the transport document: "**Carriage in accordance with 4.1.6.10**".

5.4.1.2.3 *Additional provisions for self-reactive substances of Class 4.1 and organic peroxides of Class 5.2*

5.4.1.2.3.1 For self-reactive substances of Class 4.1 and for organic peroxides of Class 5.2 that require temperature control during carriage (for self-reactive substances see 2.2.41.1.17; for organic peroxides, see 2.2.52.1.15 to 2.2.52.1.17), the control and emergency temperatures shall be indicated in the transport document, as follows:

"Control temperature: ... °C Emergency temperature: ... °C".

5.4.1.2.3.2 When for certain self-reactive substances of Class 4.1 and certain organic peroxides of Class 5.2 the competent authority has permitted the label conforming to model No.1 to be dispensed with for a specific packaging (see 5.2.2.1.9), a statement to this effect shall be included in the transport document, as follows:

"The label conforming to model No. 1 is not required".

5.4.1.2.3.3 When organic peroxides and self-reactive substances are carried under conditions where approval is required (for organic peroxides see 2.2.52.1.8, 4.1.7.2.2 and special provision TA2 of 6.8.4; for self-reactive substances see 2.2.41.1.13 and 4.1.7.2.2, a statement to his effect shall be included in the transport document, e.g. "**Carriage in accordance with 2.2.52.1.8**".

² *Distinguishing sign for motor vehicles in international traffic prescribed in the Vienna Convention on Road Traffic (1968).*

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A copy of the competent authority approval with the conditions of carriage shall be attached to the transport document. It shall be drafted in an official language of the forwarding country and also, if that language is not English, French or German, in English, French or German unless agreements, if any, concluded between the countries concerned in the transport operation provide otherwise.

5.4.1.2.3.4 When a sample of an organic peroxide (see 2.2.52.1.9) or a self-reactive substance (see 2.2.41.1.15) is carried, a statement to this effect shall be included in the transport document, e.g. "**Carriage in accordance with 2.2.52.1.9**".

5.4.1.2.3.5 When self-reactive substances type G (see Manual of Tests and Criteria, Part II, paragraph 20.4.2 (g)) are carried, the following statement may be given in the transport document: "**Not a self-reactive substance of Class 4.1**".

When organic peroxides type G (see Manual of Tests and Criteria, Part II, paragraph 20.4.3 (g)) are carried, the following statement may be given in the transport document: "**Not a substance of Class 5.2**".

5.4.1.2.4 *Additional provisions for Class 6.2*

In addition to the information concerning the consignee (see 5.4.1.1.1 (h)), the name and telephone number of a responsible person shall be indicated.

5.4.1.2.5 *Additional provisions for Class 7*

5.4.1.2.5.1 The following information shall be inserted in the transport document for each consignment of Class 7 material, as applicable, in the order given and immediately after the information required under 5.4.1.1.1 (a) to (c) and (k):

- (a) The name or symbol of each radionuclide or, for mixtures of radionuclides, an appropriate general description or a list of the most restrictive nuclides;
- (b) A description of the physical and chemical form of the material, or a notation that the material is special form radioactive material or low dispersible radioactive material. A generic chemical description is acceptable for chemical form. For radioactive material with a subsidiary risk, see last sentence of special provision 172 of Chapter 3.3;
- (c) The maximum activity of the radioactive contents during carriage expressed in becquerels (Bq) with an appropriate SI prefix symbol (see 1.2.2.1). For fissile material, the mass of fissile material (or mass of each fissile nuclide for mixtures when appropriate) in grams (g), or appropriate multiples thereof, may be used in place of activity;
- (d) The category of the package, i.e. I-WHITE, II-YELLOW, III-YELLOW;
- (e) The transport index (categories II-YELLOW and III-YELLOW only);
- (f) For consignments including fissile material other than consignments excepted under 6.4.11.2, the criticality safety index;
- (g) The identification mark for each competent authority approval certificate (special form radioactive material, low dispersible radioactive material, special arrangement, package design, or shipment) applicable to the consignment;
- (h) For consignments of more than one package, the information required in 5.4.1.1.1 and in (a) to (g) above shall be given for each package. For packages in an overpack, container, or vehicle, a detailed statement of the contents of each package within the overpack, container, or vehicle and, where appropriate, of each overpack, container, or

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vehicle shall be included. If packages are to be removed from the overpack, container, or vehicle at a point of intermediate unloading, appropriate transport documents shall be made available;

- (i) Where a consignment is required to be shipped under exclusive use, the statement "**EXCLUSIVE USE SHIPMENT**"; and
- (j) For LSA-II and LSA-III substances, SCO-I and SCO-II, the total activity of the consignment as a multiple of A_2 . For radioactive material for which the A_2 value is unlimited, the multiple of A_2 shall be zero.

5.4.1.2.5.2 The consignor shall provide in the transport documents a statement regarding actions, if any, that are required to be taken by the carrier. The statement shall be in the languages deemed necessary by the carrier or the authorities concerned, and shall include at least the following information:

- (a) Supplementary requirements for loading, stowage, carriage, handling and unloading of the package, overpack or container including any special stowage provisions for the safe dissipation of heat (see special provision CV33 (3.2) of 7.5.11), or a statement that no such requirements are necessary;
- (b) Restrictions on the mode of carriage or vehicle and any necessary routing instructions;
- (c) Emergency arrangements appropriate to the consignment.

5.4.1.2.5.3 In all cases of international carriage of packages requiring competent authority design or shipment approval, for which different approval types apply in the different countries concerned by the shipment, the UN number and proper shipping name required in 5.4.1.1.1 shall be in accordance with the certificate of the country of origin of design.

5.4.1.2.5.4 The applicable competent authority certificates need not necessarily accompany the consignment. The consignor shall make them available to the carrier(s) before loading and unloading.

5.4.1.3 *(Reserved)*

5.4.1.4 *Format and language*

5.4.1.4.1 The document containing the information in 5.4.1.1 and 5.4.1.2 may be that already required by other regulations in force for carriage by another mode of carriage. In case of multiple consignees, the name and address of the consignees and the quantities delivered enabling the nature and quantities carried to be evaluated at any time, may be entered in other documents which are to be used or in any other documents made mandatory according to other specific regulations and which shall be on board the vehicle.

The particulars to be entered in the document shall be drafted in an official language of the forwarding country, and also, if that language is not English, French, or German, in English, French or German, unless international road carriage tariffs, if any, or agreements concluded between the countries concerned in the transport operation, provide otherwise.

5.4.1.4.2 If by reason of the size of the load, a consignment cannot be loaded in its entirety on a single transport unit, at least as many separate documents, or copies of the single document, shall be made out as transport units loaded. Furthermore, in all cases, separate transport documents shall be made out for consignments or parts of consignments which may not be loaded together on the same vehicle by reason of the prohibitions set forth in 7.5.2.

The information relative to the hazards of the goods to be carried (as indicated in 5.4.1.1) may be incorporated in, or combined with, an existing transport or cargo handling document.

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The layout of the information in the document (or the order of transmission of the corresponding data by electronic data processing (EDP) or electronic data interchange (EDI) techniques) shall be as provided in 5.4.1.1.1.

When an existing transport document or cargo handling document cannot be used for the purposes of dangerous goods documentation for multimodal transport, the use of documents corresponding to the example shown in 5.4.5 is considered advisable³.

5.4.1.5 *Non-dangerous goods*

When goods mentioned by name in Table A of Chapter 3.2, are not subject to ADR because they are considered as non-dangerous according to Part 2, the consignor may enter in the transport document a statement to that effect, e.g.: "**Not goods of Class ...**"

NOTE: *This provision may be used in particular when the consignor considers that, due to the chemical nature of the goods (e.g. solutions and mixtures) carried or to the fact that such goods are deemed dangerous for other regulatory purposes the consignment might be subject to control during the journey.*

³ *If used, the relevant recommendations of the UNECE United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) may be consulted, in particular Recommendation No. 1 (United Nations Layout Key for Trade Documents) (ECE/TRADE/137, edition 81.3), UN Layout Key for Trade Documents - Guidelines for Applications (ECE/TRADE/270, edition 2002), Recommendation No. 11 (Documentary Aspects of the International Transport of Dangerous Goods) (ECE/TRADE/204, edition 96.1 – currently under revision) and Recommendation No. 22 (Layout Key for Standard Consignment Instructions) (ECE/TRADE/168, edition 1989). Refer also to the UN/CEFACT Summary of Trade Facilitation Recommendations (ECE/TRADE/346, edition 2006) and the United Nations Trade Data Elements Directory (UNTDDED) (ECE/TRADE/362, edition 2005).*

5.4.2 Large container or vehicle packing certificate

If the carriage of dangerous goods in a large container precedes a voyage by sea, a container packing certificate conforming to section 5.4.2 of the IMDG Code⁴ shall be provided with the transport document⁵.

The functions of the transport document required under 5.4.1 and of the container packing certificate as provided above may be incorporated into a single document; if not, these documents shall be attached one to the other. If these functions are incorporated into a single document, the inclusion in the transport document of a statement that the loading of the container has been carried out in accordance with the applicable modal regulations together with the identification of the person responsible for the container packing certificate shall be sufficient.

NOTE: *The container packing certificate is not required for portable tanks, tank-containers and MEGCs.*

⁴ Guidelines for use in practice and in training for loading goods in transport units have also been drawn up by the International Maritime Organization (IMO), the International Labour Organization (ILO) and the United Nations Economic Commission for Europe (UNECE) and have been published by IMO ("IMO/ILO/UNECE Guidelines for Packing of Cargo Transport Units (CTUs)").

⁵ Section 5.4.2 of the IMDG Code requires the following:

5.4.2 Container/vehicle packing certificate

5.4.2.1 When dangerous goods are packed or loaded into any container or vehicle, those responsible for packing the container or vehicle shall provide a "container/vehicle packing certificate" specifying the container/vehicle identification number(s) and certifying that the operation has been carried out in accordance with the following conditions:

- .1 The container/vehicle was clean, dry and apparently fit to receive the goods;
- .2 Packages, which need to be segregated in accordance with applicable segregation requirements, have not been packed together onto or in the container/vehicle [unless approved by the competent authority concerned in accordance with 7.2.2.3 (of the IMDG Code)];
- .3 All packages have been externally inspected for damage, and only sound packages have been loaded;
- .4 Drums have been stowed in an upright position, unless otherwise authorized by the competent authority, and all goods have been properly loaded, and, where necessary, adequately braced with securing material to suit the mode(s) of transport for the intended journey;
- .5 Goods loaded in bulk have been evenly distributed within the container/vehicle;
- .6 For consignments including goods of class 1, other than division 1.4, the container/vehicle is structurally serviceable in conformity with 7.4.6 (of the IMDG Code);
- .7 The container/vehicle and packages are properly marked, labelled, and placarded, as appropriate;
- .8 When solid carbon dioxide (CO₂-dry ice) is used for cooling purposes, the container/vehicle is externally marked or labelled in a conspicuous place, such as, at the door end, with the words: "DANGEROUS CO₂ GAS (DRY ICE) INSIDE. VENTILATE THOROUGHLY BEFORE ENTERING"; and
- .9 A dangerous goods transport document, as indicated in 5.4.1 (of the IMDG Code) has been received for each dangerous goods consignment loaded in the container/vehicle.

NOTE: *The container/vehicle packing certificate is not required for tanks*

5.4.2.2 The information required in the dangerous goods transport document and the container/vehicle packing certificate may be incorporated into a single document; if not, these documents shall be attached one to the other. If the information is incorporated into a single document, the document shall include a signed declaration such as "It is declared that the packing of the goods into the container/vehicle has been carried out in accordance with the applicable provisions". This declaration shall be dated and the person signing this declaration shall be identified on the document. Facsimile signatures are acceptable where applicable laws and regulations recognize the legal validity of facsimile signatures.

5.4.2.3 If the container/vehicle packing certificate is presented to the carrier by means of EDP or EDI transmission techniques, the signature(s) may be electronic signature(s) or may be replaced by the name(s) (in capitals) of the person authorized to sign.

5.4.2.4 When the container/vehicle packing certificate is given to a carrier by EDP or EDI techniques and subsequently the dangerous goods are transferred to a carrier that requires a paper dangerous goods transport document, the carrier shall ensure that the paper document indicates "Original received electronically" and the name of the signatory shall be shown in capital letters.

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5.4.3 Instructions in writing

- 5.4.3.1 As an aid during an accident emergency situation that may occur or arise during carriage, instructions in writing in the form specified in 5.4.3.4 shall be carried in the vehicle crew's cab and shall be readily available.
- 5.4.3.2 These instructions shall be provided by the carrier to the vehicle crew in language(s) that each member can read and understand before the commencement of the journey. The carrier shall ensure that each member of the vehicle crew concerned understands and is capable of carrying out the instructions properly.
- 5.4.3.3 Before the start of the journey, the members of the vehicle crew shall inform themselves of the dangerous goods loaded and consult the instructions in writing for details on actions to be taken in the event of an accident or emergency.
- 5.4.3.4 The instructions in writing shall correspond to the following four page model as regards its form and contents.

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INSTRUCTIONS IN WRITING ACCORDING TO ADR

Actions in the event of an accident or emergency





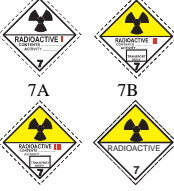



In the event of an accident or emergency that may occur or arise during carriage, the members of the vehicle crew shall take the following actions where safe and practicable to do so:

- Apply the braking system, stop the engine and isolate the battery by activating the master switch where available;
- Avoid sources of ignition, in particular, do not smoke or switch on any electrical equipment;
- Inform the appropriate emergency services, giving as much information about the incident or accident and substances involved as possible;
- Put on the warning vest and place the self-standing warning signs as appropriate;
- Keep the transport documents readily available for responders on arrival;
- Do not walk into or touch spilled substances and avoid inhalation of fumes, smoke, dusts and vapours by staying up wind;
- Where appropriate and safe to do so, use the fire extinguishers to put out small/initial fires in tyres, brakes and engine compartments;
- Fires in load compartments shall not be tackled by members of the vehicle crew;
- Where appropriate and safe to do so, use on-board equipment to prevent leakages into the aquatic environment or the sewage system and to contain spillages;
- Move away from the vicinity of the accident or emergency, advise other persons to move away and follow the advice of the emergency services;
- Remove any contaminated clothing and used contaminated protective equipment and dispose of it safely.

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Additional guidance to members of the vehicle crew on the hazard characteristics of dangerous goods by class and on actions subject to prevailing circumstances		
Danger labels and placards	Hazard characteristics	Additional guidance
(1)	(2)	(3)
Explosive substances and articles  1 1.5 1.6	May have a range of properties and effects such as mass detonation; projection of fragments; intense fire/heat flux; formation of bright light, loud noise or smoke. Sensitive to shocks and/or impacts and/or heat.	Take cover but stay away from windows.
Explosive substances and articles  1.4	Slight risk of explosion and fire.	Take cover.
Flammable gases  2.1	Risk of fire. Risk of explosion. May be under pressure. Risk of asphyxiation. May cause burns and/or frostbite. Containments may explode when heated.	Take cover. Keep out of low areas.
Non-flammable, non-toxic gases  2.2	Risk of asphyxiation. May be under pressure. May cause frostbite. Containments may explode when heated.	Take cover. Keep out of low areas.
Toxic gases  2.3	Risk of intoxication. May be under pressure. May cause burns and/or frostbite. Containments may explode when heated.	Use emergency escape mask. Take cover. Keep out of low areas.
Flammable liquids  3	Risk of fire. Risk of explosion. Containments may explode when heated.	Take cover. Keep out of low areas.
Flammable solids, self-reactive substances and solid desensitized explosives  4.1	Risk of fire. Flammable or combustible, may be ignited by heat, sparks or flames. May contain self-reactive substances that are liable to exothermic decomposition in the case of heat supply, contact with other substances (such as acids, heavy-metal compounds or amines), friction or shock. This may result in the evolution of harmful and flammable gases or vapours or self-ignition. Containments may explode when heated. Risk of explosion of desensitized explosives after loss of desensitizer.	
Substances liable to spontaneous combustion  4.2	Risk of fire by spontaneous combustion if packages are damaged or contents are spilled. May react vigorously with water	
Substances which, in contact with water, emit flammable gases  4.3	Risk of fire and explosion in contact with water.	Spilled substances should be kept dry by covering the spillages.



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Danger labels and placards (1)	Hazard characteristics (2)	Additional guidance (3)
Oxidizing substances  5.1	Risk of vigorous reaction, ignition and explosion in contact with combustible or flammable substances.	Avoid mixing with flammable or combustible substances (e.g. sawdust).
Organic peroxides  5.2	Risk of exothermic decomposition at elevated temperatures, contact with other substances (such as acids, heavy-metal compounds or amines), friction or shock. This may result in the evolution of harmful and flammable gases or vapours or self-ignition.	Avoid mixing with flammable or combustible substances (e.g. sawdust).
Toxic substances  6.1	Risk of intoxication by inhalation, skin contact or ingestion. Risk to the aquatic environment or the sewerage system.	Use emergency escape mask.
Infectious substances  6.2	Risk of infection. May cause serious disease in humans or animals. Risk to the aquatic environment or the sewerage system.	
Radioactive material  7A 7B 7C 7D	Risk of intake and external radiation.	Limit time of exposure.
Fissile material  7E	Risk of nuclear chain reaction.	
Corrosive substances  8	Risk of burns by corrosion. May react vigorously with each other, with water and with other substances. Spilled substance may evolve corrosive vapours. Risk to the aquatic environment or the sewerage system.	
Miscellaneous dangerous substances and articles  9	Risk of burns. Risk of fire. Risk of explosion. Risk to the aquatic environment or the sewerage system.	

NOTE 1: For dangerous goods with multiple risks and for mixed loads, each applicable entry shall be observed.

NOTE 2: Additional guidance shown above may be adapted to reflect the classes of dangerous goods to be carried and their means of transport.

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Additional guidance to members of the vehicle crew on the hazard characteristics of dangerous goods, indicated by marks, and on actions subject to prevailing circumstances		
Mark (1)	Hazard characteristics (2)	Additional guidance (3)
 Environmentally hazardous substances	Risk to the aquatic environment or the sewerage system	
 Elevated temperature substances	Risk of burns by heat.	Avoid contact with hot parts of the transport unit and the spilled substance.

**Equipment for personal and general protection
to carry out general actions and hazard specific emergency actions
to be carried on board the vehicle in accordance with section 8.1.5 of ADR**

The following equipment shall be carried on board the transport unit:

- for each vehicle, a wheel chock of a size suited to the maximum mass of the vehicle and to the diameter of the wheel;
- two self-standing warning signs;
- eye rinsing liquid^a; and

for each member of the vehicle crew

- a warning vest (e.g. as described in the EN 471 standard);
- portable lighting apparatus;
- a pair of protective gloves; and
- eye protection (e.g. protective goggles).

Additional equipment required for certain classes:

- an emergency escape mask^b for each member of the vehicle crew shall be carried on board the vehicle for danger label numbers 2.3 or 6.1;
- a shovel^c;
- a drain seal^c;
- a collecting container^c.

^a Not required for danger label numbers 1, 1.4, 1.5, 1.6, 2.1, 2.2 and 2.3.

^b For example an emergency escape mask with a combined gas/dust filter of the A1B1E1K1-P1 or A2B2E2K2-P2 type which is similar to that described in the EN 141 standard.

^c Only required for solids and liquids with danger label numbers 3, 4.1, 4.3, 8 or 9.

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5.4.4 Retention of dangerous goods transport information

5.4.4.1 The consignor and the carrier shall retain a copy of the dangerous goods transport document and additional information and documentation as specified in ADR, for a minimum period of three months.

5.4.4.2 When the documents are kept electronically or in a computer system, the consignor and the carrier shall be able to reproduce them in a printed form.

5.4.5 Example of a multimodal dangerous goods form

Example of a form which may be used as a combined dangerous goods declaration and container packing certificate for multimodal carriage of dangerous goods.

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MULTIMODAL DANGEROUS GOODS FORM

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1. Shipper / Consignor /Sender		2. Transport document number			
		3. Page 1 of Pages	4. Shipper's reference		
		5. Freight Forwarder's reference			
6. Consignee		7. Carrier (to be completed by the carrier)			
		SHIPPER'S DECLARATION I hereby declare that the contents of this consignment are fully and accurately described below by the proper shipping name, and are classified, packaged, marked and labeled /placarded and are in all respects in proper condition for transport according to the applicable international and national governmental regulations.			
8. This shipment is within the limitations prescribed for: (Delete non-applicable) PASSENGER AND CARGO AIRCRAFT ONLY CARGO AIRCRAFT		9. Additional handling information			
10. Vessel / flight no. and date	11. Port / place of loading				
12. Port / place of discharge	13. Destination				
14. Shipping marks		* Number and kind of packages; description of goods	Gross mass (kg)	Net mass	Cube (m ³)
15. Container identification No./ vehicle registration No.		16. Seal number (s)	17. Container/vehicle size & type	18. Tare (kg)	19. Total gross mass (including tare) (kg)
CONTAINER/VEHICLE PACKING CERTIFICATE I hereby declare that the goods described above have been packed/loaded into the container/vehicle identified above in accordance with the applicable provisions ** MUST BE COMPLETED AND SIGNED FOR ALL CONTAINER/VEHICLE LOADS BY PERSON RESPONSIBLE FOR PACKING/LOADING		21. RECEIVING ORGANISATION RECEIPT Received the above number of packages/containers/trailers in apparent good order and condition unless stated hereon: RECEIVING ORGANISATION REMARKS:			
20. Name of company		Haulier's name		22. Name of company (OF SHIPPER PREPARING THIS NOTE)	
Name / Status of declarant		Vehicle reg. no.		Name / Status of declarant	
Place and date		Signature and date		Place and date	
Signature of declarant		DRIVER'S SIGNATURE		Signature of declarant	

* FOR DANGEROUS GOODS: you must specify: UN no., proper shipping name, hazard class, packing group (where assigned) and any other element of information required under applicable national and international regulations

BLACK HATCHINGS BLACK HATCHINGS

** See 5.4.2.

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CHAPTER 5.5

SPECIAL PROVISIONS

5.5.1 *(Deleted)*

5.5.2 **Special provisions applicable to fumigated cargo transport units (UN 3359)**

5.5.2.1 **General**

5.5.2.1.1 Fumigated cargo transport units (UN 3359) containing no other dangerous goods are not subject to any provisions of ADR other than those of this section.

NOTE: For the purposes of this Chapter, cargo transport unit means a vehicle, a container, a tank-container, a portable tank or a MEGC.

5.5.2.1.2 When the fumigated cargo transport unit is loaded with dangerous goods in addition to the fumigant, any provision of ADR relevant to these goods (including placarding, marking and documentation) applies in addition to the provisions of this section.

5.5.2.1.3 Only cargo transport units that can be closed in such a way that the escape of gas is reduced to a minimum shall be used for the carriage of cargo under fumigation.

5.5.2.2 **Training**

Persons engaged in the handling of fumigated cargo transport units shall be trained commensurate with their responsibilities.

5.5.2.3 **Marking and placarding**

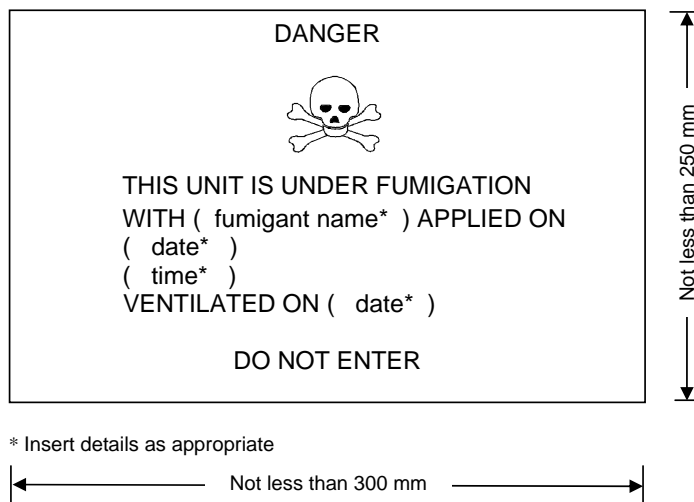
5.5.2.3.1 A fumigated cargo transport unit shall be marked with a warning mark, as specified in 5.5.2.3.2, affixed at each access point in a location where it will be easily seen by persons opening or entering the cargo transport unit. This mark shall remain on the cargo transport unit until the following provisions are met:

- (a) The fumigated cargo transport unit has been ventilated to remove harmful concentrations of fumigant gas; and
- (b) The fumigated goods or materials have been unloaded.

5.5.2.3.2 The fumigation warning mark shall be rectangular and shall not be less than 300 mm wide and 250 mm high. The markings shall be in black print on a white background with lettering not less than 25 mm high. An illustration of this mark is given in the figure below.

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Fumigation warning mark



5.5.2.3.3 If the fumigated cargo transport unit has been completely ventilated either by opening the doors of the unit or by mechanical ventilation after fumigation, the date of ventilation shall be marked on the fumigation warning mark.

5.5.2.3.4 When the fumigated cargo transport unit has been ventilated and unloaded, the fumigation warning mark shall be removed.

5.5.2.3.5 Placards conforming to model No. 9 (see 5.2.2.2.2) shall not be affixed to a fumigated cargo transport unit except as required for other Class 9 substances or articles packed therein.

5.5.2.4 *Documentation*

5.5.2.4.1 Documents associated with the carriage of cargo transport units that have been fumigated and have not been completely ventilated before carriage shall include the following information:

- "UN 3359, fumigated cargo transport unit, 9", or "UN 3359, fumigated cargo transport unit, Class 9";

- The date and time of fumigation; and

- The type and amount of the fumigant used.

These particulars shall be drafted in an official language of the forwarding country and also, if the language is not English, French or German, in English, French or German, unless agreements, if any, concluded between the countries concerned in the transport operation provide otherwise.

5.5.2.4.2 The documents may be in any form, provided they contain the information required in 5.5.2.4.1. This information shall be easy to identify, legible and durable.

5.5.2.4.3 Instructions for disposal of any residual fumigant including fumigation devices (if used) shall be provided.

5.5.2.4.4 A document is not required when the fumigated cargo transport unit has been completely ventilated and the date of ventilation has been marked on the warning mark (see 5.5.2.3.3 and 5.5.2.3.4).

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5.5.3 Special provisions applicable to packages and vehicles and containers containing substances presenting a risk of asphyxiation when used for cooling or conditioning purposes (such as dry ice (UN 1845) or nitrogen, refrigerated liquid (UN 1977) or argon, refrigerated liquid (UN 1951))

5.5.3.1 *Scope*

5.5.3.1.1 This section is not applicable to substances which may be used for cooling or conditioning purposes when carried as a consignment of dangerous goods. When they are carried as a consignment, these substances shall be carried under the relevant entry of Table A in Chapter 3.2 in accordance with the associated conditions of carriage.

5.5.3.1.2 This section is not applicable to gases in cooling cycles.

5.5.3.1.3 Dangerous goods used for cooling or conditioning tanks or MEGCs during carriage are not subject to this section.

5.5.3.2 *General*

5.5.3.2.1 Vehicles and containers containing substances used for cooling or conditioning purposes (other than fumigation) during carriage are not subject to any provisions of ADR other than those of this section.

5.5.3.2.2 When dangerous goods are loaded in cooled or conditioned vehicles and containers any provisions of ADR relevant to these dangerous goods apply in addition to the provisions of this section.

5.5.3.2.3 (Reserved)

5.5.3.2.4 Persons engaged in the handling or carriage of cooled or conditioned vehicles and containers shall be trained commensurate with their responsibilities.

5.5.3.3 *Packages containing a coolant or conditioner*

5.5.3.3.1 Packaged dangerous goods requiring cooling or conditioning assigned to packing instructions P203, P620, P650, P800, P901 or P904 of 4.1.4.1 shall meet the appropriate requirements of that packing instruction.

5.5.3.3.2 For packaged dangerous goods requiring cooling or conditioning assigned to other packing instructions, the packages shall be capable of withstanding very low temperatures and shall not be affected or significantly weakened by the coolant or conditioner. Packages shall be designed and constructed to permit the release of gas to prevent a build-up of pressure that could rupture the packaging. The dangerous goods shall be packed in such a way as to prevent movement after the dissipation of any coolant or conditioner.

5.5.3.3.3 Packages containing a coolant or conditioner shall be carried in well ventilated vehicles and containers.

5.5.3.4 *Marking of packages containing a coolant or conditioner*

5.5.3.4.1 Packages containing dangerous goods used for cooling or conditioning shall be marked with the name indicated in Column (2) of Table A of Chapter 3.2 of these dangerous goods followed by the words "AS COOLANT" or "AS CONDITIONER" as appropriate in an official language of the country of origin and also, if that language is not English, French or German, in English, French or German, unless agreements concluded between the countries concerned in the transport operation provide otherwise.

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5.5.3.4.2 The markings shall be durable, legible and placed in such a location and of such a size relative to the package as to be readily visible.

5.5.3.5 *Vehicles and containers containing unpackaged dry ice*

5.5.3.5.1 If dry ice in unpackaged form is used, it shall not come into direct contact with the metal structure of a vehicle or container to avoid embrittlement of the metal. Measures shall be taken to provide adequate insulation between the dry ice and the vehicle or container by providing a minimum of 30 mm separation (e.g. by using suitable low heat conducting materials such as timber planks, pallets etc).

5.5.3.5.2 Where dry ice is placed around packages, measures shall be taken to ensure that packages remain in the original position during carriage after the dry ice has dissipated.

5.5.3.6 *Marking of vehicles and containers*

5.5.3.6.1 Vehicles and containers containing dangerous goods used for cooling or conditioning shall be marked with a warning mark, as specified in 5.5.3.6.2 affixed at each access point in a location where it will be easily seen by persons opening or entering the vehicle or container. This mark shall remain on the vehicle or container until the following provisions are met:

- (a) The vehicle or container has been ventilated to remove harmful concentrations of coolant or conditioner; and
- (b) The cooled or conditioned goods have been unloaded.

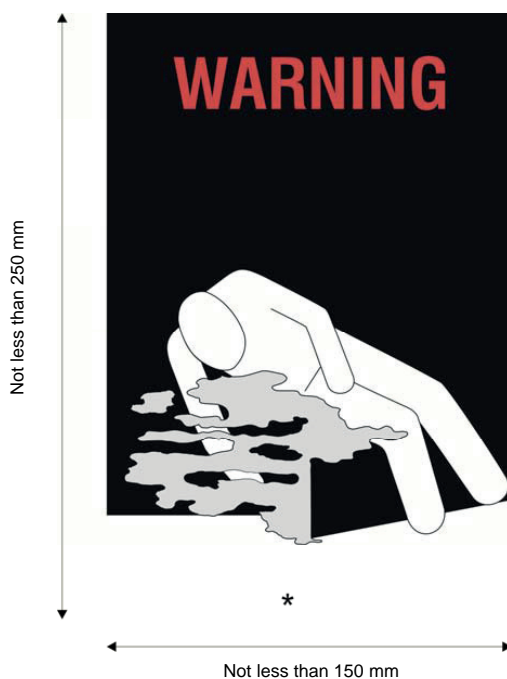
5.5.3.6.2 The warning mark shall be rectangular and shall not be less than 150 mm wide and 250 mm high. The warning mark shall include:

- (a) The word "WARNING" in red or white with lettering not less than 25 mm high in an official language of the country of origin and also, if that language is not English, French or German, in English, French or German, unless agreements concluded between the countries concerned in the transport operation provide otherwise; and
- (b) The name indicated in Column (2) of Table A of Chapter 3.2 followed by the words "AS COOLANT" or "AS CONDITIONER" as appropriate, shown below the symbol in black letters on a white background with lettering not less than 25 mm high in an official language of the country of origin and also, if that language is not English, French or German, in English, French or German, unless agreements concluded between the countries concerned in the transport operation provide otherwise.

For example: CARBON DIOXIDE, SOLID, AS COOLANT.

An illustration of this mark is given below.

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* Insert the name indicated in Column (2) of Table A of Chapter 3.2 followed by the words "AS COOLANT" or "AS CONDITIONER" as appropriate.

5.5.3.7 *Documentation*

5.5.3.7.1 Documents (such as a bill of lading, cargo manifest or CMR/CIM consignment note) associated with the carriage of vehicles or containers that have been cooled or conditioned and have not been completely ventilated before carriage shall include the following information:

- (a) The UN number preceded by the letters "UN"; and
- (b) The name indicated in Column (2) of Table A of Chapter 3.2 followed by the words "AS COOLANT" or "AS CONDITIONER" as appropriate in an official language of the country of origin and also, if that language is not English, French or German, in English, French or German, unless agreements, if any, concluded between the countries concerned in the transport operation provide otherwise.

For example: UN 1845, CARBON DIOXIDE, SOLID, AS COOLANT.

5.5.3.7.2 The transport document may be in any form, provided it contains the information required in 5.5.3.7.1. This information shall be easy to identify, legible and durable.

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PART 6

Requirements for the construction and testing of packagings, intermediate bulk containers (IBCs), large packagings, tanks and bulk containers

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CHAPTER 6.1

REQUIREMENTS FOR THE CONSTRUCTION AND TESTING OF PACKAGINGS

6.1.1 General

6.1.1.1 The requirements of this Chapter do not apply to:

- (a) Packages containing radioactive material of Class 7, unless otherwise provided (see 4.1.9);
- (b) Packages containing infectious substances of Class 6.2, unless otherwise provided (see Chapter 6.3, Note and packing instruction P621 of 4.1.4.1);
- (c) Pressure receptacles containing gases of Class 2;
- (d) Packages whose net mass exceeds 400 kg;
- (e) Packagings with a capacity exceeding 450 litres.

6.1.1.2 The requirements for packagings in 6.1.4 are based on packagings currently used. In order to take into account progress in science and technology, there is no objection to the use of packagings having specifications different from those in 6.1.4, provided that they are equally effective, acceptable to the competent authority and able successfully to withstand the tests described in 6.1.1.3 and 6.1.5. Methods of testing other than those described in this Chapter are acceptable, provided they are equivalent, and are recognized by the competent authority.

6.1.1.3 Every packaging intended to contain liquids shall successfully undergo a suitable leakproofness test, and be capable of meeting the appropriate test level indicated in 6.1.5.4.3:

- (a) Before it is first used for carriage;
- (b) After remanufacturing or reconditioning, before it is re-used for carriage;

For this test, packagings need not have their own closures fitted.

The inner receptacle of composite packagings may be tested without the outer packaging provided the test results are not affected.

This test is not necessary for:

- Inner packagings of combination packagings;
- Inner receptacles of composite packagings (glass, porcelain or stoneware), marked with the symbol "RID/ADR" according to 6.1.3.1 (a) (ii);
- Light gauge metal packagings, marked with the symbol "RID/ADR" according to 6.1.3.1 (a) (ii).

6.1.1.4 Packagings shall be manufactured, reconditioned and tested under a quality assurance programme which satisfies the competent authority in order to ensure that each packaging meets the requirements of this Chapter.

NOTE: ISO 16106:2006 "Packaging – Transport packages for dangerous goods – Dangerous goods packagings, intermediate bulk containers (IBCs) and large packagings – Guidelines for the application of ISO 9001" provides acceptable guidance on procedures which may be followed.

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6.1.1.5 Manufacturers and subsequent distributors of packagings shall provide information regarding procedures to be followed and a description of the types and dimensions of closures (including required gaskets) and any other components needed to ensure that packages as presented for carriage are capable of passing the applicable performance tests of this Chapter.

6.1.2 Code for designating types of packagings

6.1.2.1 The code consists of:

- (a) An Arabic numeral indicating the kind of packaging, e.g. drum, jerrican, etc., followed by;
- (b) A capital letter(s) in Latin characters indicating the nature of the material, e.g. steel, wood, etc., followed where necessary by;
- (c) An Arabic numeral indicating the category of packaging within the kind to which the packaging belongs.

6.1.2.2 In the case of composite packagings, two capital letters in Latin characters are used in sequence in the second position of the code. The first indicates the material of the inner receptacle and the second that of the outer packaging.

6.1.2.3 In the case of combination packagings only the code number for the outer packaging is used.

6.1.2.4 The letters "T", "V" or "W" may follow the packaging code. The letter "T" signifies a salvage packaging conforming to the requirements of 6.1.5.1.11. The letter "V" signifies a special packaging conforming to the requirements of 6.1.5.1.7. The letter "W" signifies that the packaging, although of the same type indicated by the code, is manufactured to a specification different to that in 6.1.4 and is considered equivalent under the requirements of 6.1.1.2.

6.1.2.5 The following numerals shall be used for the kinds of packaging:

1. Drum
2. (Reserved)
3. Jerrican
4. Box
5. Bag
6. Composite packaging
7. (Reserved)
0. Light gauge metal packagings

6.1.2.6 The following capital letters shall be used for the types of material:

- A. Steel (all types and surface treatments)
- B. Aluminium
- C. Natural wood
- D. Plywood
- F. Reconstituted wood
- G. Fibreboard
- H. Plastics material
- L. Textile
- M. Paper, multiwall
- N. Metal (other than steel or aluminium)
- P. Glass, porcelain or stoneware

NOTE: Plastics material is taken to include other polymeric materials such as rubber.

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6.1.2.7 The following table indicates the codes to be used for designating types of packagings depending on the kind of packagings, the material used for their construction and their category; it also refers to the sub-sections to be consulted for the appropriate requirements:

Kind	Material	Category	Code	Sub-section
1. Drums	A. Steel	non-removable head	1A1	6.1.4.1
		removable head	1A2	
	B. Aluminium	non-removable head	1B1	6.1.4.2
		removable head	1B2	
	D. Plywood		1D	6.1.4.5
	G. Fibre		1G	6.1.4.7
	H. Plastics	non-removable head	1H1	6.1.4.8
		removable head	1H2	
N. Metal, other than steel or aluminium	non-removable head	1N1	6.1.4.3	
	removable head	1N2		
2. (Reserved)				
3. Jerricans	A. Steel	non-removable head	3A1	6.1.4.4
		removable head	3A2	
	B. Aluminium	non-removable head	3B1	6.1.4.4
		removable head	3B2	
	H. Plastics	non-removable head	3H1	6.1.4.8
		removable head	3H2	
4. Boxes	A. Steel		4A	6.1.4.14
	B. Aluminium		4B	6.1.4.14
	C. Natural wood	ordinary	4C1	6.1.4.9
		with sift-proof walls	4C2	
	D. Plywood		4D	6.1.4.10
	F. Reconstituted wood		4F	6.1.4.11
	G. Fibreboard		4G	6.1.4.12
	H. Plastics	expanded	4H1	6.1.4.13
		solid	4H2	
	N. Metal, other than steel or aluminium		4N	6.1.4.14
5. Bags	H. Woven plastics	without inner liner or coating	5H1	6.1.4.16
		sift-proof	5H2	
		water resistant	5H3	
	H. Plastics film		5H4	6.1.4.17
	L. Textile	without inner liner or coating	5L1	6.1.4.15
		sift-proof	5L2	
		water resistant	5L3	
	M. Paper	multiwall	5M1	6.1.4.18
		multiwall, water resistant	5M2	

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Kind	Material	Category	Code	Sub-section
6. Composite packagings	H. Plastics receptacle	with outer steel drum	6HA1	6.1.4.19
		with outer steel crate or box	6HA2	
		with outer aluminium drum	6HB1	
		with outer aluminium crate or box	6HB2	
		with outer wooden box	6HC	
		with outer plywood drum	6HD1	
		with outer plywood box	6HD2	
		with outer fibre drum	6HG1	
		with outer fibreboard box	6HG2	
		with outer plastics drum	6HH1	
		with outer solid plastics box	6HH2	
	P. Glass, porcelain or stoneware receptacle	with outer steel drum	6PA1	6.1.4.20
		with outer steel crate or box	6PA2	
		with outer aluminium drum	6PB1	
		with outer aluminium crate or box	6PB2	
		with outer wooden box	6PC	
		with outer plywood drum	6PD1	
		with outer wickerwork hamper	6PD2	
		with outer fibre drum	6PG1	
		with outer fibreboard box	6PG2	
with outer expanded plastics packaging		6PH1		
with outer solid plastics packaging		6PH2		
7. (Reserved)				
0. Light gauge metal packagings	A. Steel	non-removable head	0A1	6.1.4.22
		removable head	0A2	

6.1.3 Marking

NOTE 1: The marking indicates that the packaging which bears it corresponds to a successfully tested design type and that it complies with the requirements of this Chapter which are related to the manufacture, but not to the use, of the packaging. In itself, therefore, the mark does not necessarily confirm that the packaging may be used for any substance: generally the type of packaging (e.g. steel drum), its maximum capacity and/or mass, and any special requirements are specified for each substance in Table A of Chapter 3.2.

NOTE 2: The marking is intended to be of assistance to packaging manufacturers, reconditioners, packaging users, carriers and regulatory authorities. In relation to the use of a new packaging, the original marking is a means for its manufacturer(s) to identify the type and to indicate those performance test regulations that have been met.


NOTE 3: The marking does not always provide full details of the test levels, etc., and these may need to be taken further into account, e.g. by reference to a test certificate, to test reports or to a register of successfully tested packagings. For example, a packaging having

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an X or Y marking may be used for substances to which a packing group having a lesser degree of danger has been assigned with the relevant maximum permissible value of the relative density¹ determined by taking into account the factor 1.5 or 2.25 indicated in the packaging test requirements in 6.1.5 as appropriate, i.e. packing group I packaging tested for products of relative density 1.2 could be used as a packing group II packaging for products of relative density 1.8 or a packing group III packaging for products of relative density 2.7, provided of course that all the performance criteria can still be met with the higher relative density product.

- 6.1.3.1 Each packaging intended for use according to the ADR shall bear markings which are durable, legible and placed in a location and of such a size relative to the packaging as to be readily visible. For packages with a gross mass of more than 30 kg, the markings or a duplicate thereof shall appear on the top or on a side of the packaging. Letters, numerals and symbols shall be at least 12 mm high, except for packagings of 30 litres or 30 kg capacity or less, when they shall be at least 6 mm in height and for packagings of 5 litres or 5 kg or less when they shall be of an appropriate size.

The marking shall show:

- (a) (i) The United Nations packaging symbol  ;

This symbol shall not be used for any purpose other than certifying that a packaging, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6 or 6.7². This symbol shall not be used for packagings which comply with the simplified conditions of 6.1.1.3, 6.1.5.3.1 (e), 6.1.5.3.5 (c), 6.1.5.4, 6.1.5.5.1 and 6.1.5.6 (see also (ii) below). For embossed metal packagings, the capital letters "UN" may be applied instead of the symbol; or

- (ii) The symbol "RID/ADR" for composite packagings (glass, porcelain or stoneware) and light gauge metal packagings conforming to simplified conditions (see 6.1.1.3, 6.1.5.3.1 (e), 6.1.5.3.5 (c), 6.1.5.4, 6.1.5.5.1 and 6.1.5.6);

NOTE: Packagings bearing this symbol are approved for rail, road and inland waterways transport operations which are subject to the provisions of RID, ADR and ADN respectively. They are not necessarily accepted for carriage by other modes of transport or for transport operations by road, rail or inland waterways which are governed by other regulations.

- (b) The code designating the type of packaging according to 6.1.2;
- (c) A code in two parts:
- (i) a letter designating the packing group(s) for which the design type has been successfully tested:
- X for packing groups I, II and III;
Y for packing groups II and III;
Z for packing group III only;

¹ Relative density (*d*) is considered to be synonymous with Specific Gravity (*SG*) and is used throughout this text.

² This symbol is also used to certify that flexible bulk containers authorized for others modes of transport complies with the requirements in Chapter 6.8 of the UN Model Regulations.

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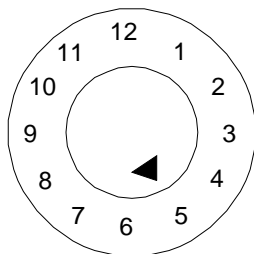
- (ii) the relative density, rounded off to the first decimal, for which the design type has been tested for packagings without inner packagings intended to contain liquids; this may be omitted when the relative density does not exceed 1.2. For packagings intended to contain solids or inner packagings, the maximum gross mass in kilograms.

For light-gauge metal packagings, marked with the symbol "RID/ADR" according to 6.1.3.1 (a) (ii) intended to contain liquids having a viscosity at 23 °C exceeding 200 mm²/s, the maximum gross mass in kg;

- (d) Either the letter "S" denoting that the packaging is intended for the carriage of solids or inner packagings or, for packagings (other than combination packagings) intended to contain liquids, the hydraulic test pressure which the packaging was shown to withstand in kPa rounded down to the nearest 10 kPa.

For light-gauge metal packagings, marked with the symbol "RID/ADR, according to 6.1.3.1(a) (ii) intended to contain liquids having a viscosity at 23 °C exceeding 200 mm²/s, the letter "S";

- (e) The last two digits of the year during which the packaging was manufactured. Packagings of types 1H and 3H shall also be appropriately marked with the month of manufacture; this may be marked on the packaging in a different place from the remainder of the marking. An appropriate method is:



- (f) The State authorizing the allocation of the mark, indicated by the distinguishing sign for motor vehicles in international traffic³;
- (g) The name of the manufacturer or other identification of the packaging specified by the competent authority.

6.1.3.2 In addition to the durable markings prescribed in 6.1.3.1, every new metal drum of a capacity greater than 100 litres shall bear the marks described in 6.1.3.1 (a) to (e) on the bottom, with an indication of the nominal thickness of at least the metal used in the body (in mm, to 0.1 mm), in permanent form (e.g. embossed). When the nominal thickness of either head of a metal drum is thinner than that of the body, the nominal thickness of the top head, body, and bottom head shall be marked on the bottom in permanent form (e.g. embossed), for example "1.0-1.2-1.0" or "0.9-1.0-1.0". Nominal thickness of metal shall be determined according to the appropriate ISO standard, for example ISO 3574:1999 for steel. The marks indicated in 6.1.3.1 (f) and (g) shall not be applied in a permanent form except as provided in 6.1.3.5.

³ Distinguishing sign for motor vehicles in international traffic prescribed in the Vienna Convention on Road Traffic (1968).






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- 6.1.3.3 Every packaging other than those referred to in 6.1.3.2 liable to undergo a reconditioning process shall bear the marks indicated in 6.1.3.1 (a) to (e) in a permanent form. Marks are permanent if they are able to withstand the reconditioning process (e.g. embossed). For packagings other than metal drums of a capacity greater than 100 litres, these permanent marks may replace the corresponding durable markings prescribed in 6.1.3.1.
- 6.1.3.4 For remanufactured metal drums, if there is no change to the packaging type and no replacement or removal of integral structural components, the required markings need not be permanent. Every other remanufactured metal drum shall bear the markings in 6.1.3.1 (a) to (e) in a permanent form (e.g. embossed) on the top head or side.
- 6.1.3.5 Metal drums made from materials (e.g. stainless steel) designed to be reused repeatedly may bear the markings indicated in 6.1.3.1 (f) and (g) in a permanent form (e.g. embossed).
- 6.1.3.6 The marking in accordance with 6.1.3.1 is valid for only one design type or series of design types. Different surface treatments may fall within the same design type.
- A "series of design types" means packagings of the same structural design, wall thickness, material and cross-section, which differ only in their lesser design heights from the design type approved.
- The closures of receptacles shall be identifiable as those referred to in the test report.
- 6.1.3.7 Marking shall be applied in the sequence of the sub-paragraphs in 6.1.3.1; each element of the marking required in these sub-paragraphs and when appropriate sub-paragraphs (h) to (j) of 6.1.3.8 shall be clearly separated, e.g. by a slash or space, so as to be easily identifiable. For examples, see 6.1.3.11.
- Any additional markings authorized by a competent authority shall still enable the parts of the mark to be correctly identified with reference to 6.1.3.1.
- 6.1.3.8 After reconditioning a packaging, the reconditioner shall apply to it a durable marking showing, in the following sequence:
- (h) The State in which the reconditioning was carried out, indicated by the distinguishing sign for motor vehicles in international traffic³;
 - (i) The name of the reconditioner or other identification of the packaging specified by the competent authority;
 - (j) The year of reconditioning; the letter "R"; and, for every packaging successfully passing the leakproofness test in 6.1.1.3, the additional letter "L".
- 6.1.3.9 When, after reconditioning, the markings required by 6.1.3.1 (a) to (d) no longer appear on the top head or the side of a metal drum, the reconditioner also shall apply them in a durable form followed by 6.1.3.8 (h), (i) and (j). These markings shall not identify a greater performance capability than that for which the original design type had been tested and marked.
- 6.1.3.10 Packagings manufactured with recycled plastics material as defined in 1.2.1 shall be marked "REC". This mark shall be placed near the mark prescribed in 6.1.3.1.



³ *Distinguishing sign for motor vehicles in international traffic prescribed in the Vienna Convention on Road Traffic (1968).*

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6.1.3.11 *Examples of markings for NEW packagings*

	4G/Y145/S/02 NL/VL823	as in 6.1.3.1 (a) (i), (b), (c), (d) and (e) as in 6.1.3.1 (f) and (g)	For a new fibreboard box
	1A1/Y1.4/150/98 NL/VL824	as in 6.1.3.1 (a) (i), (b), (c), (d) and (e) as in 6.1.3.1 (f) and (g)	For a new steel drum to contain liquids
	1A2/Y150/S/01 NL/VL825	as in 6.1.3.1 (a) (i), (b), (c), (d) and (e) as in 6.1.3.1 (f) and (g)	For a new steel drum to contain solids, or inner packagings
	4HW/Y136/S/38 NL/VL826	as in 6.1.3.1 (a) (i), (b), (c), (d) and (e) as in 6.1.3.1 (f) and (g)	For a new plastics box of equivalent specification
	1A2/Y/100/01 USA/MM5	as in 6.1.3.1 (a) (i), (b), (c), (d) and (e) as in 6.1.3.1 (f) and (g)	For a remanufactured steel drum to contain liquids
	RID/ADR/0A1/Y100/89 NL/VL123	as in 6.1.3.1 (a) (ii), (b), (c), (d) and (e) as in 6.1.3.1 (f) and (g)	For a new light gauge metal packaging, non-removable head
	RID/ADR/0A2/Y20/S/04 NL/VL124	as in 6.1.3.1 (a) (ii), (b), (c), (d) and (e) as in 6.1.3.1 (f) and (g)	For a new light gauge metal packaging, removable head, intended to contain solids, or liquids with a viscosity at 23 °C exceeding 200 mm ² /s.

6.1.3.12 *Examples of markings for RECONDITIONED packagings*

	1A1/Y1.4/150/97 NL/RB/01 RL	as in 6.1.3.1 (a) (i), (b), (c), (d) and (e) as in 6.1.3.8 (h), (i) and (j)
	1A2/Y150/S/99 USA/RB/00 R	as in 6.1.3.1 (a) (i), (b), (c), (d) and (e) as in 6.1.3.8 (h), (i) and (j)

6.1.3.13 *Example of marking for SALVAGE packagings*

	1A2T/Y300/S/01 USA/abc	as in 6.1.3.1 (a) (i), (b), (c), (d) and (e) as in 6.1.3.1 (f) and (g)
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NOTE: The markings, for which examples are given in 6.1.3.11, 6.1.3.12 and 6.1.3.13 may be applied in a single line or in multiple lines provided the correct sequence is respected.

6.1.3.14 *Certification*

By affixing marking in accordance with 6.1.3.1, it is certified that mass-produced packagings correspond to the approved design type and that the requirements referred to in the approval have been met.

6.1.4 **Requirements for packagings****6.1.4.0** *General requirements*

Any permeation of the substance contained in the packaging shall not constitute a danger under normal conditions of carriage.

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6.1.4.1 Steel drums

1A1 non-removable head

1A2 removable head

- 6.1.4.1.1 Body and heads shall be constructed of steel sheet of a suitable type and of adequate thickness in relation to the capacity of the drum and to its intended use.

NOTE: In the case of carbon steel drums, "suitable" steels are identified in ISO 3573:1999 "Hot rolled carbon steel sheet of commercial and drawing qualities" and ISO 3574:1999 "Cold-reduced carbon steel sheet of commercial and drawing qualities". For carbon steel drums below 100 litres "suitable" steels in addition to the above standards are also identified in ISO 11949:1995 "Cold-reduced electrolytic tinplate", ISO 11950:1995 "Cold-reduced electrolytic chromium/chromium oxide-coated steel" and ISO 11951:1995 "Cold-reduced blackplate in coil form for the production of tinplate or electrolytic chromium/chromium-oxide coated steel".

- 6.1.4.1.2 Body seams shall be welded on drums intended to contain more than 40 litres of liquid. Body seams shall be mechanically seamed or welded on drums intended to contain solids or 40 litres or less of liquids.

- 6.1.4.1.3 Chimes shall be mechanically seamed or welded. Separate reinforcing rings may be applied.

- 6.1.4.1.4 The body of a drum of a capacity greater than 60 litres shall, in general, have at least two expanded rolling hoops or, alternatively, at least two separate rolling hoops. If there are separate rolling hoops they shall be fitted tightly on the body and so secured that they cannot shift. Rolling hoops shall not be spot welded.

- 6.1.4.1.5 Openings for filling, emptying and venting in the bodies or heads of non-removable head (1A1) drums shall not exceed 7 cm in diameter. Drums with larger openings are considered to be of the removable head type (1A2). Closures for openings in the bodies and heads of drums shall be so designed and applied that they will remain secure and leakproof under normal conditions of carriage. Closure flanges may be mechanically seamed or welded in place. Gaskets or other sealing elements shall be used with closures, unless the closure is inherently leakproof.

- 6.1.4.1.6 Closure devices for removable head (1A2) drums shall be so designed and applied that they will remain secure and drums will remain leakproof under normal conditions of carriage. Gaskets or other sealing elements shall be used with all removable heads.

- 6.1.4.1.7 If materials used for body, heads, closures and fittings are not in themselves compatible with the contents to be carried, suitable internal protective coatings or treatments shall be applied. These coatings or treatments shall retain their protective properties under normal conditions of carriage.

- 6.1.4.1.8 Maximum capacity of drum: 450 litres.

- 6.1.4.1.9 Maximum net mass: 400 kg.

6.1.4.2 Aluminium drums

1B1 non-removable head

1B2 removable head

- 6.1.4.2.1 Body and heads shall be constructed of aluminium at least 99% pure or of an aluminium base alloy. Material shall be of a suitable type and of adequate thickness in relation to the capacity of the drum and to its intended use.

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- 6.1.4.2.2 All seams shall be welded. Chime seams, if any, shall be reinforced by the application of separate reinforcing rings.
- 6.1.4.2.3 The body of a drum of a capacity greater than 60 litres shall, in general, have at least two expanded rolling hoops or, alternatively, at least two separate rolling hoops. If there are separate rolling hoops they shall be fitted tightly on the body and so secured that they cannot shift. Rolling hoops shall not be spot welded.
- 6.1.4.2.4 Openings for filling, emptying and venting in the bodies or heads of non-removable head (1B1) drums shall not exceed 7 cm in diameter. Drums with larger openings are considered to be of the removable head type (1B2). Closures for openings in the bodies and heads of drums shall be so designed and applied that they will remain secure and leakproof under normal conditions of carriage. Closure flanges shall be welded in place so that the weld provides a leakproof seam. Gaskets or other sealing elements shall be used with closures, unless the closure is inherently leakproof.
- 6.1.4.2.5 Closure devices for removable head (1B2) drums shall be so designed and applied that they will remain secure and drums will remain leakproof under normal conditions of carriage. Gaskets or other sealing elements shall be used with all removable heads.
- 6.1.4.2.6 Maximum capacity of drum: 450 litres.
- 6.1.4.2.7 Maximum net mass: 400 kg.
- 6.1.4.3 *Drums of metal other than aluminium or steel***
- IN1 non-removable head
IN2 removable head
- 6.1.4.3.1 The body and heads shall be constructed of a metal or of a metal alloy other than steel or aluminium. Material shall be of a suitable type and of adequate thickness in relation to the capacity of the drum and to its intended use.
- 6.1.4.3.2 Chime seams, if any, shall be reinforced by the application of separate reinforcing rings. All seams, if any, shall be joined (welded, soldered, etc.) in accordance with the technical state of the art for the used metal or metal alloy.
- 6.1.4.3.3 The body of a drum of a capacity greater than 60 litres shall, in general, have at least two expanded rolling hoops or, alternatively, at least two separate rolling hoops. If there are separate rolling hoops they shall be fitted tightly on the body and so secured that they cannot shift. Rolling hoops shall not be spot welded.
- 6.1.4.3.4 Openings for filling, emptying and venting in the bodies or heads of non-removable head (IN1) drums shall not exceed 7 cm in diameter. Drums with larger openings are considered to be of the removable head type (IN2). Closures for openings in the bodies and heads of drums shall be so designed and applied that they will remain secure and leakproof under normal conditions of carriage. Closure flanges shall be joined in place (welded, soldered, etc.) in accordance with the technical state of the art for the used metal or metal alloy so that the seam join is leakproof. Gaskets or other sealing elements shall be used with closures, unless the closure is inherently leakproof.
- 6.1.4.3.5 Closure devices for removable head (IN2) drums shall be so designed and applied that they will remain secure and drums will remain leakproof under normal conditions of carriage. Gaskets or other sealing elements shall be used with all removable heads.

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6.1.4.3.6 Maximum capacity of drum: 450 litres.

6.1.4.3.7 Maximum net mass: 400 kg.

6.1.4.4 *Steel or aluminium jerricans*

3A1 steel, non-removable head

3A2 steel, removable head

3B1 aluminium, non-removable head

3B2 aluminium, removable head

6.1.4.4.1 Body and heads shall be constructed of steel sheet, of aluminium at least 99% pure or of an aluminium base alloy. Material shall be of a suitable type and of adequate thickness in relation to the capacity of the jerrican and to its intended use.

6.1.4.4.2 Chimes of steel jerricans shall be mechanically seamed or welded. Body seams of steel jerricans intended to contain more than 40 litres of liquid shall be welded. Body seams of steel jerricans intended to contain 40 litres or less shall be mechanically seamed or welded. For aluminium jerricans, all seams shall be welded. Chime seams, if any, shall be reinforced by the application of a separate reinforcing ring.

6.1.4.4.3 Openings in non-removable head jerricans (3A1 and 3B1) shall not exceed 7 cm in diameter. Jerricans with larger openings are considered to be of the removable head type (3A2 and 3B2). Closures shall be so designed that they will remain secure and leakproof under normal conditions of carriage. Gaskets or other sealing elements shall be used with closures, unless the closure is inherently leakproof.

6.1.4.4.4 If materials used for body, heads, closures and fittings are not in themselves compatible with the contents to be carried, suitable internal protective coatings or treatments shall be applied. These coatings or treatments shall retain their protective properties under normal conditions of carriage.

6.1.4.4.5 Maximum capacity of jerrican: 60 litres.

6.1.4.4.6 Maximum net mass: 120 kg.

6.1.4.5 *Plywood drums*

1D

6.1.4.5.1 The wood used shall be well seasoned, commercially dry and free from any defect likely to lessen the effectiveness of the drum for the purpose intended. If a material other than plywood is used for the manufacture of the heads, it shall be of a quality equivalent to the plywood.

6.1.4.5.2 At least two-ply plywood shall be used for the body and at least three-ply plywood for the heads; the plies shall be firmly glued together by a water resistant adhesive with their grain crosswise.

6.1.4.5.3 The body and heads of the drum and their joins shall be of a design appropriate to the capacity of the drum and to its intended use.

6.1.4.5.4 In order to prevent sifting of the contents, lids shall be lined with kraft paper or some other equivalent material which shall be securely fastened to the lid and extend to the outside along its full circumference.

6.1.4.5.5 Maximum capacity of drum: 250 litres.

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6.1.4.5.6 Maximum net mass: 400 kg.

6.1.4.6 (*Deleted*)

6.1.4.7 *Fibre drums*

1G

6.1.4.7.1 The body of the drum shall consist of multiple plies of heavy paper or fibreboard (without corrugations) firmly glued or laminated together and may include one or more protective layers of bitumen, waxed kraft paper, metal foil, plastics material, etc.

6.1.4.7.2 Heads shall be of natural wood, fibreboard, metal, plywood, plastics or other suitable material and may include one or more protective layers of bitumen, waxed kraft paper, metal foil, plastics material, etc.

6.1.4.7.3 The body and heads of the drum and their joins shall be of a design appropriate to the capacity of the drum and to its intended use.

6.1.4.7.4 The assembled packaging shall be sufficiently water resistant so as not to delaminate under normal conditions of carriage.

6.1.4.7.5 Maximum capacity of drum: 450 litres.

6.1.4.7.6 Maximum net mass: 400 kg.

6.1.4.8 *Plastics drums and jerricans*

1H1 drums, non-removable head

1H2 drums, removable head

3H1 jerricans, non-removable head

3H2 jerricans, removable head

6.1.4.8.1 The packaging shall be manufactured from suitable plastics material and be of adequate strength in relation to its capacity and intended use. Except for recycled plastics material as defined in 1.2.1, no used material other than production residues or regrind from the same manufacturing process may be used. The packaging shall be adequately resistant to ageing and to degradation caused either by the substance contained or by ultra-violet radiation. Any permeation of the substance contained in the package, or recycled plastics material used to produce new packaging, shall not constitute a danger under normal conditions of carriage.

6.1.4.8.2 If protection against ultra-violet radiation is required, it shall be provided by the addition of carbon black or other suitable pigments or inhibitors. These additives shall be compatible with the contents and remain effective throughout the life of the packaging. Where use is made of carbon black, pigments or inhibitors other than those used in the manufacture of the tested design type, retesting may be waived if the carbon black content does not exceed 2% by mass or if the pigment content does not exceed 3% by mass; the content of inhibitors of ultra-violet radiation is not limited.

6.1.4.8.3 Additives serving purposes other than protection against ultra-violet radiation may be included in the composition of the plastics material provided that they do not adversely affect the chemical and physical properties of the material of the packaging. In such circumstances, retesting may be waived.

6.1.4.8.4 The wall thickness at every point of the packaging shall be appropriate to its capacity and intended use, taking into account the stresses to which each point is liable to be exposed.

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- 6.1.4.8.5 Openings for filling, emptying and venting in the bodies or heads of non-removable head drums (1H1) and jerricans (3H1) shall not exceed 7 cm in diameter. Drums and jerricans with larger openings are considered to be of the removable head type (1H2 and 3H2). Closures for openings in the bodies or heads of drums and jerricans shall be so designed and applied that they will remain secure and leakproof under normal conditions of carriage. Gaskets or other sealing elements shall be used with closures unless the closure is inherently leakproof.
- 6.1.4.8.6 Closure devices for removable head drums and jerricans (1H2 and 3H2) shall be so designed and applied that they will remain secure and leakproof under normal conditions of carriage. Gaskets shall be used with all removable heads unless the drum or jerrican design is such that, where the removable head is properly secured, the drum or jerrican is inherently leakproof.
- 6.1.4.8.7 The maximum permissible permeability for flammable liquids shall be 0.008 g/l.h at 23 °C (see 6.1.5.7).
- 6.1.4.8.8 Where recycled plastics material is used for production of new packaging, the specific properties of the recycled material shall be assured and documented regularly as part of a quality assurance programme recognised by the competent authority. The quality assurance programme shall include a record of proper pre-sorting and verification that each batch of recycled plastics material has the proper melt flow rate, density, and tensile yield strength, consistent with that of the design type manufactured from such recycled material. This necessarily includes knowledge about the packaging material from which the recycled plastics have been derived, as well as the awareness of the prior contents of those packagings if those prior contents might reduce the capability of new packaging produced using that material. In addition, the packaging manufacturer's quality assurance programme under 6.1.1.4 shall include performance of the mechanical design type test in 6.1.5 on packagings manufactured from each batch of recycled plastics material. In this testing, stacking performance may be verified by appropriate dynamic compression testing rather than static load testing.

***NOTE:** ISO 16103:2005 – "Packaging – Transport packaging for dangerous goods - Recycled plastics material" provides additional guidance on procedures to be followed in approving the use of recycled plastics material.*

- 6.1.4.8.9 Maximum capacity of drums and jerricans: 1H1, 1H2: 450 litres
3H1, 3H2: 60 litres.
- 6.1.4.8.10 Maximum net mass: 1H1, 1H2: 400 kg
3H1, 3H2: 120 kg.

6.1.4.9 Boxes of natural wood

4C1 ordinary
4C2 with sift-proof walls

- 6.1.4.9.1 The wood used shall be well seasoned, commercially dry and free from defects that would materially lessen the strength of any part of the box. The strength of the material used and the method of construction shall be appropriate to the capacity and intended use of the box. The tops and bottoms may be made of water resistant reconstituted wood such as hardboard, particle board or other suitable type.
- 6.1.4.9.2 Fastenings shall be resistant to vibration experienced under normal conditions of carriage. End grain nailing shall be avoided whenever practicable. Joins which are likely to be highly stressed shall be made using clenched or annular ring nails or equivalent fastenings.

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- 6.1.4.9.3 Box 4C2: each part shall consist of one piece or be equivalent thereto. Parts are considered equivalent to one piece when one of the following methods of glued assembly is used: Lindermann joint, tongue and groove joint, ship lap or rabbet joint or butt joint with at least two corrugated metal fasteners at each joint.
- 6.1.4.9.4 Maximum net mass: 400 kg.
- 6.1.4.10 *Plywood boxes***
- 4D
- 6.1.4.10.1 Plywood used shall be at least 3-ply. It shall be made from well seasoned rotary cut, sliced or sawn veneer, commercially dry and free from defects that would materially lessen the strength of the box. The strength of the material used and the method of construction shall be appropriate to the capacity and intended use of the box. All adjacent plies shall be glued with water resistant adhesive. Other suitable materials may be used together with plywood in the construction of boxes. Boxes shall be firmly nailed or secured to corner posts or ends or be assembled by equally suitable devices.
- 6.1.4.10.2 Maximum net mass: 400 kg.
- 6.1.4.11 *Reconstituted wood boxes***
- 4F
- 6.1.4.11.1 The walls of boxes shall be made of water resistant reconstituted wood such as hardboard, particle board or other suitable type. The strength of the material used and the method of construction shall be appropriate to the capacity of the boxes and to their intended use.
- 6.1.4.11.2 Other parts of the boxes may be made of other suitable material.
- 6.1.4.11.3 Boxes shall be securely assembled by means of suitable devices.
- 6.1.4.11.4 Maximum net mass: 400 kg.
- 6.1.4.12 *Fibreboard boxes***
- 4G
- 6.1.4.12.1 Strong and good quality solid or double-faced corrugated fibreboard (single or multiwall) shall be used, appropriate to the capacity of the box and to its intended use. The water resistance of the outer surface shall be such that the increase in mass, as determined in a test carried out over a period of 30 minutes by the Cobb method of determining water absorption, is not greater than 155 g/m² - see ISO 535:1991. It shall have proper bending qualities. Fibreboard shall be cut, creased without scoring, and slotted so as to permit assembly without cracking, surface breaks or undue bending. The fluting of corrugated fibreboard shall be firmly glued to the facings.
- 6.1.4.12.2 The ends of boxes may have a wooden frame or be entirely of wood or other suitable material. Reinforcements of wooden battens or other suitable material may be used.
- 6.1.4.12.3 Manufacturing joints in the body of boxes shall be taped, lapped and glued, or lapped and stitched with metal staples. Lapped joints shall have an appropriate overlap.
- 6.1.4.12.4 Where closing is effected by gluing or taping, a water resistant adhesive shall be used.
- 6.1.4.12.5 Boxes shall be designed so as to provide a good fit to the contents.

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6.1.4.12.6 Maximum net mass: 400 kg.

6.1.4.13 *Plastics boxes*

4H1 expanded plastics boxes

4H2 solid plastics boxes

6.1.4.13.1 The box shall be manufactured from suitable plastics material and be of adequate strength in relation to its capacity and intended use. The box shall be adequately resistant to ageing and to degradation caused either by the substance contained or by ultra-violet radiation.

6.1.4.13.2 An expanded plastics box shall comprise two parts made of a moulded expanded plastics material, a bottom section containing cavities for the inner packagings and a top section covering and interlocking with the bottom section. The top and bottom sections shall be designed so that the inner packagings fit snugly. The closure cap for any inner packaging shall not be in contact with the inside of the top section of this box.

6.1.4.13.3 For dispatch, an expanded plastics box shall be closed with a self-adhesive tape having sufficient tensile strength to prevent the box from opening. The adhesive tape shall be weather resistant and its adhesive compatible with the expanded plastics material of the box. Other closing devices at least equally effective may be used.

6.1.4.13.4 For solid plastics boxes, protection against ultra-violet radiation, if required, shall be provided by the addition of carbon black or other suitable pigments or inhibitors. These additives shall be compatible with the contents and remain effective throughout the life of the box. Where use is made of carbon black, pigments or inhibitors other than those used in the manufacture of the tested design type, retesting may be waived if the carbon black content does not exceed 2% by mass or if the pigment content does not exceed 3% by mass; the content of inhibitors of ultra-violet radiation is not limited.

6.1.4.13.5 Additives serving purposes other than protection against ultra-violet radiation may be included in the composition of the plastics material provided that they do not adversely affect the chemical or physical properties of the material of the box. In such circumstances, retesting may be waived.

6.1.4.13.6 Solid plastics boxes shall have closure devices made of a suitable material of adequate strength and so designed as to prevent the box from unintentional opening.

6.1.4.13.7 Where recycled plastics material is used for production of new packaging, the specific properties of the recycled material shall be assured and documented regularly as part of a quality assurance programme recognised by the competent authority. The quality assurance programme shall include a record of proper pre-sorting and verification that each batch of recycled plastics material has the proper melt flow rate, density, and tensile yield strength, consistent with that of the design type manufactured from such recycled material. This necessarily includes knowledge about the packaging material from which the recycled plastics have been derived, as well as the awareness of the prior contents of those packagings if those prior contents might reduce the capability of new packaging produced using that material. In addition, the packaging manufacturer's quality assurance programme under 6.1.1.4 shall include performance of the mechanical design type test in 6.1.5 on packagings manufactured from each batch of recycled plastics material. In this testing, stacking performance may be verified by appropriate dynamic compression testing rather than static load testing.

6.1.4.13.8 Maximum net mass 4H1: 60 kg
 4H2: 400 kg.

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6.1.4.14 *Steel, aluminium or other metal boxes*

- 4A steel boxes
- 4B aluminium boxes
- 4N metal, other than steel or aluminium, boxes

6.1.4.14.1 The strength of the metal and the construction of the box shall be appropriate to the capacity of the box and to its intended use.

6.1.4.14.2 Boxes shall be lined with fibreboard or felt packing pieces or shall have an inner liner or coating of suitable material, as required. If a double seamed metal liner is used, steps shall be taken to prevent the ingress of substances, particularly explosives, into the recesses of the seams.

6.1.4.14.3 Closures may be of any suitable type; they shall remain secured under normal conditions of carriage.

6.1.4.14.4 Maximum net mass: 400 kg.

6.1.4.15 *Textile bags*

- 5L1 without inner liner or coating
- 5L2 sift-proof
- 5L3 water resistant

6.1.4.15.1 The textiles used shall be of good quality. The strength of the fabric and the construction of the bag shall be appropriate to the capacity of the bag and to its intended use.

6.1.4.15.2 Bags, sift-proof, 5L2: the bag shall be made sift-proof, for example by the use of:

- (a) paper bonded to the inner surface of the bag by a water resistant adhesive such as bitumen; or
- (b) plastics film bonded to the inner surface of the bag; or
- (c) one or more inner liners made of paper or plastics material.

6.1.4.15.3 Bags, water resistant, 5L3: to prevent the entry of moisture the bag shall be made waterproof, for example by the use of:

- (a) separate inner liners of water resistant paper (e.g. waxed kraft paper, tarred paper or plastics-coated kraft paper); or
- (b) plastics film bonded to the inner surface of the bag; or
- (c) one or more inner liners made of plastics material.

6.1.4.15.4 Maximum net mass: 50 kg.

6.1.4.16 *Woven plastics bags*

- 5H1 without inner liner or coating
- 5H2 sift-proof
- 5H3 water resistant

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- 6.1.4.16.1 Bags shall be made from stretched tapes or monofilaments of a suitable plastics material. The strength of the material used and the construction of the bag shall be appropriate to the capacity of the bag and to its intended use.
- 6.1.4.16.2 If the fabric is woven flat, the bags shall be made by sewing or some other method ensuring closure of the bottom and one side. If the fabric is tubular, the bag shall be closed by sewing, weaving or some other equally strong method of closure.
- 6.1.4.16.3 Bags, sift-proof, 5H2: the bag shall be made sift-proof, for example by means of:
- (a) paper or a plastics film bonded to the inner surface of the bag; or
 - (b) one or more separate inner liners made of paper or plastics material.
- 6.1.4.16.4 Bags, water resistant, 5H3: to prevent the entry of moisture, the bag shall be made waterproof, for example by means of:
- (a) separate inner liners of water resistant paper (e.g. waxed kraft paper, double-tarred kraft paper or plastics-coated kraft paper); or
 - (b) plastics film bonded to the inner or outer surface of the bag; or
 - (c) one or more inner plastics liners.
- 6.1.4.16.5 Maximum net mass: 50 kg.
- 6.1.4.17** *Plastics film bags*
- 5H4
- 6.1.4.17.1 Bags shall be made of a suitable plastics material. The strength of the material used and the construction of the bag shall be appropriate to the capacity of the bag and to its intended use. Joins and closures shall withstand pressures and impacts liable to occur under normal conditions of carriage.
- 6.1.4.17.2 Maximum net mass: 50 kg.
- 6.1.4.18** *Paper bags*
- 5M1 multiwall
5M2 multiwall, water resistant
- 6.1.4.18.1 Bags shall be made of a suitable kraft paper or of an equivalent paper with at least three plies, the middle ply of which may be net-cloth and adhesive bonding to the outer paper plies. The strength of the paper and the construction of the bags shall be appropriate to the capacity of the bag and to its intended use. Joins and closures shall be sift-proof.
- 6.1.4.18.2 Bags 5M2: to prevent the entry of moisture, a bag of four plies or more shall be made waterproof by the use of either a water resistant ply as one of the two outermost plies or a water resistant barrier made of a suitable protective material between the two outermost plies; a bag of three plies shall be made waterproof by the use of a water resistant ply as the outermost ply. Where there is a danger of the substance contained reacting with moisture or where it is packed damp, a waterproof ply or barrier, such as double-tarred kraft paper, plastics-coated kraft paper, plastics film bonded to the inner surface of the bag, or one or more inner plastics liners, shall also be placed next to the substance. Joins and closures shall be waterproof.

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6.1.4.18.3 Maximum net mass: 50 kg.

6.1.4.19 *Composite packagings (plastics material)*

6HA1	plastics receptacle with outer steel drum
6HA2	plastics receptacle with outer steel crate or box
6HB1	plastics receptacle with outer aluminium drum
6HB2	plastics receptacle with outer aluminium crate or box
6HC	plastics receptacle with outer wooden box
6HD1	plastics receptacle with outer plywood drum
6HD2	plastics receptacle with outer plywood box
6HG1	plastics receptacle with outer fibre drum
6HG2	plastics receptacle with outer fibreboard box
6HH1	plastics receptacle with outer plastics drum
6HH2	plastics receptacle with outer solid plastics box

6.1.4.19.1 *Inner receptacle*

6.1.4.19.1.1 The requirements of 6.1.4.8.1 and 6.1.4.8.4 to 6.1.4.8.7 apply to plastics inner receptacles.

6.1.4.19.1.2 The plastics inner receptacle shall fit snugly inside the outer packaging, which shall be free of any projection that might abrade the plastics material.

6.1.4.19.1.3 Maximum capacity of inner receptacle:

6HA1, 6HB1, 6HD1, 6HG1, 6HH1:	250 litres
6HA2, 6HB2, 6HC, 6HD2, 6HG2, 6HH2:	60 litres.

6.1.4.19.1.4 Maximum net mass:

6HA1, 6HB1, 6HD1, 6HG1, 6HH1:	400 kg
6HA2, 6HB2, 6HC, 6HD2, 6HG2, 6HH2:	75 kg.

6.1.4.19.2 *Outer packaging*

6.1.4.19.2.1 Plastics receptacle with outer steel or aluminium drum 6HA1 or 6HB1; the relevant requirements of 6.1.4.1 or 6.1.4.2, as appropriate, apply to the construction of the outer packaging.

6.1.4.19.2.2 Plastics receptacle with outer steel or aluminium crate or box 6HA2 or 6HB2; the relevant requirements of 6.1.4.14 apply to the construction of the outer packaging.

6.1.4.19.2.3 Plastics receptacle with outer wooden box 6HC; the relevant requirements of 6.1.4.9 apply to the construction of the outer packaging.

6.1.4.19.2.4 Plastics receptacle with outer plywood drum 6HD1; the relevant requirements of 6.1.4.5 apply to the construction of the outer packaging.

6.1.4.19.2.5 Plastics receptacle with outer plywood box 6HD2; the relevant requirements of 6.1.4.10 apply to the construction of the outer packaging.

6.1.4.19.2.6 Plastics receptacle with outer fibre drum 6HG1; the requirements of 6.1.4.7.1 to 6.1.4.7.4 apply to the construction of the outer packaging.

6.1.4.19.2.7 Plastics receptacle with outer fibreboard box 6HG2; the relevant requirements of 6.1.4.12 apply to the construction of the outer packaging.

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6.1.4.19.2.8 Plastics receptacle with outer plastics drum 6HH1; the requirements of 6.1.4.8.1 to 6.1.4.8.6 apply to the construction of the outer packaging.

6.1.4.19.2.9 Plastics receptacles with outer solid plastics box (including corrugated plastics material) 6HH2; the requirements of 6.1.4.13.1 and 6.1.4.13.4 to 6.1.4.13.6 apply to the construction of the outer packaging.

6.1.4.20 *Composite packagings (glass, porcelain or stoneware)*

6PA1	receptacle with outer steel drum
6PA2	receptacle with outer steel crate or box
6PB1	receptacle with outer aluminium drum
6PB2	receptacle with outer aluminium crate or box
6PC	receptacle with outer wooden box
6PD1	receptacle with outer plywood drum
6PD2	receptacle with outer wickerwork hamper
6PG1	receptacle with outer fibre drum
6PG2	receptacle with outer fibreboard box
6PH1	receptacle with outer expanded plastics packaging
6PH2	receptacle with outer solid plastics packaging

6.1.4.20.1 *Inner receptacle*

6.1.4.20.1.1 Receptacles shall be of a suitable form (cylindrical or pear-shaped) and be made of good quality material free from any defect that could impair their strength. The walls shall be sufficiently thick at every point and free from internal stresses.

6.1.4.20.1.2 Screw-threaded plastics closures, ground glass stoppers or closures at least equally effective shall be used as closures for receptacles. Any part of the closure likely to come into contact with the contents of the receptacle shall be resistant to those contents. Care shall be taken to ensure that the closures are so fitted as to be leakproof and are suitably secured to prevent any loosening during carriage. If vented closures are necessary, they shall comply with 4.1.1.8.

6.1.4.20.1.3 The receptacle shall be firmly secured in the outer packaging by means of cushioning and/or absorbent materials.

6.1.4.20.1.4 Maximum capacity of receptacle: 60 litres.

6.1.4.20.1.5 Maximum net mass: 75 kg.

6.1.4.20.2 *Outer packaging*

6.1.4.20.2.1 Receptacle with outer steel drum 6PA1; the relevant requirements of 6.1.4.1 apply to the construction of the outer packaging. The removable lid required for this type of packaging may nevertheless be in the form of a cap.

6.1.4.20.2.2 Receptacle with outer steel crate or box 6PA2; the relevant requirements of 6.1.4.14 apply to the construction of the outer packaging. For cylindrical receptacles the outer packaging shall, when upright, rise above the receptacle and its closure. If the crate surrounds a pear-shaped receptacle and is of matching shape, the outer packaging shall be fitted with a protective cover (cap).

6.1.4.20.2.3 Receptacle with outer aluminium drum 6PB1; the relevant requirements of 6.1.4.2 apply to the construction of the outer packaging.

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- 6.1.4.20.2.4 Receptacle with outer aluminium crate or box 6PB2; the relevant requirements of 6.1.4.14 apply to the construction of the outer packaging.
- 6.1.4.20.2.5 Receptacle with outer wooden box 6PC; the relevant requirements of 6.1.4.9 apply to the construction of the outer packaging.
- 6.1.4.20.2.6 Receptacle with outer plywood drum 6PD1; the relevant requirements of 6.1.4.5 apply to the construction of the outer packaging.
- 6.1.4.20.2.7 Receptacle with outer wickerwork hamper 6PD2. The wickerwork hamper shall be properly made with material of good quality. It shall be fitted with a protective cover (cap) so as to prevent damage to the receptacle.
- 6.1.4.20.2.8 Receptacle with outer fibre drum 6PG1; the relevant requirements of 6.1.4.7.1 to 6.1.4.7.4 apply to the construction of the outer packaging.
- 6.1.4.20.2.9 Receptacle with outer fibreboard box 6PG2; the relevant requirements of 6.1.4.12 apply to the construction of the outer packaging.
- 6.1.4.20.2.10 Receptacle with outer expanded plastics or solid plastics packaging (6PH1 or 6PH2); the materials of both outer packagings shall meet the relevant requirements of 6.1.4.13. Outer solid plastics packaging shall be manufactured from high density polyethylene or some other comparable plastics material. The removable lid for this type of packaging may nevertheless be in the form of a cap.

6.1.4.21 *Combination packagings*

The relevant requirements of section 6.1.4 for the outer packagings to be used, are applicable.

NOTE: For the inner and outer packagings to be used, see the relevant packing instructions in Chapter 4.1.

6.1.4.22 *Light gauge metal packagings*

0A1 non-removable-head
0A2 removable-head

- 6.1.4.22.1 The sheet metal for the body and ends shall be of suitable steel, and of a gauge appropriate to the capacity and intended use of the packaging.
- 6.1.4.22.2 The joints shall be welded, at least double-seamed by welting or produced by a method ensuring a similar degree of strength and leakproofness.
- 6.1.4.22.3 Inner coatings of zinc, tin, lacquer, etc. shall be tough and shall adhere to the steel at every point, including the closures.
- 6.1.4.22.4 Openings for filling, emptying and venting in the bodies or heads of non-removable head (0A1) packagings shall not exceed 7 cm in diameter. Packagings with larger openings shall be considered to be of the removable-head type (0A2).
- 6.1.4.22.5 The closures of non-removable-head packagings (0A1) shall either be of the screw-threaded type or be capable of being secured by a screwable device or a device at least equally effective. The closures of removable-head packagings (0A2) shall be so designed and fitted that they stay firmly closed and the packagings remain leakproof in normal conditions of carriage.

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6.1.4.22.6 Maximum capacity of packagings: 40 litres.

6.1.4.22.7 Maximum net mass: 50 kg.

6.1.5 Test requirements for packagings

6.1.5.1 Performance and frequency of tests

6.1.5.1.1 The design type of each packaging shall be tested as provided in 6.1.5 in accordance with procedures established by the competent authority allowing the allocation of the mark and shall be approved by this competent authority.

6.1.5.1.2 Each packaging design type shall successfully pass the tests prescribed in this Chapter before being used. A packaging design type is defined by the design, size, material and thickness, manner of construction and packing, but may include various surface treatments. It also includes packagings which differ from the design type only in their lesser design height.

6.1.5.1.3 Tests shall be repeated on production samples at intervals established by the competent authority. For such tests on paper or fibreboard packagings, preparation at ambient conditions is considered equivalent to the requirements of 6.1.5.2.3.

6.1.5.1.4 Tests shall also be repeated after each modification which alters the design, material or manner of construction of a packaging.

6.1.5.1.5 The competent authority may permit the selective testing of packagings that differ only in minor respects from a tested type, e.g. smaller sizes of inner packagings or inner packagings of lower net mass; and packagings such as drums, bags and boxes which are produced with small reductions in external dimension(s).

6.1.5.1.6 *(Reserved)*

NOTE: For the conditions for assembling different inner packagings in an outer packaging and permissible variations in inner packagings, see 4.1.1.5.1.

6.1.5.1.7 Articles or inner packagings of any type for solids or liquids may be assembled and carried without testing in an outer packaging under the following conditions:

- (a) The outer packaging shall have been successfully tested in accordance with 6.1.5.3 with fragile (e.g. glass) inner packagings containing liquids using the packing group I drop height;
- (b) The total combined gross mass of inner packagings shall not exceed one half the gross mass of inner packagings used for the drop test in (a) above;
- (c) The thickness of cushioning material between inner packagings and between inner packagings and the outside of the packaging shall not be reduced below the corresponding thicknesses in the originally tested packaging; and if a single inner packaging was used in the original test, the thicknesses of cushioning between inner packagings shall not be less than the thickness of cushioning between the outside of the packaging and the inner packaging in the original test. If either fewer or smaller inner packagings are used (as compared to the inner packagings used in the drop test), sufficient additional cushioning material shall be used to take up void spaces;
- (d) The outer packaging shall have passed successfully the stacking test in 6.1.5.6 while empty. The total mass of identical packages shall be based on the combined mass of inner packagings used for the drop test in (a) above;

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- (e) Inner packagings containing liquids shall be completely surrounded with a sufficient quantity of absorbent material to absorb the entire liquid contents of the inner packagings;
- (f) If the outer packaging is intended to contain inner packagings for liquids and is not leakproof, or is intended to contain inner packagings for solids and is not siftproof, a means of containing any liquid or solid contents in the event of leakage shall be provided in the form of a leakproof liner, plastics bag or other equally efficient means of containment. For packagings containing liquids, the absorbent material required in (e) above shall be placed inside the means of containing the liquid contents;
- (g) Packagings shall be marked in accordance with 6.1.3 as having been tested to packing group I performance for combination packagings. The marked gross mass in kilograms shall be the sum of the mass of the outer packaging plus one half of the mass of the inner packaging(s) as used for the drop test referred to in (a) above. Such a package mark shall also contain a letter "V" as described in 6.1.2.4.

6.1.5.1.8 The competent authority may at any time require proof, by tests in accordance with this section, that serially-produced packagings meet the requirements of the design type tests. For verification purposes records of such tests shall be maintained.

6.1.5.1.9 If an inner treatment or coating is required for safety reasons, it shall retain its protective properties even after the tests.

6.1.5.1.10 Provided the validity of the test results is not affected and with the approval of the competent authority, several tests may be made on one sample.

6.1.5.1.11 *Salvage packagings*

Salvage packagings (see 1.2.1) shall be tested and marked in accordance with the requirements applicable to packing group II packagings intended for the carriage of solids or inner packagings, except as follows:

- (a) The test substance used in performing the tests shall be water, and the packagings shall be filled to not less than 98% of their maximum capacity. It is permissible to use additives, such as bags of lead shot, to achieve the requisite total package mass so long as they are placed so that the test results are not affected. Alternatively, in performing the drop test, the drop height may be varied in accordance with 6.1.5.3.5 (b);
- (b) Packagings shall, in addition, have been successfully subjected to the leakproofness test at 30 kPa, with the results of this test reflected in the test report required by 6.1.5.8; and
- (c) Packagings shall be marked with the letter "T" as described in 6.1.2.4.

6.1.5.2 *Preparation of packagings for testing*

6.1.5.2.1 Tests shall be carried out on packagings prepared as for carriage including, with respect to combination packagings, the inner packagings used. Inner or single receptacles or packagings other than bags shall be filled to not less than 98% of their maximum capacity for liquids or 95% for solids. Bags shall be filled to the maximum mass at which they may be used. For combination packagings where the inner packaging is designed to carry liquids and solids, separate testing is required for both liquid and solid contents. The substances or articles to be carried in the packagings may be replaced by other substances or articles except where this would invalidate the results of the tests. For solids, when another substance is used it shall have the same physical characteristics (mass, grain size, etc.) as the substance to be carried. It is permissible to use additives, such as bags of lead shot, to achieve the requisite total package mass, so long as they are placed so that the test results are not affected.

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- 6.1.5.2.2 In the drop tests for liquids, when another substance is used, it shall be of similar relative density and viscosity to those of the substance being carried. Water may also be used for the liquid drop test under the conditions in 6.1.5.3.5.
- 6.1.5.2.3 Paper or fibreboard packagings shall be conditioned for at least 24 hours in an atmosphere having a controlled temperature and relative humidity (r.h.). There are three options, one of which shall be chosen. The preferred atmosphere is 23 ± 2 °C and $50\% \pm 2\%$ r.h. The two other options are 20 ± 2 °C and $65\% \pm 2\%$ r.h. or 27 ± 2 °C and $65\% \pm 2\%$ r.h.

***NOTE:** Average values shall fall within these limits. Short-term fluctuations and measurement limitations may cause individual measurements to vary by up to $\pm 5\%$ relative humidity without significant impairment of test reproducibility.*

6.1.5.2.4 (Reserved)

- 6.1.5.2.5 To check that their chemical compatibility with the liquids is sufficient, plastics drums and jerricans in accordance with 6.1.4.8 and if necessary composite packagings (plastics material) in accordance with 6.1.4.19 shall be subjected to storage at ambient temperature for six months, during which time the test samples shall be kept filled with the goods they are intended to carry.

For the first and last 24 hours of storage, the test samples shall be placed with the closure downwards. However, packagings fitted with a vent shall be so placed on each occasion for five minutes only. After this storage the test samples shall undergo the tests prescribed in 6.1.5.3 to 6.1.5.6.

When it is known that the strength properties of the plastics material of the inner receptacles of composite packagings (plastics material) are not significantly altered by the action of the filling substance, it shall not be necessary to check that the chemical compatibility is sufficient.

A significant alteration in strength properties means:

- (a) distinct embrittlement; or
- (b) a considerable decrease in elasticity, unless related to a not less than proportionate increase in the elongation under load.

Where the behaviour of the plastics material has been established by other means, the above compatibility test may be dispensed with. Such procedures shall be at least equivalent to the above compatibility test and be recognized by the competent authority.

***NOTE:** For plastics drums and jerricans and composite packagings (plastics material) made of polyethylene, see also 6.1.5.2.6 below.*

- 6.1.5.2.6 For polyethylene drums and jerricans in accordance with 6.1.4.8 and if necessary, polyethylene composite packagings in accordance with 6.1.4.19, chemical compatibility with filling liquids assimilated in accordance with 4.1.1.21 may be verified as follows with standard liquids (see 6.1.6).

The standard liquids are representative for the processes of deterioration on polyethylene, as there are softening through swelling, cracking under stress, molecular degradation and combinations thereof. The sufficient chemical compatibility of the packagings may be verified by storage of the required test samples for three weeks at 40 °C with the appropriate standard liquid(s); where this standard liquid is water, storage in accordance with this procedure is not required. Storage is not required either for test samples which are used for the stacking test in case of the standard liquids "wetting solution" and "acetic acid".

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For the first and last 24 hours of storage, the test samples shall be placed with the closure downwards. However, packagings fitted with a vent shall be so placed on each occasion for five minutes only. After this storage, the test samples shall undergo the tests prescribed in 6.1.5.3 to 6.1.5.6.

The compatibility test for tert-Butyl hydroperoxide with more than 40% peroxide content and peroxyacetic acids of Class 5.2 shall not be carried out using standard liquids. For these substances, sufficient chemical compatibility of the test samples shall be verified during a storage period of six months at ambient temperature with the substances they are intended to carry.

Results of the procedure in accordance with this paragraph from polyethylene packagings can be approved for an equal design type, the internal surface of which is fluorinated.

6.1.5.2.7 For packagings made of polyethylene, as specified in 6.1.5.2.6, which have passed the test in 6.1.5.2.6, filling substances other than those assimilated in accordance with 4.1.1.21 may also be approved. Such approval shall be based on laboratory tests verifying that the effect of such filling substances on the test specimens is less than that of the appropriate standard liquid(s) taking into account the relevant processes of deterioration. The same conditions as those set out in 4.1.1.21.2 shall apply with respect to relative density and vapour pressure.

6.1.5.2.8 Provided that the strength properties of the plastics inner packagings of a combination packaging are not significantly altered by the action of the filling substance, proof of chemical compatibility is not necessary. A significant alteration in strength properties means:

- (a) distinct embrittlement;
- (b) a considerable decrease in elasticity, unless related to a not less than proportionate increase in elastic elongation.

6.1.5.3 *Drop test*⁴

6.1.5.3.1 *Number of test samples (per design type and manufacturer) and drop orientation*

For other than flat drops the centre of gravity shall be vertically over the point of impact.

Where more than one orientation is possible for a given drop test, the orientation most likely to result in failure of the packaging shall be used.

Packaging	No. of test samples	Drop orientation
(a) Steel drums Aluminium drums Drums of metal other than steel or aluminium Steel jerricans Aluminium jerricans Plywood drums Fibre drums Plastics drums and jerricans Composite packagings which are in the shape of a drum Light gauge metal packagings	Six (three for each drop)	First drop (using three samples): the packaging shall strike the target diagonally on the chime or, if the packaging has no chime, on a circumferential seam or an edge. Second drop (using the other three samples): the packaging shall strike the target on the weakest part not tested by the first drop, for example a closure or, for some cylindrical drums, the welded longitudinal seam of the drum body

⁴ See ISO Standard 2248.

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Packaging	No. of test samples	Drop orientation
(b) Boxes of natural wood Plywood boxes Reconstituted wood boxes Fibreboard boxes Plastics boxes Steel or aluminium boxes Composite packagings which are in the shape of a box	Five (one for each drop)	First drop: flat on the bottom Second drop: flat on the top Third drop: flat on the long side Fourth drop: flat on the short side Fifth drop: on a corner
(c) Bags - single-ply with a side seam	Three (three drops per bag)	First drop: flat on a wide face Second drop: flat on a narrow face Third drop: on an end of the bag
(d) Bags - single-ply without a side seam, or multi-ply	Three (two drops per bag)	First drop: flat on a wide face Second drop: on an end of the bag
(e) Composite packagings (glass, stoneware or porcelain), marked with the symbol "RID/ADR" according to 6.1.3.1 (a) (ii) and which are in the shape of a drum or box	Three (one for each drop)	Diagonally on the bottom chime, or, if there is no chime, on a circumferential seam or the bottom edge

6.1.5.3.2 *Special preparation of test samples for the drop test*

The temperature of the test sample and its contents shall be reduced to $-18\text{ }^{\circ}\text{C}$ or lower for the following packagings:

- (a) Plastics drums (see 6.1.4.8);
- (b) Plastics jerricans (see 6.1.4.8);
- (c) Plastics boxes other than expanded plastics boxes (see 6.1.4.13);
- (d) Composite packagings (plastics material) (see 6.1.4.19); and
- (e) Combination packagings with plastics inner packagings, other than plastics bags intended to contain solids or articles.

Where test samples are prepared in this way, the conditioning in 6.1.5.2.3 may be waived. Test liquids shall be kept in the liquid state by the addition of anti-freeze if necessary.

6.1.5.3.3 Removable head packagings for liquids shall not be dropped until at least 24 hours after filling and closing to allow for any possible gasket relaxation.

6.1.5.3.4 *Target*

The target shall be a non-resilient and horizontal surface and shall be:

- Integral and massive enough to be immovable;
- Flat with a surface kept free from local defects capable of influencing the test results;
- Rigid enough to be non-deformable under test conditions and not liable to become damaged by the tests; and
- Sufficiently large to ensure that the test package falls entirely upon the surface.

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6.1.5.3.5 *Drop height*

For solids and liquids, if the test is performed with the solid or liquid to be carried or with another substance having essentially the same physical characteristics:

Packing Group I	Packing Group II	Packing Group III
1.8 m	1.2 m	0.8 m

For liquids in single packagings and for inner packagings of combination packagings, if the test is performed with water:

NOTE: *The term water includes water/antifreeze solutions with a minimum specific gravity of 0.95 for testing at - 18 °C.*

- (a) where the substances to be carried have a relative density not exceeding 1.2:

Packing Group I	Packing Group II	Packing Group III
1.8 m	1.2 m	0.8 m

- (b) where the substances to be carried have a relative density exceeding 1.2, the drop height shall be calculated on the basis of the relative density (d) of the substance to be carried, rounded up to the first decimal, as follows:

Packing Group I	Packing Group II	Packing Group III
$d \times 1.5$ (m)	$d \times 1.0$ (m)	$d \times 0.67$ (m)

- (c) for light-gauge metal packagings, marked with symbol "RID/ADR" according to 6.1.3.1(a) (ii) intended for the carriage of substances having a viscosity at 23 °C greater than 200 mm²/s (corresponding to a flow time of 30 seconds with an ISO flow cup having a jet orifice of 6 mm diameter in accordance with ISO Standard 2431:1993)

- (i) if the relative density does not exceed 1.2:

Packing group II	Packing group III
0.6 m	0.4 m

- (ii) where the substances to be carried have a relative density (d) exceeding 1.2 the drop height shall be calculated on the basis of the relative density (d) of the substance to be carried, rounded up to the first decimal place, as follows:

Packing group II	Packing group III
$d \times 0.5$ m	$d \times 0.33$ m

6.1.5.3.6 *Criteria for passing the test*

- 6.1.5.3.6.1 Each packaging containing liquid shall be leakproof when equilibrium has been reached between the internal and external pressures, however for inner packagings of combination packagings and except for inner receptacles of composite packagings (glass, porcelain or stoneware), marked with the symbol "RID/ADR" according to 6.1.3.1 (a) (ii) it is not necessary that the pressures be equalized.

- 6.1.5.3.6.2 Where a packaging for solids undergoes a drop test and its upper face strikes the target, the test sample passes the test if the entire contents are retained by an inner packaging or inner

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receptacle (e.g. a plastics bag), even if the closure while retaining its containment function, is no longer sift-proof.

- 6.1.5.3.6.3 The packaging or outer packaging of a composite or combination packaging shall not exhibit any damage liable to affect safety during carriage. Inner receptacles, inner packagings, or articles shall remain completely within the outer packaging and there shall be no leakage of the filling substance from the inner receptacle(s) or inner packaging(s).
- 6.1.5.3.6.4 Neither the outermost ply of a bag nor an outer packaging may exhibit any damage liable to affect safety during carriage.
- 6.1.5.3.6.5 A slight discharge from the closure(s) upon impact is not considered to be a failure of the packaging provided that no further leakage occurs.
- 6.1.5.3.6.6 No rupture is permitted in packagings for goods of Class 1 which would permit the spillage of loose explosive substances or articles from the outer packaging.

6.1.5.4 *Leakproofness test*

The leakproofness test shall be performed on all design types of packagings intended to contain liquids; however, this test is not required for

- inner packagings of combination packagings;
- inner receptacles of composite packagings (glass, porcelain or stoneware), marked with the symbol "RID/ADR" according to 6.1.3.1 (a) (i);
- light gauge metal packagings, marked with the symbol "RID/ADR" according to 6.1.3.1 (a) (ii) intended for substances with a viscosity at 23 °C exceeding 200 mm²/s.

- 6.1.5.4.1 *Number of test samples:* three test samples per design type and manufacturer.
- 6.1.5.4.2 *Special preparation of test samples for the test:* either vented closures shall be replaced by similar non-vented closures or the vent shall be sealed.
- 6.1.5.4.3 *Test method and pressure to be applied:* the packagings including their closures shall be restrained under water for 5 minutes while an internal air pressure is applied, the method of restraint shall not affect the results of the test.

The air pressure (gauge) to be applied shall be:

Packing Group I	Packing Group II	Packing Group III
Not less than 30 kPa (0.3 bar)	Not less than 20 kPa (0.2 bar)	Not less than 20 kPa (0.2 bar)

Other methods at least equally effective may be used.

- 6.1.5.4.4 *Criterion for passing the test:* there shall be no leakage.

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6.1.5.5 *Internal pressure (hydraulic) test*

6.1.5.5.1 *Packagings to be tested*

The internal pressure (hydraulic) test shall be carried out on all design types of metal, plastics and composite packagings intended to contain liquids. This test is not required for:

- Inner packagings of combination packagings;
- Inner receptacles of composite packagings (glass, porcelain or stoneware), marked with the symbol "RID/ADR" according to 6.1.3.1 (a) (ii);
- Light gauge metal packagings, marked with the symbol "RID/ADR" according to 6.1.3.1 (a) (ii) intended for substances with a viscosity at 23 °C exceeding 200 mm²/s.

6.1.5.5.2 *Number of test samples:* three test samples per design type and manufacturer.

6.1.5.5.3 *Special preparation of packagings for testing:* either vented closures shall be replaced by similar non-vented closures or the vent shall be sealed.

6.1.5.5.4 *Test method and pressure to be applied:* metal packagings and composite packagings (glass, porcelain or stoneware), including their closures, shall be subjected to the test pressure for 5 minutes. Plastics packagings and composite packagings (plastics material) including their closures shall be subjected to the test pressure for 30 minutes. This pressure is the one to be included in the marking required by 6.1.3.1 (d). The manner in which the packagings are supported shall not invalidate the test. The test pressure shall be applied continuously and evenly; it shall be kept constant throughout the test period. The hydraulic pressure (gauge) applied, as determined by any one of the following methods, shall be:

- (a) not less than the total gauge pressure measured in the packaging (i.e. the vapour pressure of the filling liquid and the partial pressure of the air or other inert gases, minus 100 kPa) at 55 °C, multiplied by a safety factor of 1.5; this total gauge pressure shall be determined on the basis of a maximum degree of filling in accordance with 4.1.1.4 and a filling temperature of 15 °C; or
- (b) not less than 1.75 times the vapour pressure at 50 °C of the liquid to be carried, minus 100 kPa but with a minimum test pressure of 100 kPa; or
- (c) not less than 1.5 times the vapour pressure at 55 °C of the liquid to be carried, minus 100 kPa but with a minimum test pressure of 100 kPa.

6.1.5.5.5 In addition, packagings intended to contain liquids of packing group I shall be tested to a minimum test pressure of 250 kPa (gauge) for a test period of 5 or 30 minutes depending upon the material of construction of the packaging.

6.1.5.5.6 *Criterion for passing the test:* no packaging may leak.

6.1.5.6 *Stacking test*

All design types of packagings other than bags, and other than non-stackable composite packagings (glass, porcelain, or stoneware) marked with the symbol "RID/ADR" according to 6.1.3.1 (a) (ii), shall be subjected to a stacking test.

6.1.5.6.1 *Number of test samples:* three test samples per design type and manufacturer.

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6.1.5.6.2 *Test method:* the test sample shall be subjected to a force applied to the top surface of the test sample equivalent to the total weight of identical packages which might be stacked on it during carriage; where the contents of the test sample are liquids with relative density different from that of the liquid to be carried, the force shall be calculated in relation to the latter. The minimum height of the stack including the test sample shall be 3 metres. The duration of the test shall be 24 hours except that plastics drums, jerricans, and composite packagings 6HH1 and 6HH2 intended for liquids shall be subjected to the stacking test for a period of 28 days at a temperature of not less than 40 °C.

For the test in accordance with 6.1.5.2.5, the original filling substance shall be used. For the test in accordance with 6.1.5.2.6, a stacking test shall be carried out with a standard liquid.

6.1.5.6.3 *Criteria for passing the test:* no test sample shall leak. In composite packagings or combination packagings, there shall be no leakage of the filling substance from the inner receptacle or inner packaging. No test sample shall show any deterioration which could adversely affect transport safety or any distortion liable to reduce its strength or cause instability in stacks of packages. Plastics packagings shall be cooled to ambient temperature before the assessment.

6.1.5.7 *Supplementary permeability test for plastics drums and jerricans in accordance with 6.1.4.8 and for composite packagings (plastics material) in accordance with 6.1.4.19 intended for the carriage of liquids having a flash-point ≤ 60 °C, other than 6HA1 packagings*

Polyethylene packagings need be subjected to this test only if they are to be approved for the carriage of benzene, toluene, xylene or mixtures and preparations containing those substances.

6.1.5.7.1 *Number of test samples:* three packagings per design type and manufacturer.

6.1.5.7.2 *Special preparation of the test sample for the test:* the test samples are to be pre-stored with the original filling substance in accordance with 6.1.5.2.5, or, for polyethylene packagings, with the standard liquid mixture of hydrocarbons (white spirit) in accordance with 6.1.5.2.6.

6.1.5.7.3 *Test method:* the test samples filled with the substance for which the packaging is to be approved shall be weighed before and after storage for 28 days at 23 °C and 50% relative atmospheric humidity. For polyethylene packagings, the test may be carried out with the standard liquid mixture of hydrocarbons (white spirit) in place of benzene, toluene or xylene.

6.1.5.7.4 *Criterion for passing the test:* permeability shall not exceed 0.008 g/l.h.

6.1.5.8 *Test Report*

6.1.5.8.1 A test report containing at least the following particulars shall be drawn up and shall be available to the users of the packaging:

1. Name and address of the test facility;
2. Name and address of applicant (where appropriate);
3. A unique test report identification;
4. Date of the test report;
5. Manufacturer of the packaging;
6. Description of the packaging design type (e.g. dimensions, materials, closures, thickness, etc.), including method of manufacture (e.g. blow moulding) and which may include drawing(s) and/or photograph(s);

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7. Maximum capacity;
8. Characteristics of test contents, e.g. viscosity and relative density for liquids and particle size for solids;
9. Test descriptions and results;
10. The test report shall be signed with the name and status of the signatory.

6.1.5.8.2 The test report shall contain statements that the packaging prepared as for carriage was tested in accordance with the appropriate requirements of this section and that the use of other packaging methods or components may render it invalid. A copy of the test report shall be available to the competent authority.

6.1.6 Standard liquids for verifying the chemical compatibility testing of polyethylene packagings, including IBCs, in accordance with 6.1.5.2.6 and 6.5.6.3.5, respectively

6.1.6.1 The following standard liquids shall be used for this plastics material.

- (a) **Wetting Solution** for substances causing severe cracking in polyethylene under stress, in particular for all solutions and preparations containing wetting agents.

An aqueous solution of 1% of alkyl benzene sulphonate, or an aqueous solution of 5% nonylphenol ethoxylate which has been preliminary stored for at least 14 days at a temperature of 40 °C before being used for the first time for the tests, shall be used. The surface tension of this solution shall be 31 to 35 mN/m at 23 °C.

The stacking test shall be carried out on the basis of a relative density of not less than 1.20.

A compatibility test with acetic acid is not required if adequate chemical compatibility is proved with a wetting solution.

For filling substances causing cracking in polyethylene under stress which is resistant to the wetting solution, adequate chemical compatibility may be proved after preliminary storing for three weeks at 40 °C in accordance with 6.1.5.2.6, but with the original filling matter;

- (b) **Acetic acid** for substances and preparations causing cracking in polyethylene under stress, in particular for monocarboxylic acids and monovalent alcohols.

Acetic acid in 98 to 100% concentration shall be used.

Relative density = 1.05.

The stacking test shall be carried out on the basis of a relative density not less than 1.1.

In the case of filling substances causing polyethylene to swell more than acetic acid and to such an extent that the polyethylene mass is increased by up to 4%, adequate chemical compatibility may be proved after preliminary storing for three weeks at 40 °C, in accordance with 6.1.5.2.6 but with the original filling matter;

- (c) **Normal butyl acetate/normal butyl acetate-saturated wetting solution** for substances and preparations causing polyethylene to swell to such an extent that the polyethylene mass is increased by about 4% and at the same time causing cracking under stress, in particular for phyto-sanitary products, liquid paints and esters. Normal butyl acetate in 98 to 100% concentration shall be used for preliminary storage in accordance with 6.1.5.2.6.

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For the stacking test in accordance with 6.1.5.6, a test liquid consisting of a 1 to 10% aqueous wetting solution mixed with 2% normal butyl acetate conforming to (a) above shall be used.

The stacking test shall be carried out on the basis of a relative density not less than 1.0.

In the case of filling substances causing polyethylene to swell more than normal butyl acetate and to such an extent that the polyethylene mass is increased by up to 7.5%, adequate chemical compatibility may be proved after preliminary storing for three weeks at 40 °C, in accordance with 6.1.5.2.6 but with the original filling matter;

- (d) **Mixture of hydrocarbons (white spirit)** for substances and preparations causing polyethylene to swell, in particular for hydrocarbons, esters and ketones.

A mixture of hydrocarbons having a boiling range 160 °C to 220 °C, relative density 0.78-0.80, flash-point > 50 °C and an aromatic content 16% to 21% shall be used.

The stacking test shall be carried out on the basis of a relative density not less than 1.0.

In the case of filling substances causing polyethylene to swell to such an extent that the polyethylene mass is increased by more than 7.5%, adequate chemical compatibility may be proved after preliminary storing for three weeks at 40 °C, in accordance with 6.1.5.2.6 but with the original filling matter;

- (e) **Nitric acid** for all substances and preparations having an oxidizing effect on polyethylene and causing molecular degradation identical to or less than 55% nitric acid.

Nitric acid in a concentration of not less than 55% shall be used.

The stacking test shall be carried out on the basis of a relative density of not less than 1.4.

In the case of filling substances more strongly oxidizing than 55% nitric acid or causing degradation of the molecular mass proceed in accordance with 6.1.5.2.5.

The period of use shall be determined in such cases by observing the degree of damage (e.g. two years for nitric acid in not less than 55% concentration);

- (f) **Water** for substances which do not attack polyethylene in any of the cases referred to under (a) to (e), in particular for inorganic acids and lyes, aqueous saline solutions, polyvalent alcohols and organic substances in aqueous solution.

The stacking test shall be carried out on the basis of a relative density of not less than 1.2.

A design type test with water is not required if adequate chemical compatibility is proved with wetting solution or nitric acid.

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CHAPTER 6.2

REQUIREMENTS FOR THE CONSTRUCTION AND TESTING OF PRESSURE RECEPTACLES, AEROSOL DISPENSERS, SMALL RECEPTACLES CONTAINING GAS (GAS CARTRIDGES) AND FUEL CELL CARTRIDGES CONTAINING LIQUEFIED FLAMMABLE GAS

NOTE: *Aerosol dispensers, small receptacles containing gas (gas cartridges) and fuel cell cartridges containing liquefied flammable gas are not subject to the requirements of 6.2.1 to 6.2.5.*

6.2.1 General requirements

6.2.1.1 Design and construction

6.2.1.1.1 Pressure receptacles and their closures shall be designed, manufactured, tested and equipped in such a way as to withstand all conditions, including fatigue, to which they will be subjected during normal conditions of carriage and use.

6.2.1.1.2 *(Reserved)*

6.2.1.1.3 In no case shall the minimum wall thickness be less than that specified in the design and construction technical standards.

6.2.1.1.4 For welded pressure receptacles, only metals of weldable quality shall be used.

6.2.1.1.5 The test pressure of cylinders, tubes, pressure drums and bundles of cylinders shall be in accordance with packing instruction P200 of 4.1.4.1, or, for a chemical under pressure, with packing instruction P206 of 4.1.4.1. The test pressure for closed cryogenic receptacles shall be in accordance with packing instruction P203 of 4.1.4.1. The test pressure of a metal hydride storage system shall be in accordance with packing instruction P205 of 4.1.4.1.

6.2.1.1.6 Pressure receptacles assembled in bundles shall be structurally supported and held together as a unit. Pressure receptacles shall be secured in a manner that prevents movement in relation to the structural assembly and movement that would result in the concentration of harmful local stresses. Manifold assemblies (e.g. manifold, valves, and pressure gauges) shall be designed and constructed such that they are protected from impact damage and forces normally encountered in carriage. Manifolds shall have at least the same test pressure as the cylinders. For toxic liquefied gases, each pressure receptacle shall have an isolation valve to ensure that each pressure receptacle can be filled separately and that no interchange of pressure receptacle contents can occur during carriage.

NOTE: *Toxic liquefied gases have the classification codes 2T, 2TF, 2TC, 2TO, 2TFC or 2TOC.*

6.2.1.1.7 Contact between dissimilar metals which could result in damage by galvanic action shall be avoided.

6.2.1.1.8 *Additional requirements for the construction of closed cryogenic receptacles for refrigerated liquefied gases*

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- 6.2.1.1.8.1 The mechanical properties of the metal used shall be established for each pressure receptacle, including the impact strength and the bending coefficient.

NOTE: *With regard to the impact strength, sub-section 6.8.5.3 gives details of test requirements which may be used.*

- 6.2.1.1.8.2 The pressure receptacles shall be thermally insulated. The thermal insulation shall be protected against impact by means of a jacket. If the space between the pressure receptacle and the jacket is evacuated of air (vacuum-insulation), the jacket shall be designed to withstand without permanent deformation an external pressure of at least 100 kPa (1 bar) calculated in accordance with a recognised technical code or a calculated critical collapsing pressure of not less than 200 kPa (2 bar) gauge pressure. If the jacket is so closed as to be gas-tight (e.g. in the case of vacuum-insulation), a device shall be provided to prevent any dangerous pressure from developing in the insulating layer in the event of inadequate gas-tightness of the pressure receptacle or its fittings. The device shall prevent moisture from penetrating into the insulation.

- 6.2.1.1.8.3 Closed cryogenic receptacles intended for the carriage of refrigerated liquefied gases having a boiling point below $-182\text{ }^{\circ}\text{C}$ at atmospheric pressure shall not include materials which may react with oxygen or oxygen enriched atmospheres in a dangerous manner, when located in parts of the thermal insulation where there is a risk of contact with oxygen or with oxygen enriched liquid.

- 6.2.1.1.8.4 Closed cryogenic receptacles shall be designed and constructed with suitable lifting and securing arrangements.

- 6.2.1.1.9 *Additional requirements for the construction of pressure receptacles for acetylene*

Pressure receptacles for UN 1001 acetylene, dissolved, and UN 3374 acetylene, solvent free, shall be filled with a porous material, uniformly distributed, of a type that conforms to the requirements and testing specified by the competent authority and which:

- (a) Is compatible with the pressure receptacle and does not form harmful or dangerous compounds either with the acetylene or with the solvent in the case of UN 1001; and
- (b) Is capable of preventing the spread of decomposition of the acetylene in the porous material.

In the case of UN 1001, the solvent shall be compatible with the pressure receptacle.

6.2.1.2 *Materials*

- 6.2.1.2.1 Construction materials of pressure receptacles and their closures which are in direct contact with dangerous goods shall not be affected or weakened by the dangerous goods intended to be carried and shall not cause a dangerous effect e.g. catalysing a reaction or reacting with the dangerous goods.

- 6.2.1.2.2 Pressure receptacles and their closures shall be made of the materials specified in the design and construction technical standards and the applicable packing instruction for the substances intended for carriage in the pressure receptacle. The materials shall be resistant to brittle fracture and to stress corrosion cracking as indicated in the design and construction technical standards.

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6.2.1.3 *Service equipment*

- 6.2.1.3.1 Valves, piping and other fittings subjected to pressure, excluding pressure relief devices, shall be designed and constructed so that the burst pressure is at least 1.5 times the test pressure of the pressure receptacle.
- 6.2.1.3.2 Service equipment shall be configured or designed to prevent damage that could result in the release of the pressure receptacle contents during normal conditions of handling and carriage. Manifold piping leading to shut-off valves shall be sufficiently flexible to protect the valves and the piping from shearing or releasing the pressure receptacle contents. The filling and discharge valves and any protective caps shall be capable of being secured against unintended opening. Valves shall be protected as specified in 4.1.6.8.
- 6.2.1.3.3 Pressure receptacles which are not capable of being handled manually or rolled, shall be fitted with devices (skids, rings, straps) ensuring that they can be safely handled by mechanical means and so arranged as not to impair the strength of, nor cause undue stresses in, the pressure receptacle.
- 6.2.1.3.4 Individual pressure receptacles shall be equipped with pressure relief devices as specified in packing provision P200 (2) or P205 of 4.1.4.1 or in 6.2.1.3.6.4 and 6.2.1.3.6.5. Pressure-relief devices shall be designed to prevent the entry of foreign matter, the leakage of gas and the development of any dangerous excess pressure. When fitted, pressure relief devices on manifolded horizontal pressure receptacles filled with flammable gas shall be arranged to discharge freely to the open air in such a manner as to prevent any impingement of escaping gas upon the pressure receptacle itself under normal conditions of carriage.
- 6.2.1.3.5 Pressure receptacles whose filling is measured by volume shall be provided with a level indicator.
- 6.2.1.3.6 *Additional requirements for closed cryogenic receptacles*
- 6.2.1.3.6.1 Each filling and discharge opening in a closed cryogenic receptacle used for the carriage of flammable refrigerated liquefied gases shall be fitted with at least two mutually independent shut-off devices in series, the first being a stop-valve, the second being a cap or equivalent device.
- 6.2.1.3.6.2 For sections of piping which can be closed at both ends and where liquid product can be trapped, a method of automatic pressure-relief shall be provided to prevent excess pressure build-up within the piping.
- 6.2.1.3.6.3 Each connection on a closed cryogenic receptacle shall be clearly marked to indicate its function (e.g. vapour or liquid phase).
- 6.2.1.3.6.4 Pressure-relief devices
- 6.2.1.3.6.4.1 Every closed cryogenic receptacle shall be provided with at least one pressure-relief device. The pressure-relief device shall be of the type that will resist dynamic forces including surge.
- 6.2.1.3.6.4.2 Closed cryogenic receptacles may, in addition, have a frangible disc in parallel with the spring loaded device(s) in order to meet the requirements of 6.2.1.3.6.5.
- 6.2.1.3.6.4.3 Connections to pressure-relief devices shall be of sufficient size to enable the required discharge to pass unrestricted to the pressure-relief device.
- 6.2.1.3.6.4.4 All pressure-relief device inlets shall under maximum filling conditions be situated in the vapour space of the closed cryogenic receptacle and the devices shall be so arranged as to ensure that the escaping vapour is discharged unrestrictedly.

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6.2.1.3.6.5 Capacity and setting of pressure-relief devices

NOTE: *In relation to pressure-relief devices of closed cryogenic receptacles, maximum allowable working pressure (MAWP) means the maximum effective gauge pressure permissible at the top of a loaded closed cryogenic receptacle in its operating position including the highest effective pressure during filling and discharge.*

6.2.1.3.6.5.1 The pressure-relief device shall open automatically at a pressure not less than the MAWP and be fully open at a pressure equal to 110% of the MAWP. It shall, after discharge, close at a pressure not lower than 10% below the pressure at which discharge starts and shall remain closed at all lower pressures.

6.2.1.3.6.5.2 Frangible discs shall be set to rupture at a nominal pressure which is the lower of either the test pressure or 150% of the MAWP.

6.2.1.3.6.5.3 In the case of the loss of vacuum in a vacuum-insulated closed cryogenic receptacle the combined capacity of all pressure-relief devices installed shall be sufficient so that the pressure (including accumulation) inside the closed cryogenic receptacle does not exceed 120% of the MAWP.

6.2.1.3.6.5.4 The required capacity of the pressure-relief devices shall be calculated in accordance with an established technical code recognized by the competent authority¹.

6.2.1.4 *Approval of pressure receptacles*

6.2.1.4.1 The conformity of pressure receptacles shall be assessed at time of manufacture as required by the competent authority. Pressure receptacles shall be inspected, tested and approved by an inspection body. The technical documentation shall include full specifications on design and construction, and full documentation on the manufacturing and testing.

6.2.1.4.2 Quality assurance systems shall conform to the requirements of the competent authority.

6.2.1.5 *Initial inspection and test*

6.2.1.5.1 New pressure receptacles, other than closed cryogenic receptacles and metal hydride storage systems, shall be subjected to testing and inspection during and after manufacture in accordance with the applicable design standards including the following:

On an adequate sample of pressure receptacles:

- (a) Testing of the mechanical characteristics of the material of construction;
- (b) Verification of the minimum wall thickness;
- (c) Verification of the homogeneity of the material for each manufacturing batch;
- (d) Inspection of the external and internal conditions of the pressure receptacles;
- (e) Inspection of the neck threads;
- (f) Verification of the conformance with the design standard;

¹ See for example CGA Publications S-1.2-2003 "Pressure Relief Device Standards-Part 2-Cargo and Portable Tanks for Compressed Gases" and S-1.1-2003 "Pressure Relief Device Standards-Part 1-Cylinders for Compressed Gases".

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For all pressure receptacles:

- (g) A hydraulic pressure test. Pressure receptacles shall withstand the test pressure without expansion greater than that allowed in the design specification;

NOTE: *With the agreement of the competent authority, the hydraulic pressure test may be replaced by a test using a gas, where such an operation does not entail any danger.*

- (h) Inspection and assessment of manufacturing defects and either repairing them or rendering the pressure receptacles unserviceable. In the case of welded pressure receptacles, particular attention shall be paid to the quality of the welds;
- (i) An inspection of the markings on the pressure receptacles;
- (j) In addition, pressure receptacles intended for the carriage of UN No. 1001 acetylene, dissolved, and UN No. 3374 acetylene, solvent free, shall be inspected to ensure proper installation and condition of the porous material and, if applicable, the quantity of solvent.

6.2.1.5.2 On an adequate sample of closed cryogenic receptacles, the inspections and tests specified in 6.2.1.5.1 (a), (b), (d) and (f) shall be performed. In addition, welds shall be inspected by radiographic, ultrasonic or another suitable non-destructive test method on a sample of closed cryogenic receptacles according to the applicable design and construction standard. This weld inspection does not apply to the jacket.

Additionally, all closed cryogenic receptacles shall undergo the initial inspections and tests specified in 6.2.1.5.1 (g), (h) and (i), as well as a leakproofness test and a test of the satisfactory operation of the service equipment after assembly.

6.2.1.5.3 For metal hydride storage systems, it shall be verified that the inspections and tests specified in 6.2.1.5.1 (a), (b), (c), (d), (e) if applicable, (f), (g), (h) and (i) have been performed on an adequate sample of the receptacles used in the metal hydride storage system. In addition, on an adequate sample of metal hydride storage systems, the inspections and tests specified in 6.2.1.5.1 (c) and (f) shall be performed, as well as 6.2.1.5.1 (e), if applicable, and inspection of the external conditions of the metal hydride storage system.

Additionally, all metal hydride storage systems shall undergo the initial inspections and tests specified in 6.2.1.5.1 (h) and (i), as well as a leakproofness test and a test of the satisfactory operation of the service equipment.

6.2.1.6 *Periodic inspection and test*

6.2.1.6.1 Refillable pressure receptacles, other than cryogenic receptacles, shall be subjected to periodic inspections and tests by a body authorised by the competent authority, in accordance with the following:

- (a) Check of the external conditions of the pressure receptacle and verification of the equipment and the external markings;
- (b) Check of the internal conditions of the pressure receptacle (e.g. internal inspection, verification of minimum wall thickness);
- (c) Checking of the threads if there is evidence of corrosion or if the fittings are removed;
- (d) A hydraulic pressure test and, if necessary, verification of the characteristics of the material by suitable tests;

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- (e) Check of service equipment, other accessories and pressure-relief devices, if to be reintroduced into service.

NOTE 1: *With the agreement of the competent authority, the hydraulic pressure test may be replaced by a test using a gas, where such an operation does not entail any danger.*

NOTE 2: *With the agreement of the competent authority, the hydraulic pressure test of cylinders or tubes may be replaced by an equivalent method based on acoustic emission testing or a combination of acoustic emission testing and ultrasonic examination. ISO 16148:2006 may be used as a guide for acoustic emission testing procedures.*

NOTE 3: *The hydraulic pressure test may be replaced by ultrasonic examination carried out in accordance with ISO 10461:2005+A1:2006 for seamless aluminium alloy gas cylinders and in accordance with ISO 6406:2005 for seamless steel gas cylinders.*

NOTE 4: *For the periodic inspection and test frequencies, see packing instruction P200 of 4.1.4.1 or, for a chemical under pressure, packing instruction P206 of 4.1.4.1.*

6.2.1.6.2 Pressure receptacles intended for the carriage of UN No. 1001 acetylene, dissolved and UN No. 3374 acetylene, solvent free, shall be examined only as specified in 6.2.1.6.1 (a), (c) and (e). In addition the condition of the porous material (e.g. cracks, top clearance, loosening, settlement) shall be examined.

6.2.1.6.3 Pressure relief valves for closed cryogenic receptacles shall be subject to periodic inspections and tests.

6.2.1.7 Requirements for manufacturers

6.2.1.7.1 The manufacturer shall be technically able and shall possess all resources required for the satisfactory manufacture of pressure receptacles; this relates in particular to qualified personnel:

- (a) To supervise the entire manufacturing process;
- (b) To carry out joining of materials; and
- (c) To carry out the relevant tests.

6.2.1.7.2 The proficiency test of a manufacturer shall in all instances be carried out by an inspection body approved by the competent authority of the country of approval.

6.2.1.8 Requirements for inspection bodies

6.2.1.8.1 Inspection bodies shall be independent from manufacturing enterprises and competent to perform the tests, inspections and approvals required.

6.2.2 Requirements for UN pressure receptacles

In addition to the general requirements of section 6.2.1, UN pressure receptacles shall comply with the requirements of this section, including the standards, as applicable.

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6.2.2.1 Design, construction and initial inspection and test

6.2.2.1.1 The following standards apply for the design, construction, and initial inspection and test of UN cylinders, except that inspection requirements related to the conformity assessment system and approval shall be in accordance with 6.2.2.5:

ISO 9809-1:1999	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 1: Quenched and tempered steel cylinders with tensile strength less than 1 100 MPa <i>NOTE: The note concerning the F factor in section 7.3 of this standard shall not be applied for UN cylinders.</i>
ISO 9809-2:2000	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 2: Quenched and tempered steel cylinders with tensile strength greater than or equal to 1 100 MPa
ISO 9809-3:2000	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 3: Normalized steel cylinders
ISO 7866:1999	Gas cylinders – Refillable seamless aluminium alloy gas cylinders – Design, construction and testing <i>NOTE: The note concerning the F factor in section 7.2 of this standard shall not be applied for UN cylinders. Aluminium alloy 6351A – T6 or equivalent shall not be authorised.</i>
ISO 4706:2008	Gas cylinders – Refillable welded steel cylinders – Test pressure 60 bar and below
ISO 18172-1:2007	Gas cylinders – Refillable welded stainless steel cylinders – Part 1: Test pressure 6 MPa and below
ISO 20703:2006	Gas cylinders – Refillable welded aluminium-alloy cylinders – Design, construction and testing
ISO 11118:1999	Gas cylinders – Non-refillable metallic gas cylinders – Specification and test methods
ISO 11119-1:2002	Gas cylinders of composite construction – Specification and test methods – Part 1: Hoop wrapped composite gas cylinders
ISO 11119-2:2002	Gas cylinders of composite construction – Specification and test methods – Part 2: Fully wrapped fibre reinforced composite gas cylinders with load-sharing metal liners
ISO 11119-3:2002	Gas cylinders of composite construction – Specification and test methods – Part 3: Fully wrapped fibre reinforced composite gas cylinders with non-load-sharing metallic or non-metallic liners

NOTE 1: In the above referenced standards composite cylinders shall be designed for unlimited service life.

NOTE 2: After the first 15 years of service, composite cylinders manufactured according to these standards, may be approved for extended service by the competent authority which was responsible for the original approval of the cylinders and which will base its decision on the test information supplied by the manufacturer or owner or user.

6.2.2.1.2 The following standard apply for the design, construction, and initial inspection and test of UN tubes, except that inspection requirements related to the conformity assessment system and approval shall be in accordance with 6.2.2.5:

ISO 11120:1999	Gas cylinders – Refillable seamless steel tubes for compressed gas transport, of water capacity between 150 l and 3 000 l – Design, construction and testing <i>NOTE: The note concerning the F factor in section 7.1 of this standard shall not be applied for UN tubes.</i>
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- 6.2.2.1.3 The following standards apply for the design, construction and initial inspection and test of UN acetylene cylinders, except that inspection requirements related to the conformity assessment system and approval shall be in accordance with 6.2.2.5:

For the cylinder shell:

ISO 9809-1:1999	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 1: Quenched and tempered steel cylinders with tensile strength less than 1 100 MPa <i>NOTE: The note concerning the F factor in section 7.3 of this standard shall not be applied for UN cylinders.</i>
ISO 9809-3:2000	Gas cylinders – Refillable seamless steel gas cylinders – Design, construction and testing – Part 3: Normalized steel cylinders

For the porous material in the cylinder:

ISO 3807-1:2000	Cylinders for acetylene – Basic requirements – Part 1: Cylinders without fusible plugs
ISO 3807-2:2000	Cylinders for acetylene – Basic requirements – Part 2: Cylinders with fusible plugs

- 6.2.2.1.4 The following standard apply for the design, construction, and initial inspection and test of UN cryogenic receptacles, except that inspection requirements related to the conformity assessment system and approval shall be in accordance with 6.2.2.5:

ISO 21029-1:2004	Cryogenic vessels – Transportable vacuum insulated vessels of not more than 1 000 l volume – Part 1: Design, fabrication, inspection and tests
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- 6.2.2.1.5 The following standard applies for the design, construction, and initial inspection and test of UN metal hydride storage systems, except that inspection requirements related to the conformity assessment system and approval shall be in accordance with 6.2.2.5:

ISO 16111:2008	Transportable gas storage devices – Hydrogen absorbed in reversible metal hydride
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6.2.2.2 **Materials**

In addition to the material requirements specified in the pressure receptacle design and construction standards, and any restrictions specified in the applicable packing instruction for the gas(es) to be carried (e.g. packing instruction P200 or P205 of 4.1.4.1), the following standards apply to material compatibility:

ISO 11114-1:1997	Transportable gas cylinders – Compatibility of cylinder and valve materials with gas contents – Part 1: Metallic materials
ISO 11114-2:2000	Transportable gas cylinders – Compatibility of cylinder and valve materials with gas contents – Part 2: Non-metallic materials

NOTE: The limitations imposed in ISO 11114-1 on high strength steel alloys at ultimate tensile strength levels up to 1 100 MPa do not apply to UN No. 2203 silane.

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6.2.2.3 Service equipment

The following standards apply to closures and their protection:

ISO 11117:2008 + Cor 1:2009	Gas cylinders – Valve protection caps and valve guards – Design, construction and tests <i>NOTE: Construction according to ISO 11117:1998 may continue until 31 December 2014.</i>
ISO 10297:2006	Transportable gas cylinders – Cylinder valves – Specification and type testing <i>NOTE: The EN version of this ISO standard fulfils the requirements and may also be used.</i>
ISO 13340:2001	Transportable gas cylinders – Cylinder valves for non-refillable cylinders – Specification and prototype testing

For UN metal hydride storage systems, the requirements specified in the following standard apply to closures and their protection:

ISO 16111:2008	Transportable gas storage devices – Hydrogen absorbed in reversible metal hydride
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6.2.2.4 Periodic inspection and test

The following standards apply to the periodic inspection and testing of UN cylinders and UN metal hydride storage systems:

ISO 6406:2005	Periodic inspection and testing of seamless steel gas cylinders
ISO 10460:2005	Gas cylinders – Welded carbon-steel gas cylinders – Periodic inspection and testing <i>NOTE: The repair of welds described in clause 12.1 of this standard shall not be permitted. Repairs described in clause 12.2 require the approval of the competent authority which approved the periodic inspection and test body in accordance with 6.2.2.6.</i>
ISO 10461:2005 + A1:2006	Seamless aluminium-alloy gas cylinders – Periodic inspection and testing
ISO 10462:2005	Gas cylinders – Transportable cylinders for dissolved acetylene – Periodic inspection and maintenance
ISO 11623:2002	Transportable gas cylinders – Periodic inspection and testing of composite gas cylinders
ISO 16111:2008	Transportable gas storage devices – Hydrogen absorbed in reversible metal hydride

6.2.2.5 Conformity assessment system and approval for manufacture of pressure receptacles**6.2.2.5.1 Definitions**

For the purposes of this sub-section:

Conformity assessment system means a system for competent authority approval of a manufacturer, by pressure receptacle design type approval, approval of manufacturer's quality system and approval of inspection bodies;

Design type means a pressure receptacle design as specified by a particular pressure receptacle standard;

Verify means confirm by examination or provision of objective evidence that specified requirements have been fulfilled.

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6.2.2.5.2 *General requirements*

Competent authority

6.2.2.5.2.1 The competent authority that approves the pressure receptacle shall approve the conformity assessment system for the purpose of ensuring that pressure receptacles conform to the requirements of ADR. In instances where the competent authority that approves a pressure receptacle is not the competent authority in the country of manufacture, the marks of the approval country and the country of manufacture shall be indicated in the pressure receptacle marking (see 6.2.2.7 and 6.2.2.8).

The competent authority of the country of approval shall supply, upon request, evidence demonstrating compliance to this conformity assessment system to its counterpart in a country of use.

6.2.2.5.2.2 The competent authority may delegate its functions in this conformity assessment system in whole or in part.

6.2.2.5.2.3 The competent authority shall ensure that a current list of approved inspection bodies and their identity marks and approved manufacturers and their identity marks is available.

Inspection body

6.2.2.5.2.4 The inspection body shall be approved by the competent authority for the inspection of pressure receptacles and shall:

- (a) Have a staff with an organizational structure, capable, trained, competent, and skilled, to satisfactorily perform its technical functions;
- (b) Have access to suitable and adequate facilities and equipment;
- (c) Operate in an impartial manner and be free from any influence which could prevent it from doing so;
- (d) Ensure commercial confidentiality of the commercial and proprietary activities of the manufacturer and other bodies;
- (e) Maintain clear demarcation between actual inspection body functions and unrelated functions;
- (f) Operate a documented quality system;
- (g) Ensure that the tests and inspections specified in the relevant pressure receptacle standard and ADR are performed; and
- (h) Maintain an effective and appropriate report and record system in accordance with 6.2.2.5.6.

6.2.2.5.2.5 The inspection body shall perform design type approval, pressure receptacle production testing and inspection, and certification to verify conformity with the relevant pressure receptacle standard (see 6.2.2.5.4 and 6.2.2.5.5).

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Manufacturer

6.2.2.5.2.6 The manufacturer shall:

- (a) Operate a documented quality system in accordance with 6.2.2.5.3;
- (b) Apply for design type approvals in accordance with 6.2.2.5.4;
- (c) Select an inspection body from the list of approved inspection bodies maintained by the competent authority in the country of approval; and
- (d) Maintain records in accordance with 6.2.2.5.6.

Testing laboratory

6.2.2.5.2.7 The testing laboratory shall have:

- (a) Staff with an organizational structure, sufficient in number, competence, and skill; and
- (b) Suitable and adequate facilities and equipment to perform the tests required by the manufacturing standard to the satisfaction of the inspection body.

6.2.2.5.3 *Manufacturer's quality system*

6.2.2.5.3.1 The quality system shall contain all the elements, requirements, and provisions adopted by the manufacturer. It shall be documented in a systematic and orderly manner in the form of written policies, procedures and instructions.

The contents shall in particular include adequate descriptions of:

- (a) The organizational structure and responsibilities of personnel with regard to design and product quality;
- (b) The design control and design verification techniques, processes, and procedures that will be used when designing the pressure receptacles;
- (c) The relevant pressure receptacle manufacturing, quality control, quality assurance and process operation instructions that will be used;
- (d) Quality records, such as inspection reports, test data and calibration data;
- (e) Management reviews to ensure the effective operation of the quality system arising from the audits in accordance with 6.2.2.5.3.2;
- (f) The process describing how customer requirements are met;
- (g) The process for control of documents and their revision;
- (h) The means for control of non-conforming pressure receptacles, purchased components, in-process and final materials; and
- (i) Training programmes and qualification procedures for relevant personnel.

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6.2.2.5.3.2 Audit of the quality system

The quality system shall be initially assessed to determine whether it meets the requirements in 6.2.2.5.3.1 to the satisfaction of the competent authority.

The manufacturer shall be notified of the results of the audit. The notification shall contain the conclusions of the audit and any corrective actions required.

Periodic audits shall be carried out, to the satisfaction of the competent authority, to ensure that the manufacturer maintains and applies the quality system. Reports of the periodic audits shall be provided to the manufacturer.

6.2.2.5.3.3 Maintenance of the quality system

The manufacturer shall maintain the quality system as approved in order that it remains adequate and efficient.

The manufacturer shall notify the competent authority that approved the quality system, of any intended changes. The proposed changes shall be evaluated in order to determine whether the amended quality system will still satisfy the requirements in 6.2.2.5.3.1.

6.2.2.5.4 *Approval process*

Initial design type approval

6.2.2.5.4.1 The initial design type approval shall consist of approval of the manufacturer's quality system and approval of the pressure receptacle design to be produced. An application for an initial design type approval shall meet the requirements of 6.2.2.5.4.2 to 6.2.2.5.4.6 and 6.2.2.5.4.9.

6.2.2.5.4.2 A manufacturer desiring to produce pressure receptacles in accordance with a pressure receptacle standard and ADR shall apply for, obtain, and retain a design type approval certificate issued by the competent authority in the country of approval for at least one pressure receptacle design type in accordance with the procedure given in 6.2.2.5.4.9. This certificate shall, on request, be submitted to the competent authority of the country of use.

6.2.2.5.4.3 An application shall be made for each manufacturing facility and shall include:

- (a) The name and registered address of the manufacturer and in addition, if the application is submitted by an authorised representative, its name and address;
- (b) The address of the manufacturing facility (if different from the above);
- (c) The name and title of the person(s) responsible for the quality system;
- (d) The designation of the pressure receptacle and the relevant pressure receptacle standard;
- (e) Details of any refusal of approval of a similar application by any other competent authority;
- (f) The identity of the inspection body for design type approval;
- (g) Documentation on the manufacturing facility as specified under 6.2.2.5.3.1; and
- (h) The technical documentation required for design type approval, which shall enable verification of the conformity of the pressure receptacles with the requirements of

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the relevant pressure receptacle design standard. The technical documentation shall cover the design and method of manufacture and shall contain, as far as is relevant for assessment, at least the following:

- (i) pressure receptacle design standard, design and manufacturing drawings, showing components and subassemblies, if any;
- (ii) descriptions and explanations necessary for the understanding of the drawings and intended use of the pressure receptacles;
- (iii) a list of the standards necessary to fully define the manufacturing process;
- (iv) design calculations and material specifications; and
- (v) design type approval test reports, describing the results of examinations and tests carried out in accordance with 6.2.2.5.4.9.

6.2.2.5.4.4 An initial audit in accordance with 6.2.2.5.3.2 shall be performed to the satisfaction of the competent authority.

6.2.2.5.4.5 If the manufacturer is denied approval, the competent authority shall provide written detailed reasons for such denial.

6.2.2.5.4.6 Following approval, changes to the information submitted under 6.2.2.5.4.3 relating to the initial approval shall be provided to the competent authority.

Subsequent design type approvals

6.2.2.5.4.7 An application for a subsequent design type approval shall meet the requirements of 6.2.2.5.4.8 and 6.2.2.5.4.9, provided a manufacturer is in the possession of an initial design type approval. In such a case, the manufacturer's quality system according to 6.2.2.5.3 shall have been approved during the initial design type approval and shall be applicable for the new design.

6.2.2.5.4.8 The application shall include:

- (a) The name and address of the manufacturer and in addition, if the application is submitted by an authorised representative, its name and address;
- (b) Details of any refusal of approval of a similar application by any other competent authority;
- (c) Evidence that initial design type approval has been granted; and
- (d) The technical documentation, as described in 6.2.2.5.4.3 (h).

Procedure for design type approval

6.2.2.5.4.9 The inspection body shall:

- (a) Examine the technical documentation to verify that:
 - (i) the design is in accordance with the relevant provisions of the standard, and
 - (ii) the prototype lot has been manufactured in conformity with the technical documentation and is representative of the design;

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- (b) Verify that the production inspections have been carried out as required in accordance with 6.2.2.5.5;
- (c) Select pressure receptacles from a prototype production lot and supervise the tests of these pressure receptacles as required for design type approval;
- (d) Perform or have performed the examinations and tests specified in the pressure receptacle standard to determine that:
 - (i) the standard has been applied and fulfilled, and
 - (ii) the procedures adopted by the manufacturer meet the requirements of the standard; and
- (e) Ensure that the various type approval examinations and tests are correctly and competently carried out.

After prototype testing has been carried out with satisfactory results and all applicable requirements of 6.2.2.5.4 have been satisfied, a design type approval certificate shall be issued, which shall include the name and address of the manufacturer, results and conclusions of the examination, and the necessary data for identification of the design type.

If the manufacturer is denied a design type approval, the competent authority shall provide written detailed reasons for such denial.

6.2.2.5.4.10 Modifications to approved design types

The manufacturer shall either:

- (a) Inform the issuing competent authority of modifications to the approved design type, where such modifications do not constitute a new design, as specified in the pressure receptacle standard; or
- (b) Request a subsequent design type approval where such modifications constitute a new design according to the relevant pressure receptacle standard. This additional approval shall be given in the form of an amendment to the original design type approval certificate.

6.2.2.5.4.11 Upon request, the competent authority shall communicate to any other competent authority, information concerning design type approval, modifications of approvals and withdrawn approvals.

6.2.2.5.5 *Production inspection and certification*

General requirements

An inspection body, or its delegate, shall carry out the inspection and certification of each pressure receptacle. The inspection body selected by the manufacturer for inspection and testing during production may be different from the inspection body used for the design type approval testing.

Where it can be demonstrated to the satisfaction of the inspection body that the manufacturer has trained competent inspectors, independent of the manufacturing operations, inspection may be performed by those inspectors. In such a case, the manufacturer shall maintain training records of the inspectors.

The inspection body shall verify that the inspections by the manufacturer, and tests performed on those pressure receptacles, fully conform to the standard and the requirements

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of ADR. Should non-conformance in conjunction with this inspection and testing be determined, the permission to have inspection performed by the manufacturer's inspectors may be withdrawn.

The manufacturer shall, after approval by the inspection body, make a declaration of conformity with the certified design type. The application of the pressure receptacle certification marking shall be considered a declaration that the pressure receptacle complies with the applicable pressure receptacle standards and the requirements of this conformity assessment system and ADR. The inspection body shall affix or delegate the manufacturer to affix the pressure receptacle certification marking and the registered mark of the inspection body to each approved pressure receptacle.

A certificate of compliance, signed by the inspection body and the manufacturer, shall be issued before the pressure receptacles are filled.

6.2.2.5.6 *Records*

Design type approval and certificate of compliance records shall be retained by the manufacturer and the inspection body for not less than 20 years.

6.2.2.6 *Approval system for periodic inspection and test of pressure receptacles*

6.2.2.6.1 *Definition*

For the purposes of this section:

Approval system means a system for competent authority approval of a body performing periodic inspection and test of pressure receptacles (hereinafter referred to as "periodic inspection and test body"), including approval of that body's quality system.

6.2.2.6.2 *General requirements*

Competent authority

6.2.2.6.2.1

The competent authority shall establish an approval system for the purpose of ensuring that the periodic inspection and test of pressure receptacles conform to the requirements of ADR. In instances where the competent authority that approves a body performing periodic inspection and test of a pressure receptacle is not the competent authority of the country approving the manufacture of the pressure receptacle, the marks of the approval country of periodic inspection and test shall be indicated in the pressure receptacle marking (see 6.2.2.7).

The competent authority of the country of approval for the periodic inspection and test shall supply, upon request, evidence demonstrating compliance to this approval system including the records of the periodic inspection and test to its counterpart in a country of use.

The competent authority of the country of approval may terminate the approval certificate referred to in 6.2.2.6.4.1, upon evidence demonstrating non-compliance with the approval system.

6.2.2.6.2.2

The competent authority may delegate its functions in this approval system, in whole or in part.

6.2.2.6.2.3

The competent authority shall ensure that a current list of approved periodic inspection and test bodies and their identity marks is available.

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Periodic inspection and test body

6.2.2.6.2.4 The periodic inspection and test body shall be approved by the competent authority and shall:

- (a) Have a staff with an organizational structure, capable, trained, competent, and skilled, to satisfactorily perform its technical functions;
- (b) Have access to suitable and adequate facilities and equipment;
- (c) Operate in an impartial manner and be free from any influence which could prevent it from doing so;
- (d) Ensure commercial confidentiality;
- (e) Maintain clear demarcation between actual periodic inspection and test body functions and unrelated functions;
- (f) Operate a documented quality system accordance with 6.2.2.6.3;
- (g) Apply for approval in accordance with 6.2.2.6.4;
- (h) Ensure that the periodic inspections and tests are performed in accordance with 6.2.2.6.5; and
- (i) Maintain an effective and appropriate report and record system in accordance with 6.2.2.6.6.

6.2.2.6.3 *Quality system and audit of the periodic inspection and test body*

6.2.2.6.3.1 Quality system

The quality system shall contain all the elements, requirements, and provisions adopted by the periodic inspection and test body. It shall be documented in a systematic and orderly manner in the form of written policies, procedures, and instructions.

The quality system shall include:

- (a) A description of the organizational structure and responsibilities;
- (b) The relevant inspection and test, quality control, quality assurance, and process operation instructions that will be used;
- (c) Quality records, such as inspection reports, test data, calibration data and certificates;
- (d) Management reviews to ensure the effective operation of the quality system arising from the audits performed in accordance with 6.2.2.6.3.2;
- (e) A process for control of documents and their revision;
- (f) A means for control of non-conforming pressure receptacles; and
- (g) Training programmes and qualification procedures for relevant personnel.

6.2.2.6.3.2 Audit

The periodic inspection and test body and its quality system shall be audited in order to determine whether it meets the requirements of ADR to the satisfaction of the competent authority.

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An audit shall be conducted as part of the initial approval process (see 6.2.2.6.4.3). An audit may be required as part of the process to modify an approval (see 6.2.2.6.4.6).

Periodic audits shall be conducted, to the satisfaction of the competent authority, to ensure that the periodic inspection and test body continues to meet the requirements of ADR.

The periodic inspection and test body shall be notified of the results of any audit. The notification shall contain the conclusions of the audit and any corrective actions required.

6.2.2.6.3.3 Maintenance of the quality system

The periodic inspection and test body shall maintain the quality system as approved in order that it remains adequate and efficient.

The periodic inspection and test body shall notify the competent authority that approved the quality system, of any intended changes, in accordance with the process for modification of an approval in 6.2.2.6.4.6.

6.2.2.6.4 *Approval process for periodic inspection and test bodies*

Initial approval

6.2.2.6.4.1 A body desiring to perform periodic inspection and test of pressure receptacles in accordance with a pressure receptacle standard and ADR shall apply for, obtain, and retain an approval certificate issued by the competent authority.

This written approval shall, on request, be submitted to the competent authority of a country of use.

6.2.2.6.4.2 An application shall be made for each periodic inspection and test body and shall include:

- (a) The name and address of the periodic inspection and test body and, if the application is submitted by an authorised representative, its name and address;
- (b) The address of each facility performing periodic inspection and test;
- (c) The name and title of the person(s) responsible for the quality system;
- (d) The designation of the pressure receptacles, the periodic inspection and test methods, and the relevant pressure receptacle standards met by the quality system;
- (e) Documentation on each facility, the equipment, and the quality system as specified under 6.2.2.6.3.1;
- (f) The qualifications and training records of the periodic inspection and test personnel; and
- (g) Details of any refusal of approval of a similar application by any other competent authority.

6.2.2.6.4.3 The competent authority shall:

- (a) Examine the documentation to verify that the procedures are in accordance with the requirements of the relevant pressure receptacle standards and ADR; and
- (b) Conduct an audit in accordance with 6.2.2.6.3.2 to verify that the inspections and tests are carried out as required by the relevant pressure receptacle standards and ADR, to the satisfaction of the competent authority.

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6.2.2.6.4.4 After the audit has been carried out with satisfactory results and all applicable requirements of 6.2.2.6.4 have been satisfied, an approval certificate shall be issued. It shall include the name of the periodic inspection and test body, the registered mark, the address of each facility, and the necessary data for identification of its approved activities (e.g. designation of pressure receptacles, periodic inspection and test method and pressure receptacle standards).

6.2.2.6.4.5 If the periodic inspection and test body is denied approval, the competent authority shall provide written detailed reasons for such denial.

Modifications to periodic inspection and test body approvals

6.2.2.6.4.6 Following approval, the periodic inspection and test body shall notify the issuing competent authority of any modifications to the information submitted under 6.2.2.6.4.2 relating to the initial approval.

The modifications shall be evaluated in order to determine whether the requirements of the relevant pressure receptacle standards and ADR will be satisfied. An audit in accordance with 6.2.2.6.3.2 may be required. The competent authority shall accept or reject these modifications in writing, and an amended approval certificate shall be issued as necessary.

6.2.2.6.4.7 Upon request, the competent authority shall communicate to any other competent authority, information concerning initial approvals, modifications of approvals, and withdrawn approvals.

6.2.2.6.5 *Periodic inspection and test and certification*

The application of the periodic inspection and test marking to a pressure receptacle shall be considered a declaration that the pressure receptacle complies with the applicable pressure receptacle standards and the requirements of ADR. The periodic inspection and test body shall affix the periodic inspection and test marking, including its registered mark, to each approved pressure receptacle (see 6.2.2.7.7).

A record certifying that a pressure receptacle has passed the periodic inspection and test shall be issued by the periodic inspection and test body, before the pressure receptacle is filled.

6.2.2.6.6 *Records*

The periodic inspection and test body shall retain records of pressure receptacle periodic inspection and tests (both passed and failed) including the location of the test facility, for not less than 15 years.

The owner of the pressure receptacle shall retain an identical record until the next periodic inspection and test unless the pressure receptacle is permanently removed from service.

6.2.2.7 *Marking of refillable UN pressure receptacles*

NOTE: *Marking requirements for UN metal hydride storage systems are given in 6.2.2.9.*

6.2.2.7.1 Refillable UN pressure receptacles shall be marked clearly and legibly with certification, operational and manufacturing marks. These marks shall be permanently affixed (e.g. stamped, engraved, or etched) on the pressure receptacle. The marks shall be on the shoulder, top end or neck of the pressure receptacle or on a permanently affixed component of the pressure receptacle (e.g. welded collar or corrosion resistant plate welded on the outer jacket of a closed cryogenic receptacle). Except for the UN packaging symbol, the minimum size of the marks shall be 5 mm for pressure receptacles with a diameter greater than or

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equal to 140 mm and 2.5 mm for pressure receptacles with a diameter less than 140 mm. The minimum size of the UN packaging symbol shall be 10 mm for pressure receptacles with a diameter greater than or equal to 140 mm and 5 mm for pressure receptacles with a diameter less than 140 mm.

6.2.2.7.2 The following certification marks shall be applied:

(a) The United Nations packaging symbol



;

This symbol shall not be used for any purpose other than certifying that a packaging, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6 or 6.7². This symbol shall not be used for pressure receptacles which only conform to the requirements of 6.2.3 to 6.2.5 (see 6.2.3.9).

- (b) The technical standard (e.g. ISO 9809-1) used for design, manufacture and testing;
- (c) The character(s) identifying the country of approval as indicated by the distinguishing signs for motor vehicles in international traffic³;

NOTE: The country of approval shall be understood to be the country that approved the body which inspected the individual receptacle at time of manufacture.

- (d) The identity mark or stamp of the inspection body that is registered with the competent authority of the country authorizing the marking;
- (e) The date of the initial inspection, the year (four digits) followed by the month (two digits) separated by a slash (i.e. "/");

6.2.2.7.3 The following operational marks shall be applied:

- (f) The test pressure in bar, preceded by the letters "PH" and followed by the letters "BAR";
- (g) The mass of the empty pressure receptacle including all permanently attached integral parts (e.g. neck ring, foot ring, etc.) in kilograms, followed by the letters "KG". This mass shall not include the mass of valve, valve cap or valve guard, any coating or porous material for acetylene. The mass shall be expressed to three significant figures rounded up to the last digit. For cylinders of less than 1 kg, the mass shall be expressed to two significant figures rounded up to the last digit. In the case of pressure receptacles for UN No. 1001 acetylene, dissolved and UN No. 3374 acetylene, solvent free, at least one decimal shall be shown after the decimal point and two digits for pressure receptacles of less than 1 kg;
- (h) The minimum guaranteed wall thickness of the pressure receptacle in millimetres followed by the letters "MM". This mark is not required for pressure receptacles with a water capacity less than or equal to 1 litre or for composite cylinders or for closed cryogenic receptacles;
- (i) In the case of pressure receptacles for compressed gases, UN No. 1001 acetylene, dissolved, and UN No. 3374 acetylene, solvent free, the working pressure in bar,

² This symbol is also used to certify that flexible bulk containers authorized for others modes of transport complies with the requirements in Chapter 6.8 of the UN Model Regulations.

³ Distinguishing signs for motor vehicles in international traffic prescribed in the Vienna Convention on Road Traffic (1968).

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preceded by the letters "PW". In the case of closed cryogenic receptacles, the maximum allowable working pressure preceded by the letters "MAWP";

- (j) In the case of pressure receptacles for liquefied gases and refrigerated liquefied gases, the water capacity in litres expressed to three significant figures rounded down to the last digit, followed by the letter "L". If the value of the minimum or nominal water capacity is an integer, the figures after the decimal point may be neglected;
- (k) In the case of pressure receptacles for UN No. 1001 acetylene, dissolved, the total of the mass of the empty receptacle, the fittings and accessories not removed during filling, any coating, the porous material, the solvent and the saturation gas expressed to three significant figures rounded down to the last digit followed by the letters "KG". At least one decimal shall be shown after the decimal point. For pressure receptacles of less than 1 kg, the mass shall be expressed to two significant figures rounded down to the last digit;
- (l) In the case of pressure receptacles for UN No. 3374 acetylene, solvent free, the total of the mass of the empty receptacle, the fittings and accessories not removed during filling, any coating and the porous material expressed to three significant figures rounded down to the last digit followed by the letters "KG". At least one decimal shall be shown after the decimal point. For pressure receptacles of less than 1 kg, the mass shall be expressed to two significant figures rounded down to the last digit;

6.2.2.7.4 The following manufacturing marks shall be applied:

- (m) Identification of the cylinder thread (e.g. 25E). This mark is not required for closed cryogenic receptacles;
- (n) The manufacturer's mark registered by the competent authority. When the country of manufacture is not the same as the country of approval, then the manufacturer's mark shall be preceded by the character(s) identifying the country of manufacture as indicated by the distinguishing signs for motor vehicles in international traffic³. The country mark and the manufacturer's mark shall be separated by a space or slash;
- (o) The serial number assigned by the manufacturer;
- (p) In the case of steel pressure receptacles and composite pressure receptacles with steel liner intended for the carriage of gases with a risk of hydrogen embrittlement, the letter "H" showing compatibility of the steel (see ISO 11114-1:1997).

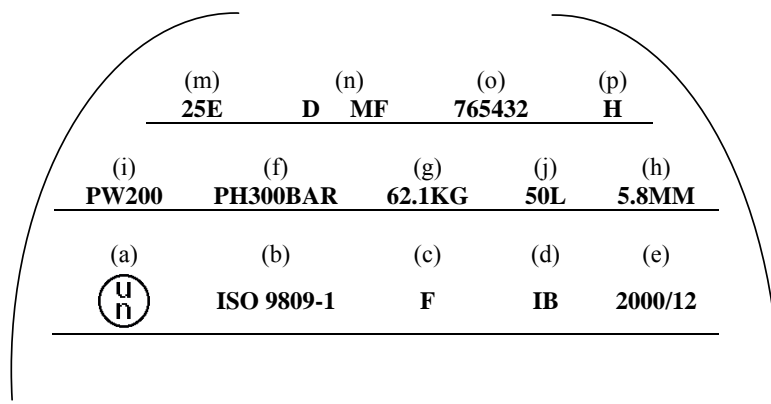
6.2.2.7.5 The above marks shall be placed in three groups:

- Manufacturing marks shall be the top grouping and shall appear consecutively in the sequence given in 6.2.2.7.4.
- The operational marks in 6.2.2.7.3 shall be the middle grouping and the test pressure (f) shall be immediately preceded by the working pressure (i) when the latter is required.
- Certification marks shall be the bottom grouping and shall appear in the sequence given in 6.2.2.7.2.

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The following is an example of the markings applied to a cylinder.



6.2.2.7.6 Other marks are allowed in areas other than the side wall, provided they are made in low stress areas and are not of a size and depth that will create harmful stress concentrations. In the case of closed cryogenic receptacles, such marks may be on a separate plate attached to the outer jacket. Such marks shall not conflict with required marks.

6.2.2.7.7 In addition to the preceding marks, each refillable pressure receptacle that meets the periodic inspection and test requirements of 6.2.2.4 shall be marked indicating:

- The character(s) identifying the country authorizing the body performing the periodic inspection and test as indicated by the distinguishing signs of motor vehicles in international traffic³. This marking is not required if this body is approved by the competent authority of the country approving manufacture;
- The registered mark of the body authorised by the competent authority for performing periodic inspection and test;
- The date of the periodic inspection and test, the year (two digits) followed by the month (two digits) separated by a slash (i.e. "/"). Four digits may be used to indicate the year.

The above marks shall appear consecutively in the sequence given.

6.2.2.7.8 For acetylene cylinders, with the agreement of the competent authority, the date of the most recent periodic inspection and the stamp of the body performing the periodic inspection and test may be engraved on a ring held on the cylinder by the valve. The ring shall be configured so that it can only be removed by disconnecting the valve from the cylinder.

6.2.2.7.9 For bundles of cylinders, pressure receptacle marking requirements shall only apply to the individual cylinders of a bundle and not to any assembly structure.

6.2.2.8 *Marking of non-refillable UN pressure receptacles*

6.2.2.8.1 Non-refillable UN pressure receptacles shall be marked clearly and legibly with certification and gas or pressure receptacle specific marks. These marks shall be permanently affixed (e.g. stencilled, stamped, engraved, or etched) on the pressure receptacle. Except when stencilled, the marks shall be on the shoulder, top end or neck of the pressure receptacle or on a permanently affixed component of the pressure receptacle (e.g. welded collar). Except

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for the UN packaging symbol and the "DO NOT REFILL" mark, the minimum size of the marks shall be 5 mm for pressure receptacles with a diameter greater than or equal to 140 mm and 2.5 mm for pressure receptacles with a diameter less than 140 mm. The minimum size of the UN packaging symbol shall be 10 mm for pressure receptacles with a diameter greater than or equal to 140 mm and 5 mm for pressure receptacles with a diameter less than 140 mm. The minimum size of the "DO NOT REFILL" mark shall be 5 mm.

6.2.2.8.2 The marks listed in 6.2.2.7.2 to 6.2.2.7.4 shall be applied with the exception of (g), (h) and (m). The serial number (o) may be replaced by the batch number. In addition, the words "DO NOT REFILL" in letters of at least 5 mm in height are required.

6.2.2.8.3 The requirements of 6.2.2.7.5 shall apply.

NOTE: *Non-refillable pressure receptacles may, on account of their size, substitute this marking by a label.*

6.2.2.8.4 Other marks are allowed provided they are made in low stress areas other than the side wall and are not of a size and depth that will create harmful stress concentrations. Such marks shall not conflict with required marks.

6.2.2.9 *Marking of UN metal hydride storage systems*

6.2.2.9.1 UN metal hydride storage systems shall be marked clearly and legibly with the marks listed below. These marks shall be permanently affixed (e.g. stamped, engraved, or etched) on the metal hydride storage system. The marks shall be on the shoulder, top end or neck of the metal hydride storage system or on a permanently affixed component of the metal hydride storage system. Except for the United Nations packaging symbol, the minimum size of the marks shall be 5 mm for metal hydride storage systems with a smallest overall dimension greater than or equal to 140 mm and 2.5 mm for metal hydride storage systems with a smallest overall dimension less than 140 mm. The minimum size of the United Nations packaging symbol shall be 10 mm for metal hydride storage systems with a smallest overall dimension greater than or equal to 140 mm and 5 mm for metal hydride storage systems with a smallest overall dimension less than 140 mm.

6.2.2.9.2 The following marks shall be applied:

(a) The United Nations packaging symbol



;

This symbol shall not be used for any purpose other than certifying that a packaging, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6 or 6.7²;

(b) "ISO 16111" (the technical standard used for design, manufacture and testing);

(c) The character(s) identifying the country of approval as indicated by the distinguishing signs of motor vehicles in international traffic³;

NOTE: *The country of approval shall be understood to be the country that approved the body which inspected the individual receptacle at the time of manufacture.*

² This symbol is also used to certify that flexible bulk containers authorized for others modes of transport complies with the requirements in Chapter 6.8 of the UN Model Regulations.

³ Distinguishing signs for motor vehicles in international traffic prescribed in the Vienna Convention on Road Traffic (1968).

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- (d) The identity mark or stamp of the inspection body that is registered with the competent authority of the country authorizing the marking;
- (e) The date of the initial inspection, the year (four digits) followed by the month (two digits) separated by a slash (i.e. "/");
- (f) The test pressure of the receptacle in bar, preceded by the letters "PH" and followed by the letters "BAR";
- (g) The rated charging pressure of the metal hydride storage system in bar, preceded by the letters "RCP" and followed by the letters "BAR";
- (h) The manufacturer's mark registered by the competent authority. When the country of manufacture is not the same as the country of approval, then the manufacturer's mark shall be preceded by the character(s) identifying the country of manufacture as indicated by the distinguishing signs of motor vehicles in international traffic³. The country mark and the manufacturer's mark shall be separated by a space or slash;
- (i) The serial number assigned by the manufacturer;
- (j) In the case of steel receptacles and composite receptacles with steel liner, the letter "H" showing compatibility of the steel (see ISO 11114-1:1997); and,
- (k) In the case of metal hydride storage systems having limited life, the date of expiry, denoted by the letters "FINAL" followed by the year (four digits) followed by the month (two digits) separated by a slash (i.e. "/").

The certification marks specified in (a) to (e) above shall appear consecutively in the sequence given. The test pressure (f) shall be immediately preceded by the rated charging pressure (g). The manufacturing marks specified in (h) to (k) above shall appear consecutively in the sequence given.

6.2.2.9.3 Other marks are allowed in areas other than the side wall, provided they are made in low stress areas and are not of a size and depth that will create harmful stress concentrations. Such marks shall not conflict with required marks.

6.2.2.9.4 In addition to the preceding marks, each metal hydride storage system that meets the periodic inspection and test requirements of 6.2.2.4 shall be marked indicating:

- (a) The character(s) identifying the country authorizing the body performing the periodic inspection and test, as indicated by the distinguishing sign of motor vehicles in international traffic³. This marking is not required if this body is approved by the competent authority of the country approving manufacture;
- (b) The registered mark of the body authorised by the competent authority for performing periodic inspection and test;
- (c) The date of the periodic inspection and test, the year (two digits) followed by the month (two digits) separated by a slash (i.e. "/"). Four digits may be used to indicate the year.

The above marks shall appear consecutively in the sequence given.

³ *Distinguishing signs for motor vehicles in international traffic prescribed in the Vienna Convention on Road Traffic (1968).*

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6.2.2.10 *Equivalent procedures for conformity assessment and periodic inspection and test*

For UN pressure receptacles the requirements of 6.2.2.5 and 6.2.2.6 are considered to have been complied with when the following procedures are applied:

Procedure	Relevant body
Type approval (1.8.7.2)	Xa
Supervision of manufacture (1.8.7.3)	Xa or IS
Initial inspection and tests (1.8.7.4)	Xa or IS
Periodic inspection (1.8.7.5)	Xa or Xb or IS

Xa means the competent authority, its delegate or inspection body conforming to 1.8.6.2, 1.8.6.4, 1.8.6.5 and 1.8.6.8 and accredited according to EN ISO/IEC 17020:2004 type A.

Xb means inspection body conforming to 1.8.6.2, 1.8.6.4, 1.8.6.5 and 1.8.6.8 and accredited according to EN ISO/IEC 17020:2004 type B.

IS means an in-house inspection service of the applicant under the surveillance of an inspection body conforming to 1.8.6.2, 1.8.6.4, 1.8.6.5 and 1.8.6.8 and accredited according to EN ISO/IEC 17020:2004 type A. The in-house inspection service shall be independent from design process, manufacturing operations, repair and maintenance.

6.2.3 **General requirements for non-UN pressure receptacles****6.2.3.1** *Design and construction*

6.2.3.1.1 Pressure receptacles and their closures not designed, constructed, inspected, tested and approved according to the requirements of 6.2.2 shall be designed, constructed, inspected, tested and approved in accordance with the general requirements of 6.2.1 as supplemented or modified by the requirements of this section and those of 6.2.4 or 6.2.5.

6.2.3.1.2 Whenever possible the wall thickness shall be determined by calculation, accompanied, if needed, by experimental stress analysis. Otherwise the wall thickness may be determined by experimental means.

Appropriate design calculations for the pressure envelope and supporting components shall be used to ensure the safety of the pressure receptacles concerned.

The minimum wall thickness to withstand pressure shall be calculated in particular with regard to:

- The calculation pressures, which shall not be less than the test pressure;
- The calculation temperatures allowing for appropriate safety margins;
- The maximum stresses and peak stress concentrations where necessary;
- Factors inherent to the properties of the material.

6.2.3.1.3 For welded pressure receptacles, only metals of weldable quality whose adequate impact strength at an ambient temperature of $-20\text{ }^{\circ}\text{C}$ can be guaranteed shall be used.

6.2.3.1.4 For closed cryogenic receptacles, the impact strength to be established as required by 6.2.1.1.8.1 shall be tested as laid down in 6.8.5.3.

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6.2.3.2 *(Reserved)*

6.2.3.3 *Service equipment*

6.2.3.3.1 Service equipment shall comply with 6.2.1.3.

6.2.3.3.2 *Openings*

Pressure drums may be provided with openings for filling and discharge and with other openings intended for level gauges, pressure gauges or relief devices. The number of openings shall be kept to a minimum consistent with safe operations. Pressure drums may also be provided with an inspection opening, which shall be closed by an effective closure.

6.2.3.3.3 *Fittings*

- (a) If cylinders are fitted with a device to prevent rolling, this device shall not be integral with the valve cap;
- (b) Pressure drums which are capable of being rolled shall be equipped with rolling hoops or be otherwise protected against damage due to rolling (e.g. by corrosion resistant metal sprayed on to the pressure receptacle surface);
- (c) Bundles of cylinders shall be fitted with appropriate devices ensuring that they can be handled and carried safely;
- (d) If level gauges, pressure gauges or relief devices are installed, they shall be protected in the same way as is required for valves in 4.1.6.8.

6.2.3.4 *Initial inspection and test*

6.2.3.4.1 New pressure receptacles shall be subjected to testing and inspection during and after manufacture in accordance with the requirements of 6.2.1.5.

6.2.3.4.2 *Specific provisions applying to aluminium alloy pressure receptacles*

- (a) In addition to the initial inspection required by 6.2.1.5.1, it is necessary to test for possible intercrystalline corrosion of the inside wall of the pressure receptacles where use is made of an aluminium alloy containing copper, or where use is made of an aluminium alloy containing magnesium and manganese and the magnesium content is greater than 3.5% or the manganese content lower than 0.5%;
- (b) In the case of an aluminium/copper alloy the test shall be carried out by the manufacturer at the time of approval of a new alloy by the competent authority; it shall thereafter be repeated in the course of production, for each pour of the alloy;
- (c) In the case of an aluminium/magnesium alloy the test shall be carried out by the manufacturer at the time of approval of a new alloy and of the manufacturing process by the competent authority. The test shall be repeated whenever a change is made in the composition of the alloy or in the manufacturing process.

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6.2.3.5 *Periodic inspection and test*

6.2.3.5.1 Periodic inspection and test shall be in accordance with 6.2.1.6.1.

NOTE: *With the agreement of the competent authority of the country that issued the type approval, the hydraulic pressure test of each welded steel cylinder intended for the carriage of gases of UN No. 1965, hydrocarbon gas mixture liquefied, n.o.s., with a capacity below 6.5 l may be replaced by another test ensuring an equivalent level of safety.*

6.2.3.5.2 *(Deleted)***6.2.3.6** *Approval of pressure receptacles*

6.2.3.6.1 The procedures for conformity assessment and periodic inspection of section 1.8.7 shall be performed by the relevant body according to the following table.

Procedure	Relevant body
Type approval (1.8.7.2)	Xa
Supervision of manufacture (1.8.7.3)	Xa or IS
Initial inspection and tests (1.8.7.4)	Xa or IS
Periodic inspection (1.8.7.5)	Xa or Xb or IS

For refillable pressure receptacles, the conformity assessment of valves and other demountable accessories having a direct safety function may be carried out separately from the receptacles and the conformity assessment procedure shall be at least as stringent as that undergone by the pressure receptacle to which they are fitted.

Xa means the competent authority, its delegate or inspection body conforming to 1.8.6.2, 1.8.6.4, 1.8.6.5 and 1.8.6.8 and accredited according to EN ISO/IEC 17020:2004 type A.

Xb means inspection body conforming to 1.8.6.2, 1.8.6.4, 1.8.6.5 and 1.8.6.8 and accredited according to EN ISO/IEC 17020:2004 type B.

IS means an in-house inspection service of the applicant under the surveillance of an inspection body conforming to 1.8.6.2, 1.8.6.4, 1.8.6.5 and 1.8.6.8 and accredited according to EN ISO/IEC 17020:2004 type A. The in-house inspection service shall be independent from design process, manufacturing operations, repair and maintenance.

6.2.3.6.2 If the country of approval is not a Contracting Party to ADR, the competent authority mentioned in 6.2.1.7.2 shall be the competent authority of a Contracting Party to ADR.

6.2.3.7 *Requirements for manufacturers*

6.2.3.7.1 The relevant requirements of 1.8.7 shall be met.

6.2.3.8 *Requirements for inspection bodies*

The requirements of 1.8.6 shall be met.

6.2.3.9 *Marking of refillable pressure receptacles*

6.2.3.9.1 Markings shall be in accordance with sub-section 6.2.2.7 with the following variations.

6.2.3.9.2 The United Nations packaging symbol specified in 6.2.2.7.2 (a) shall not be applied.

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- 6.2.3.9.3 The requirements of 6.2.2.7.3 (j) shall be replaced by the following:
- (j) The water capacity of the pressure receptacle in litres followed by the letter "L". In the case of pressure receptacles for liquefied gases the water capacity in litres shall be expressed to three significant figures rounded down to the last digit. If the value of the minimum or nominal water capacity is an integer, the figures after the decimal point may be neglected.
- 6.2.3.9.4 The marks specified in 6.2.2.7.3 (g) and (h) and 6.2.2.7.4 (m) are not required for pressure receptacles for UN No. 1965 hydrocarbon gas mixture, liquefied, n.o.s.
- 6.2.3.9.5 When marking the date required by 6.2.2.7.7 (c), the month need not be indicated for gases for which the interval between periodic inspections is 10 years or more (see packing instructions P200 and P203 of 4.1.4.1).
- 6.2.3.9.6 The marks in accordance with 6.2.2.7.7 may be engraved on a ring of an appropriate material affixed to the cylinder when the valve is installed and which is removable only by disconnecting the valve from the cylinder.
- 6.2.3.9.7 *Marking of bundles of cylinders*
- 6.2.3.9.7.1 Individual cylinders in a bundle of cylinders shall be marked in accordance with 6.2.3.9.
- 6.2.3.9.7.2 A plate permanently attached to the frame of the bundle shall bear the following markings:
- (a) The certification marks specified in 6.2.2.7.2 (b), (c), (d) and (e);
- (b) The operational marks specified in 6.2.2.7.3 (f), (i), (j) and the gross mass which shall include the mass of the frame of the bundle and all permanently attached parts (cylinders, manifold, fittings and valves). Bundles intended for the carriage of UN No. 1001 acetylene, dissolved and UN No. 3374 acetylene, solvent free shall bear the tare mass as specified in paragraph (a) (6) of clause 5.4 of EN 12755:2000; and
- (c) The manufacturing marks specified in 6.2.2.7.4 (n), (o) and, where applicable, (p).
- 6.2.3.9.7.3 The marks shall be placed in three groups:
- (a) The manufacturing marks shall be the top grouping and shall appear consecutively in the sequence given in 6.2.3.9.7.2 (c);
- (b) The operational marks in 6.2.3.9.7.2 (b) shall be the middle grouping and the operational mark specified in 6.2.2.7.3 (f) shall be immediately preceded by the operational mark specified in 6.2.2.7.3 (i) when the latter is required;
- (c) Certification marks shall be the bottom grouping and shall appear in the sequence given in 6.2.3.9.7.2 (a).
- 6.2.3.10 *Marking of non-refillable pressure receptacles***
- 6.2.3.10.1 Markings shall be in accordance with 6.2.2.8, except that the United Nations packaging symbol specified in 6.2.2.7.2 (a) shall not be applied.

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6.2.3.11 *Salvage pressure receptacles*

- 6.2.3.11.1 To permit the safe handling and disposal of the pressure receptacles carried within the salvage pressure receptacle, the design may include equipment not otherwise used for cylinders or pressure drums such as flat heads, quick opening devices and openings in the cylindrical part.
- 6.2.3.11.2 Instructions on the safe handling and use of the salvage pressure receptacle shall be clearly shown in the documentation for the application to the competent authority of the country of approval and shall form part of the approval certificate. In the approval certificate, the pressure receptacles authorized to be carried in a salvage pressure receptacle shall be indicated. A list of the materials of construction of all parts likely to be in contact with the dangerous goods shall also be included.
- 6.2.3.11.3 A copy of the approval certificate shall be delivered by the manufacturer to the owner of a salvage pressure receptacle.
- 6.2.3.11.4 The marking of salvage pressure receptacles according to 6.2.3 shall be determined by the competent authority of the country of approval taking into account suitable marking provisions of 6.2.3.9 as appropriate. The marking shall include the water capacity and test pressure of the salvage pressure receptacle.

6.2.4 **Requirements for non-UN pressure receptacles designed, constructed and tested according to referenced standards**

NOTE: Persons or bodies identified in standards as having responsibilities in accordance with ADR shall meet the requirements of ADR.

6.2.4.1 *Design, construction and initial inspection and test*

The standards referenced in the table below shall be applied for the issue of type approvals as indicated in column (4) to meet the requirements of Chapter 6.2 referred to in column (3). The requirements of Chapter 6.2 referred to in column (3) shall prevail in all cases. Column (5) gives the latest date when existing type approvals shall be withdrawn according to 1.8.7.2.4; if no date is shown the type approval remains valid until it expires.

Since 1 January 2009 the use of the referenced standards has been mandatory. Exceptions are dealt with in 6.2.5.

If more than one standard is referenced for the application of the same requirements, only one of them shall be applied, but in full unless otherwise specified in the table below.

Reference	Title of document	Applicable sub-sections and paragraphs	Applicable for new type approvals or for renewals	Latest date for withdrawal of existing type approvals
(1)	(2)	(3)	(4)	(5)
<i>for design and construction</i>				
Annex I, Parts 1 to 3 to 84/525/EEC	Council directive on the approximation of the laws of the Member States relating to seamless steel gas cylinders, published in the Official Journal of the European Communities No. L300 of 19.11.1984	6.2.3.1 and 6.2.3.4	Until further notice	

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Reference	Title of document	Applicable sub-sections and paragraphs	Applicable for new type approvals or for renewals	Latest date for withdrawal of existing type approvals
(1)	(2)	(3)	(4)	(5)
Annex I, Parts 1 to 3 to 84/526/EEC	Council directive on the approximation of the laws of the Member States relating to seamless, unalloyed aluminium and aluminium alloy gas cylinders, published in the Official Journal of the European Communities No. L300 of 19.11.1984	6.2.3.1 and 6.2.3.4	Until further notice	
Annex I, Parts 1 to 3 to 84/527/EEC	Council directive on the approximation of the laws of the Member States relating to welded unalloyed steel gas cylinders, published in the Official Journal of the European Communities No. L300 of 19.11.1984	6.2.3.1 and 6.2.3.4	Until further notice	
EN 1442:1998 + AC:1999	Transportable refillable welded steel cylinders for liquefied petroleum gas (LPG) - Design and construction	6.2.3.1 and 6.2.3.4	Between 1 July 2001 and 30 June 2007	31 December 2012
EN 1442:1998 + A2:2005	Transportable refillable welded steel cylinders for liquefied petroleum gas (LPG) - Design and construction	6.2.3.1 and 6.2.3.4	Between 1 January 2007 and 31 December 2010	
EN 1442:2006 + A1:2008	Transportable refillable welded steel cylinders for liquefied petroleum gas (LPG) - Design and construction	6.2.3.1 and 6.2.3.4	Until further notice	
EN 1800:1998 + AC:1999	Transportable gas cylinders - Acetylene cylinders - Basic requirements and definitions	6.2.1.1.9	Between 1 July 2001 and 31 December 2010	
EN 1800:2006	Transportable gas cylinders - Acetylene cylinders - Basic requirements, definitions and type testing	6.2.1.1.9	Until further notice	
EN 1964-1:1999	Transportable gas cylinders – Specifications for the design and construction of refillable transportable seamless steel gas cylinders of capacity from 0.5 litres up to 150 litres – Part 1: Cylinders made of seamless steel with a Rm value of less than 1 100 MPa	6.2.3.1 and 6.2.3.4	Until 31 December 2014	
EN 1975:1999 (except Annex G)	Transportable gas cylinders – Specifications for the design and construction of refillable transportable seamless aluminium and aluminium alloy gas cylinders of capacity from 0.5 litres up to 150 litres	6.2.3.1 and 6.2.3.4	Until 30 June 2005	
EN 1975:1999 + A1:2003	Transportable gas cylinders – Specifications for the design and construction of refillable transportable seamless aluminium and aluminium alloy gas cylinders of capacity from 0.5 litres up to 150 litres	6.2.3.1 and 6.2.3.4	Until 31 December 2014	
EN ISO 11120:1999	Gas cylinders – Refillable seamless steel tubes for compressed gas transport of water capacity between 150 litres and 3 000 litres – Design, construction and testing	6.2.3.1 and 6.2.3.4	Until further notice	

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Reference	Title of document	Applicable sub-sections and paragraphs	Applicable for new type approvals or for renewals	Latest date for withdrawal of existing type approvals
(1)	(2)	(3)	(4)	(5)
EN 1964-3:2000	Transportable gas cylinders – Specifications for the design and construction of refillable transportable seamless steel gas cylinders of capacity from 0.5 litre up to 150 litres – Part 3: Cylinders made of seamless stainless steel with an Rm value of less than 1 100 MPa	6.2.3.1 and 6.2.3.4	Until further notice	
EN 12862:2000	Transportable gas cylinders- Specifications for the design and construction of refillable transportable welded aluminium alloy gas cylinders	6.2.3.1 and 6.2.3.4	Until further notice	
EN 1251-2:2000	Cryogenic vessels – Transportable, vacuum insulated, of not more than 1 000 litres volume – Part 2: Design, fabrication, inspection and testing	6.2.3.1 and 6.2.3.4	Until further notice	
EN 12257:2002	Transportable gas cylinders – Seamless, hoop wrapped composite cylinders	6.2.3.1 and 6.2.3.4	Until further notice	
EN 12807:2001 (except Annex A)	Transportable refillable brazed steel cylinders for liquefied petroleum gas (LPG) – Design and construction	6.2.3.1 and 6.2.3.4	Between 1 January 2005 and 31 December 2010	31 December 2012
EN 12807:2008	Transportable refillable brazed steel cylinders for liquefied petroleum gas (LPG) – Design and construction	6.2.3.1 and 6.2.3.4	Until further notice	
EN 1964-2:2001	Transportable gas cylinders – Specification for the design and construction of refillable transportable seamless steel gas cylinders of water capacities from 0.5 litre up to and including 150 litre – Part 2: Cylinders made of seamless steel with an Rm value of 1 100 MPa and above	6.2.3.1 and 6.2.3.4	Until 31 December 2014	
EN ISO 9809-1:2010	Gas cylinders — Refillable seamless steel gas cylinders — Design, construction and testing – Part 1: Quenched and tempered steel cylinders with tensile strength less than 1100 MPa (ISO 9809-1:2010)	6.2.3.1 and 6.2.3.4	Until further notice	
EN ISO 9809-2:2010	Gas cylinders — Refillable seamless steel gas cylinders — Design, construction and testing – Part 2: Quenched and tempered steel cylinders with tensile strength greater than or equal to 1100 MPa (ISO 9809-2:2010)	6.2.3.1 and 6.2.3.4	Until further notice	
EN ISO 9809-3:2010	Gas cylinders — Refillable seamless steel gas cylinders — Design, construction and testing – Part 3: Normalized steel cylinders (ISO 9809-3:2010)	6.2.3.1 and 6.2.3.4	Until further notice	
EN 13293:2002	Transportable gas cylinders – Specification for the design and construction of refillable transportable seamless normalised carbon manganese steel gas cylinders of water capacity up to 0.5 litre for compressed, liquefied and dissolved gases and up to 1 litre for carbon dioxide	6.2.3.1 and 6.2.3.4	Until further notice	
EN 13322-1:2003	Transportable gas cylinders – Refillable welded steel gas cylinders – Design and construction – Part 1: Welded steel	6.2.3.1 and 6.2.3.4	Until 30 June 2007	

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Reference	Title of document	Applicable sub-sections and paragraphs	Applicable for new type approvals or for renewals	Latest date for withdrawal of existing type approvals
(1)	(2)	(3)	(4)	(5)
EN 13322-1:2003 + A1:2006	Transportable gas cylinders – Refillable welded steel gas cylinders – Design and construction – Part 1: Welded steel	6.2.3.1 and 6.2.3.4	Until further notice	
EN 13322-2:2003	Transportable gas cylinders – Refillable welded stainless steel gas cylinders – Design and construction – Part 2: Welded stainless steel	6.2.3.1 and 6.2.3.4	Until 30 June 2007	
EN 13322-2:2003 + A1:2006	Transportable gas cylinders – Refillable welded stainless steel gas cylinders – Design and construction – Part 2: Welded stainless steel	6.2.3.1 and 6.2.3.4	Until further notice	
EN 12245:2002	Transportable gas cylinders – Fully wrapped composite cylinders	6.2.3.1 and 6.2.3.4	Until 31 December 2014	
EN 12245:2009 +A1:2011	Transportable gas cylinders – Fully wrapped composite cylinders	6.2.3.1 and 6.2.3.4	Until further notice	
EN 12205:2001	Transportable gas cylinders – Non refillable metallic gas cylinders	6.2.3.1 and 6.2.3.4	Until further notice	
EN 13110:2002	Transportable refillable welded aluminium cylinders for liquefied petroleum gas (LPG) – Design and construction	6.2.3.1 and 6.2.3.4	Until 31 December 2014	
EN 13110:2012 except clause 9	Transportable refillable welded aluminium cylinders for liquefied petroleum gas (LPG) – Design and construction	6.2.3.1 and 6.2.3.4	Until further notice	
EN 14427:2004	Transportable refillable fully wrapped composite cylinders for liquefied petroleum gases - Design and construction <i>NOTE: This standard applies only to cylinders equipped with pressure relief valves.</i>	6.2.3.1 and 6.2.3.4	Until 30 June 2007	
EN 14427:2004 + A1:2005	Transportable refillable fully wrapped composite cylinders for liquefied petroleum gases - Design and construction <i>NOTE 1: This standard applies only to cylinders equipped with pressure relief valves.</i> <i>NOTE 2: In 5.2.9.2.1 and 5.2.9.3.1, both cylinders shall be subject to a burst test when they show damage equal to or worse than the rejection criteria.</i>	6.2.3.1 and 6.2.3.4	Until further notice	
EN 14208:2004	Transportable gas cylinders – Specification for welded pressure drums up to 1000 litres capacity for the transport of gases – Design and construction	6.2.3.1 and 6.2.3.4	Until further notice	
EN 14140:2003	Transportable refillable welded steel cylinders for Liquefied Petroleum Gas (LPG) – Alternative design and construction	6.2.3.1 and 6.2.3.4	Between 1 January 2005 and 31 December 2010	
EN 14140:2003 + A1:2006	LPG equipment and accessories – Transportable refillable welded steel cylinders for LPG – Alternative design and construction	6.2.3.1 and 6.2.3.4	Until further notice	

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Reference	Title of document	Applicable sub-sections and paragraphs	Applicable for new type approvals or for renewals	Latest date for withdrawal of existing type approvals
(1)	(2)	(3)	(4)	(5)
EN 13769:2003	Transportable gas cylinders – Cylinder bundles – Design, manufacture, identification and testing	6.2.3.1 and 6.2.3.4	Until 30 June 2007	
EN 13769:2003 + A1:2005	Transportable gas cylinders – Cylinder bundles – Design, manufacture, identification and testing	6.2.3.1 and 6.2.3.4	Until 31 December 2014	
EN ISO 10961:2012	Gas cylinders – Cylinder bundles – Design, manufacture, testing and inspection	6.2.3.1 and 6.2.3.4	Until further notice	
EN 14638-1:2006	Transportable gas cylinders – Refillable welded receptacles of a capacity not exceeding 150 litres – Part 1 Welded austenitic stainless steel cylinders made to a design justified by experimental methods	6.2.3.1 and 6.2.3.4	Until further notice	
EN 14893:2006 + AC:2007	LPG equipment and accessories – Transportable LPG welded steel pressure drums with a capacity between 150 and 1 000 litres	6.2.3.1 and 6.2.3.4	Until further notice	
EN 14638-3:2010/AC	Transportable gas cylinders — Refillable welded receptacles of a capacity not exceeding 150 litres — Part 3: Welded carbon steel cylinders made to a design justified by experimental methods	6.2.3.1 and 6.2.3.4	Until further notice	
<i>for closures</i>				
EN 849:1996 (except Annex A)	Transportable gas cylinders – Cylinder valves – Specification and type testing	6.2.3.1 and 6.2.3.3	Until 30 June 2003	31 December 2014
EN 849:1996 + A2:2001	Transportable gas cylinders – Cylinder valves – Specification and type testing	6.2.3.1 and 6.2.3.3	Until 30 June 2003	31 December 2016
EN ISO 10297:2006	Transportable gas cylinders – Cylinder valves – Specification and type testing	6.2.3.1 and 6.2.3.3	Until further notice	
EN ISO 14245:2010	Gas cylinders – Specifications and testing of LPG cylinder valves – Self-closing (ISO 14245:2006)	6.2.3.1 and 6.2.3.3	Until further notice	
EN 13152:2001	Specifications and testing of LPG – Cylinder valves – Self closing	6.2.3.1 and 6.2.3.3	Between 1 January 2005 and 31 December 2010	
EN 13152:2001 + A1:2003	Specifications and testing of LPG – Cylinder valves – Self closing	6.2.3.1 and 6.2.3.3	Between 1 January 2009 and 31 December 2014	
EN ISO 15995:2010	Gas cylinders – Specifications and testing of LPG cylinder valves – Manually operated (ISO 15995:2006)	6.2.3.1 and 6.2.3.3	Until further notice	
EN 13153:2001	Specifications and testing of LPG – Cylinder valves – Manually operated	6.2.3.1 and 6.2.3.3	Between 1 January 2005 and 31 December 2010	
EN 13153:2001 + A1:2003	Specifications and testing of LPG – Cylinder valves – Manually operated	6.2.3.1 and 6.2.3.3	Between 1 January 2009 and 31 December 2014	
EN ISO 13340:2001	Transportable gas cylinders – Cylinder valves for non-refillable cylinders – Specification and prototype testing	6.2.3.1 and 6.2.3.3	Until further notice	

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6.2.4.2 Periodic inspection and test

The standards referenced in the table below shall be applied for the periodic inspection and test of pressure receptacles as indicated in column (3) to meet the requirements of 6.2.3.5 which shall prevail in all cases.

The use of a referenced standard is mandatory.

When a pressure receptacle is constructed in accordance with the provisions of 6.2.5 the procedure for periodic inspection if specified in the type approval shall be followed.

If more than one standard is referenced for the application of the same requirements, only one of them shall be applied, but in full unless otherwise specified in the table below.

Reference	Title of document	Applicable
(1)	(2)	(3)
<i>for periodic inspection and test</i>		
EN 1251-3:2000	Cryogenic vessels – Transportable, vacuum insulated, of not more than 1 000 litres volume – Part 3: Operational requirements	Until further notice
EN 1968:2002 + A1:2005 (except Annex B)	Transportable gas cylinders – Periodic inspection and testing of seamless steel gas cylinders	Until further notice
EN 1802:2002 (except Annex B)	Transportable gas cylinders – Periodic inspection and testing of seamless aluminium alloy gas cylinders	Until further notice
EN 12863:2002 + A1:2005	Transportable gas cylinders – Periodic inspection and maintenance of dissolved acetylene cylinders <i>NOTE: In this standard "initial inspection" is to be understood as the "first periodic inspection" after final approval of a new acetylene cylinder.</i>	Until further notice
EN 1803:2002 (except Annex B)	Transportable gas cylinders – Periodic inspection and testing of welded steel gas cylinders	Until further notice
EN ISO 11623:2002 (except clause 4)	Transportable gas cylinders – Periodic inspection and testing of composite gas cylinders	Until further notice
EN 14189:2003	Transportable gas cylinders – Inspection and maintenance of cylinder valves at time of periodic inspection of gas cylinders	Until 31 December 2014
EN ISO 22434:2012	Transportable gas cylinders – Inspection and maintenance of cylinder valves (ISO 22434:2006)	Mandatorily from 1 January 2015
EN 14876:2007	Transportable gas cylinders – Periodic inspection and testing of welded steel pressure drums	Until further notice
EN 14912:2005	LPG equipment and accessories – Inspection and maintenance of LPG cylinder valves at time of periodic inspection of cylinders	Until further notice
EN 1440:2008 + A1:2012 (except Annexes G and H)	LPG equipment and accessories – Periodic inspection of transportable refillable LPG cylinders	Mandatorily from 1 January 2015

6.2.5 Requirements for non-UN pressure receptacles not designed, constructed and tested according to referenced standards

To reflect scientific and technical progress or where no standard is referenced in 6.2.2 or 6.2.4, or to deal with specific aspects not addressed in a standard referenced in 6.2.2 or 6.2.4, the competent authority may recognize the use of a technical code providing the same level of safety.

In the type approval the issuing body shall specify the procedure for periodic inspections if the standards referenced in 6.2.2 or 6.2.4 are not applicable or shall not be applied.

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The competent authority shall transmit to the secretariat of UNECE a list of the technical codes that it recognises. The list should include the following details: name and date of the code, purpose of the code and details of where it may be obtained. The secretariat shall make this information publicly available on its website.

A standard which has been adopted for reference in a future edition of the ADR may be approved by the competent authority for use without notifying the secretariat of UNECE.

The requirements of 6.2.1, 6.2.3 and the following requirements however shall be met.

NOTE: For this section, the references to technical standards in 6.2.1 shall be considered as references to technical codes.

6.2.5.1 *Materials*

The following provisions contain examples of materials that may be used to comply with the requirements for materials in 6.2.1.2:

- (a) Carbon steel for compressed, liquefied, refrigerated liquefied gases and dissolved gases as well as for substances not in Class 2 listed in Table 3 of packing instruction P200 of 4.1.4.1;
- (b) Alloy steel (special steels), nickel, nickel alloy (such as monel) for compressed, liquefied, refrigerated liquefied gases and dissolved gases as well as for substances not in Class 2 listed in Table 3 of packing instruction P200 of 4.1.4.1;
- (c) Copper for:
 - (i) gases of classification codes 1A, 1O, 1F and 1TF, whose filling pressure referred to a temperature of 15 °C does not exceed 2 MPa (20 bar);
 - (ii) gases of classification code 2A and also UN No. 1033 dimethyl ether; UN No. 1037 ethyl chloride; UN No. 1063 methyl chloride; UN No. 1079 sulphur dioxide; UN No. 1085 vinyl bromide; UN No. 1086 vinyl chloride; and UN No. 3300 ethylene oxide and carbon dioxide mixture with more than 87% ethylene oxide;
 - (iii) gases of classification codes 3A, 3O and 3F;
- (d) Aluminium alloy: see special requirement "a" of packing instruction P200 (10) of 4.1.4.1;
- (e) Composite material for compressed, liquefied, refrigerated liquefied gases and dissolved gases;
- (f) Synthetic materials for refrigerated liquefied gases; and
- (g) Glass for the refrigerated liquefied gases of classification code 3A other than UN No. 2187 carbon dioxide, refrigerated, liquid or mixtures thereof, and gases of classification code 3O.

6.2.5.2 *Service equipment*

(Reserved)

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6.2.5.3 Metal cylinders, tubes, pressure drums and bundles of cylinders

At the test pressure, the stress in the metal at the most severely stressed point of the pressure receptacle shall not exceed 77% of the guaranteed minimum yield stress (Re).

"Yield stress" means the stress at which a permanent elongation of 2 per thousand (i.e. 0.2%) or, for austenitic steels, 1% of the gauge length on the test-piece, has been produced.

NOTE: In the case of sheet-metal the axis of the tensile test-piece shall be at right angles to the direction of rolling. The permanent elongation at fracture, shall be measured on a test-piece of circular cross-section in which the gauge length "l" is equal to five times the diameter "d" ($l = 5d$); if test pieces of rectangular cross-section are used, the gauge length "l" shall be calculated by the formula:

$$l = 5.65 \sqrt{F_0}$$

where F_0 indicates the initial cross-sectional area of the test-piece.

Pressure receptacles and their closures shall be made of suitable materials which shall be resistant to brittle fracture and to stress corrosion cracking between $-20\text{ }^{\circ}\text{C}$ and $+50\text{ }^{\circ}\text{C}$.

Welds shall be skilfully made and shall afford the fullest safety.

6.2.5.4 Additional provisions relating to aluminium-alloy pressure receptacles for compressed gases, liquefied gases, dissolved gases and non pressurized gases subject to special requirements (gas samples) as well as articles containing gas under pressure other than aerosol dispensers and small receptacles containing gas (gas cartridges)

6.2.5.4.1 The materials of aluminium-alloy pressure receptacles which are to be accepted shall satisfy the following requirements:

	A	B	C	D
Tensile strength, Rm, in MPa (= N/mm ²)	49 to 186	196 to 372	196 to 372	343 to 490
Yield stress, Re, in MPa (= N/mm ²) (permanent set $\lambda = 0.2\%$)	10 to 167	59 to 314	137 to 334	206 to 412
Permanent elongation at fracture ($l = 5d$) in per cent	12 to 40	12 to 30	12 to 30	11 to 16
Bend test (diameter of former $d = n \times e$, where e is the thickness of the test piece)	n=5(Rm \leq 98) n=6(Rm $>$ 98)	n=6(Rm \leq 325) n=7(Rm $>$ 325)	n=6(Rm \leq 325) n=7(Rm $>$ 325)	n=7(Rm \leq 392) n=8(Rm $>$ 392)
Aluminium Association Series Number ^a	1 000	5 000	6 000	2 000

^a See "Aluminium Standards and Data", Fifth edition, January 1976, published by the Aluminium Association, 750 Third Avenue, New York.

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The actual properties will depend on the composition of the alloy concerned and on the final treatment of the pressure receptacle, but whatever alloy is used the thickness of the pressure receptacle shall be calculated by one of the following formulae:

$$e = \frac{P_{\text{MPa}} D}{\frac{2\text{Re}}{1.3} + P_{\text{MPa}}} \quad \text{or} \quad e = \frac{P_{\text{bar}} D}{\frac{20\text{Re}}{1.3} + P_{\text{bar}}}$$

where

e	=	minimum thickness of pressure receptacle wall, in mm
P _{MPa}	=	test pressure, in MPa
P _{bar}	=	test pressure, in bar
D	=	nominal external diameter of the pressure receptacle, in mm and
Re	=	guaranteed minimum proof stress with 0.2% proof stress, in MPa (= N/mm ²)

In addition, the value of the minimum guaranteed proof stress (Re) introduced into the formula is in no case to be greater than 0.85 times the guaranteed minimum tensile strength (Rm), whatever the type of alloy used.

NOTE 1: *The above characteristics are based on previous experience with the following materials used for pressure receptacles:*

- Column A: Aluminium, unalloyed, 99.5% pure;*
- Column B: Alloys of aluminium and magnesium;*
- Column C: Alloys of aluminium, silicon and magnesium, such as ISO/R209-Al-Si-Mg (Aluminium Association 6351);*
- Column D: Alloys of aluminium, copper and magnesium.*

NOTE 2: *The permanent elongation at fracture is measured by means of test-pieces of circular cross-section in which the gauge length "l" is equal to five times the diameter "d" (l = 5d); if test-pieces of rectangular section are used the gauge length shall be calculated by the formula:*

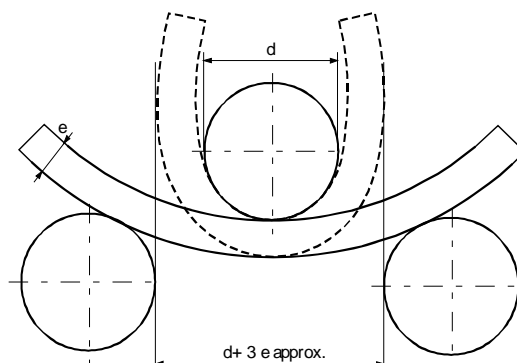
$$l = 5.65 \sqrt{F_o}$$

where F_o is the initial cross-section area of the test-piece.

- NOTE 3:**
- (a) *The bend test (see diagram) shall be carried out on specimens obtained by cutting into two equal parts of width 3e, but in no case less than 25 mm, an annular section of a cylinder. The specimens shall not be machined elsewhere than on the edges;*
 - (b) *The bend test shall be carried out between a mandrel of diameter (d) and two circular supports separated by a distance of (d + 3e). During the test the inner faces shall be separated by a distance not greater than the diameter of the mandrel;*
 - (c) *The specimen shall not exhibit cracks when it has been bent inwards around the mandrel until the inner faces are separated by a distance not greater than the diameter of the mandrel;*
 - (d) *The ratio (n) between the diameter of the mandrel and the thickness of the specimen shall conform to the values given in the table.*

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Diagram of bend test



6.2.5.4.2 A lower minimum elongation value is acceptable on condition that an additional test approved by the competent authority of the country in which the pressure receptacles are made proves that safety of carriage is ensured to the same extent as in the case of pressure receptacles constructed to comply with the characteristics given in the table in 6.2.5.4.1 (see also EN 1975:1999 + A1:2003).

6.2.5.4.3 The wall thickness of the pressure receptacles at the thinnest point shall be the following:

- where the diameter of the pressure receptacle is less than 50 mm: not less than 1.5 mm;
- where the diameter of the pressure receptacle is from 50 to 150 mm: not less than 2 mm; and
- where the diameter of the pressure receptacle is more than 150 mm: not less than 3 mm.

6.2.5.4.4 The ends of the pressure receptacles shall have a semicircular, elliptical or "basket-handle" section; they shall afford the same degree of safety as the body of the pressure receptacle.

6.2.5.5 *Pressure receptacles in composite materials*

For composite cylinders, tubes, pressure drums and bundles of cylinders which make use of composite materials, the construction shall be such that a minimum burst ratio (burst pressure divided by test pressure) is:

- 1.67 for hoop wrapped pressure receptacles;
- 2.00 for fully wrapped pressure receptacles.

6.2.5.6 *Closed cryogenic receptacles*

The following requirements apply to the construction of closed cryogenic receptacles for refrigerated liquefied gases:

6.2.5.6.1 If non-metallic materials are used, they shall resist brittle fracture at the lowest working temperature of the pressure receptacle and its fittings.

6.2.5.6.2 The pressure relief devices shall be so constructed as to work perfectly even at their lowest working temperature. Their reliability of functioning at that temperature shall be established and checked by testing each device or a sample of devices of the same type of construction.

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6.2.5.6.3 The vents and pressure relief devices of pressure receptacles shall be so designed as to prevent the liquid from splashing out.

6.2.6 General requirements for aerosol dispensers, small receptacles containing gas (gas cartridges) and fuel cell cartridges containing liquefied flammable gas

6.2.6.1 *Design and construction*

6.2.6.1.1 Aerosol dispensers (UN No.1950 aerosols) containing only a gas or a mixture of gases, and small receptacles containing gas (gas cartridges) (UN No. 2037), shall be made of metal. This requirement shall not apply to aerosols and small receptacles containing gas (gas cartridges) with a maximum capacity of 100 ml for UN No. 1011 butane. Other aerosol dispensers (UN No.1950 aerosols) shall be made of metal, synthetic material or glass. Receptacles made of metal and having an outside diameter of not less than 40 mm shall have a concave bottom.

6.2.6.1.2 The capacity of receptacles made of metal shall not exceed 1 000 ml; that of receptacles made of synthetic material or of glass shall not exceed 500 ml.

6.2.6.1.3 Each model of receptacles (aerosol dispensers or cartridges) shall, before being put into service, satisfy a hydraulic pressure test carried out in conformity with 6.2.6.2.

6.2.6.1.4 The release valves and dispersal devices of aerosol dispensers (UN No.1950 aerosols) and the valves of UN No. 2037 small receptacles containing gas (gas cartridges) shall ensure that the receptacles are so closed as to be leakproof and shall be protected against accidental opening. Valves and dispersal devices which close only by the action of the internal pressure are not to be accepted.

6.2.6.1.5 The internal pressure at 50 °C shall exceed neither two-thirds of the test pressure nor 1.32 MPa (13.2 bar). Aerosol dispensers and small receptacles containing gas (gas cartridges) shall be so filled that at 50°C the liquid phase does not exceed 95% of their capacity.

6.2.6.2 *Hydraulic pressure test*

6.2.6.2.1 The internal pressure to be applied (test pressure) shall be 1.5 times the internal pressure at 50 °C, with a minimum pressure of 1 MPa (10 bar).

6.2.6.2.2 The hydraulic pressure tests shall be carried out on at least five empty receptacles of each model:

- (a) until the prescribed test pressure is reached, by which time no leakage or visible permanent deformation shall have occurred; and
- (b) until leakage or bursting occurs; the dished end, if any, shall yield first and the receptacle shall not leak or burst until a pressure 1.2 times the test pressure has been reached or passed.

6.2.6.3 *Tightness (leakproofness) test*

6.2.6.3.1 *Small receptacles containing gas (gas cartridges) and fuel cell cartridges containing liquefied flammable gas*

6.2.6.3.1.1 Each receptacle or fuel cell cartridge shall satisfy a tightness (leakproofness) test in a hot-water bath.

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6.2.6.3.1.2 The temperature of the bath and the duration of the test shall be such that the internal pressure of each receptacle or fuel cell cartridge reaches at least 90% of the internal pressure that would be reached at 55 °C. However, if the contents are sensitive to heat or if the receptacles or fuel cell cartridges are made of a plastics material which softens at this temperature, the temperature of the bath shall be from 20 °C to 30 °C. In addition, one receptacle or fuel cell cartridge out of every 2000 shall be tested at 55 °C.

6.2.6.3.1.3 No leakage or permanent deformation of a receptacle or fuel cell cartridge shall occur, except that a plastics receptacle or fuel cell cartridge may be deformed through softening provided that it does not leak.

6.2.6.3.2 *Aerosol dispensers*

Each filled aerosol dispenser shall be subjected to a test performed in a hot water bath or an approved water bath alternative.

6.2.6.3.2.1 Hot water bath test

6.2.6.3.2.1.1 The temperature of the water bath and the duration of the test shall be such that the internal pressure reaches that which would be reached at 55 °C (50 °C if the liquid phase does not exceed 95% of the capacity of the aerosol dispenser at 50 °C). If the contents are sensitive to heat or if the aerosol dispensers are made of plastics material which softens at this test temperature, the temperature of the bath shall be set at between 20 °C and 30 °C but, in addition, one aerosol dispenser in 2 000 shall be tested at the higher temperature.

6.2.6.3.2.1.2 No leakage or permanent deformation of an aerosol dispenser may occur, except that a plastics aerosol dispenser may be deformed through softening provided that it does not leak.

6.2.6.3.2.2 Alternative methods

With the approval of the competent authority alternative methods which provide an equivalent level of safety may be used provided that the requirements of 6.2.6.3.2.2.1, 6.2.6.3.2.2.2 and 6.2.6.3.2.2.3 are met.

6.2.6.3.2.2.1 Quality system

Aerosol dispenser fillers and component manufacturers shall have a quality system. The quality system shall implement procedures to ensure that all aerosol dispensers that leak or that are deformed are rejected and not offered for carriage.

The quality system shall include:

- (a) A description of the organizational structure and responsibilities;
- (b) The relevant inspection and test, quality control, quality assurance, and process operation instructions that will be used;
- (c) Quality records, such as inspection reports, test data, calibration data and certificates;
- (d) Management reviews to ensure the effective operation of the quality system;
- (e) A process for control of documents and their revision;
- (f) A means for control of non-conforming aerosol dispensers;
- (g) Training programmes and qualification procedures for relevant personnel; and

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- (h) Procedures to ensure that there is no damage to the final product.

An initial audit and periodic audits shall be conducted to the satisfaction of the competent authority. These audits shall ensure the approved system is and remains adequate and efficient. Any proposed changes to the approved system shall be notified to the competent authority in advance.

6.2.6.3.2.2.2 Pressure and leak testing of aerosol dispensers before filling

Every empty aerosol dispenser shall be subjected to a pressure equal to or in excess of the maximum expected in the filled aerosol dispensers at 55 °C (50 °C if the liquid phase does not exceed 95% of the capacity of the receptacle at 50 °C). This shall be at least two-thirds of the design pressure of the aerosol dispenser. If any aerosol dispenser shows evidence of leakage at a rate equal to or greater than 3.3×10^{-2} mbar.l.s⁻¹ at the test pressure, distortion or other defect, it shall be rejected.

6.2.6.3.2.2.3 Testing of the aerosol dispensers after filling

Prior to filling the filler shall ensure that the crimping equipment is set appropriately and the specified propellant is used.

Each filled aerosol dispenser shall be weighed and leak tested. The leak detection equipment shall be sufficiently sensitive to detect at least a leak rate of 2.0×10^{-3} mbar.l.s⁻¹ at 20 °C.

Any filled aerosol dispenser which shows evidence of leakage, deformation or excessive weight shall be rejected.

6.2.6.3.3 With the approval of the competent authority, aerosols and receptacles, small, are not subject to 6.2.6.3.1 and 6.2.6.3.2, if they are required to be sterile but may be adversely affected by water bath testing, provided:

- (a) They contain a non-flammable gas and either
- (i) contain other substances that are constituent parts of pharmaceutical products for medical, veterinary or similar purposes;
 - (ii) contain other substances used in the production process for pharmaceutical products; or
 - (iii) are used in medical, veterinary or similar applications;
- (b) An equivalent level of safety is achieved by the manufacturer's use of alternative methods for leak detection and pressure resistance, such as helium detection and water bathing a statistical sample of at least 1 in 2000 from each production batch; and
- (c) For pharmaceutical products according to (a) (i) and (iii) above, they are manufactured under the authority of a national health administration. If required by the competent authority, the principles of Good Manufacturing Practice (GMP) established by the World Health Organization (WHO)⁴ shall be followed.

⁴ WHO Publication: "Quality assurance of pharmaceuticals. A compendium of guidelines and related materials. Volume 2: Good manufacturing practices and inspection".

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6.2.6.4 *Reference to standards*

The requirements of this section are deemed to be met if the following standards are complied with:

- for aerosol dispensers (UN No. 1950 aerosols): Annex to Council Directive 75/324/EEC⁵ as amended and applicable at the date of manufacture;
- for UN No. 2037, small receptacles containing gas (gas cartridges) containing UN No. 1965, hydrocarbon gas mixture n.o.s, liquefied: EN 417:2012 Non-refillable metallic gas cartridges for liquefied petroleum gases, with or without a valve, for use with portable appliances - Construction, inspection, testing and marking.

⁵ Council Directive 75/324/EEC of 20 May 1975 on the approximation of the laws of the Member States relating to aerosol dispensers, published in the Official Journal of the European Communities No. L 147 of 9.06.1975.

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CHAPTER 6.3

REQUIREMENTS FOR THE CONSTRUCTION AND TESTING OF PACKAGINGS FOR CLASS 6.2 INFECTIOUS SUBSTANCES OF CATEGORY A

NOTE: *The requirements of this Chapter don't apply to packagings used for the carriage of Class 6.2 substances according to packing instruction P621 of 4.1.4.1.*

6.3.1 General

6.3.1.1 The requirements of this Chapter apply to packagings intended for the carriage of infectious substances of Category A.

6.3.2 Requirements for packagings

6.3.2.1 The requirements for packagings in this section are based on packagings, as specified in 6.1.4, currently used. In order to take into account progress in science and technology, there is no objection to the use of packagings having specifications different from those in this Chapter provided that they are equally effective, acceptable to the competent authority and able successfully to withstand the tests described in 6.3.5. Methods of testing other than those described in ADR are acceptable provided they are equivalent, and are recognized by the competent authority.

6.3.2.2 Packagings shall be manufactured and tested under a quality assurance programme which satisfies the competent authority in order to ensure that each packaging meets the requirements of this Chapter.

NOTE: *ISO 16106:2006 "Packaging – Transport packages for dangerous goods – Dangerous goods packagings, intermediate bulk containers (IBCs) and large packagings – Guidelines for the application of ISO 9001" provides acceptable guidance on procedures which may be followed.*

6.3.2.3 Manufacturers and subsequent distributors of packagings shall provide information regarding procedures to be followed and a description of the types and dimensions of closures (including required gaskets) and any other components needed to ensure that packages as presented for carriage are capable of passing the applicable performance tests of this Chapter.

6.3.3 Code for designating types of packagings

6.3.3.1 The codes for designating types of packagings are set out in 6.1.2.7.

6.3.3.2 The letters "U" or "W" may follow the packaging code. The letter "U" signifies a special packaging conforming to the requirements of 6.3.5.1.6. The letter "W" signifies that the packaging, although, of the same type indicated by the code is manufactured to a specification different from that in 6.1.4 and is considered equivalent under the requirements of 6.3.2.1.

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6.3.4 Marking

NOTE 1: The marking indicates that the packaging which bears it corresponds to a successfully tested design type and that it complies with the requirements of this Chapter which are related to the manufacture, but not to the use, of the packaging.

NOTE 2: The marking is intended to be of assistance to packaging manufacturers, reconditioners, packaging users, carriers and regulatory authorities.

NOTE 3: The marking does not always provide full details of the test levels, etc., and these may need to be taken further into account, e.g. by reference to a test certificate, to test reports or to a register of successfully tested packagings.

6.3.4.1 Each packaging intended for use according to ADR shall bear markings which are durable, legible and placed in a location and of such a size relative to the packaging as to be readily visible. For packages with a gross mass of more than 30 kg, the markings or a duplicate thereof shall appear on the top or on a side of the packaging. Letters, numerals and symbols shall be at least 12 mm high, except for packagings of 30 litres or 30 kg capacity or less, when they shall be at least 6 mm in height and for packagings of 5 litres or 5 kg or less when they shall be of an appropriate size.

6.3.4.2 A packaging that meets the requirements of this section and of 6.3.5 shall be marked with:

(a) The United Nations packaging symbol



;

This symbol shall not be used for any purpose other than certifying that a packaging, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6 or 6.7¹;

- (b) The code designating the type of packaging according to the requirements of 6.1.2;
- (c) The text "CLASS 6.2";
- (d) The last two digits of the year of manufacture of the packaging;
- (e) The state authorizing the allocation of the mark, indicated by the distinguishing sign for motor vehicles in international traffic²;
- (f) The name of the manufacturer or other identification of the packaging specified by the competent authority;
- (g) For packagings meeting the requirements of 6.3.5.1.6, the letter "U", inserted immediately following the marking required in (b) above.

6.3.4.3 Marking shall be applied in the sequence shown in 6.3.4.2 (a) to (g); each element of the marking required in these sub-paragraphs shall be clearly separated, e.g. by a slash or space, so as to be easily identifiable. For examples, see 6.3.4.4.

¹ This symbol is also used to certify that flexible bulk containers authorized for others modes of transport complies with the requirements in Chapter 6.8 of the UN Model Regulations.

² Distinguishing sign for motor vehicles in international traffic prescribed in the Vienna Convention on Road Traffic (1968).

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Any additional markings authorized by a competent authority shall still enable the parts of the mark to be correctly identified with reference to 6.3.4.1.

6.3.4.4 *Example of marking*



4G/CLASS 6.2/06
S/SP-9989-ERIKSSON

as in 6.3.4.2 (a), (b), (c) and (d)
as in 6.3.4.2 (e) and (f)

6.3.5 **Test requirements for packagings**

6.3.5.1 *Performance and frequency of tests*

6.3.5.1.1 The design type of each packaging shall be tested as provided in this section in accordance with procedures established by the competent authority allowing the allocation of the mark and shall be approved by this competent authority.

6.3.5.1.2 Each packaging design type shall successfully pass the tests prescribed in this Chapter before being used. A packaging design type is defined by the design, size, material and thickness, manner of construction and packing, but may include various surface treatments. It also includes packagings which differ from the design type only in their lesser design height.

6.3.5.1.3 Tests shall be repeated on production samples at intervals established by the competent authority.

6.3.5.1.4 Tests shall also be repeated after each modification which alters the design, material or manner of construction of a packaging.

6.3.5.1.5 The competent authority may permit the selective testing of packagings that differ only in minor respects from a tested type, e.g. smaller sizes or lower net mass of primary receptacles; and packagings such as drums and boxes which are produced with small reductions in external dimension(s).

6.3.5.1.6 Primary receptacles of any type may be assembled within a secondary packaging and carried without testing in the rigid outer packaging under the following conditions:

- (a) The rigid outer packaging shall have been successfully tested in accordance with 6.3.5.2.2 with fragile (e.g. glass) primary receptacles;
- (b) The total combined gross mass of primary receptacles shall not exceed one half the gross mass of primary receptacles used for the drop test in (a) above;
- (c) The thickness of cushioning between primary receptacles and between primary receptacles and the outside of the secondary packaging shall not be reduced below the corresponding thicknesses in the originally tested packaging; and if a single primary receptacle was used in the original test, the thickness of cushioning between primary receptacles shall not be less than the thickness of cushioning between the outside of the secondary packaging and the primary receptacle in the original test. When either fewer or smaller primary receptacles are used (as compared to the primary receptacles used in the drop test), sufficient additional cushioning material shall be used to take up the void spaces;
- (d) The rigid outer packaging shall have successfully passed the stacking test in 6.1.5.6 while empty. The total mass of identical packages shall be based on the combined mass of packagings used in the drop test in (a) above;

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- (e) For primary receptacles containing liquids, an adequate quantity of absorbent material to absorb the entire liquid content of the primary receptacles shall be present;
- (f) If the rigid outer packaging is intended to contain primary receptacles for liquids and is not leakproof, or is intended to contain primary receptacles for solids and is not siftproof, a means of containing any liquid or solid contents in the event of leakage shall be provided in the form of a leakproof liner, plastics bag or other equally effective means of containment;
- (g) In addition to the markings prescribed in 6.3.4.2 (a) to (f), packagings shall be marked in accordance with 6.3.4.2 (g).

6.3.5.1.7 The competent authority may at any time require proof, by tests in accordance with this section, that serially-produced packagings meet the requirements of the design type tests.

6.3.5.1.8 Provided the validity of the test results is not affected and with the approval of the competent authority, several tests may be made on one sample.

6.3.5.2 *Preparation of packagings for testing*

6.3.5.2.1 Samples of each packaging shall be prepared as for carriage, except that a liquid or solid infectious substance shall be replaced by water or, where conditioning at -18°C is specified, by water/antifreeze. Each primary receptacle shall be filled to not less than 98% of its capacity.

NOTE: The term water includes water/antifreeze solution with a minimum specific gravity of 0.95 for testing at -18°C .

6.3.5.2.2 Tests and number of samples required

Tests required for packaging types

Type of packaging ^a			Tests required					Stack 6.1.5.6
Rigid outer packaging	Primary receptacle		Water spray	Cold conditioning	Drop	Additional drop	Puncture	
	Plastics	Other	6.3.5.3.6.1	6.3.5.3.6.2	6.3.5.3	6.3.5.3.6.3	6.3.5.4	
			No. of samples	No. of samples	No. of samples	No. of samples	No. of samples	No. of samples
Fibreboard box	x		5	5	10	Required on one sample when the packaging is intended to contain dry ice.	2	Required on three samples when testing a "U"-marked packaging as defined in 6.3.5.1.6 for specific provisions.
		x	5	0	5		2	
Fibreboard drum	x		3	3	6		2	
		x	3	0	3		2	
Plastics box	x		0	5	5		2	
		x	0	5	5		2	
Plastics drum/jerrican	x		0	3	3		2	
		x	0	3	3		2	
Boxes of other material	x		0	5	5	2		
		x	0	0	5	2		
Drums/jerricans of other material	x		0	3	3	2		
		x	0	0	3	2		

^a "Type of packaging" categorizes packagings for test purposes according to the kind of packaging and its material characteristics.

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NOTE 1: *In instances where a primary receptacle is made of two or more materials, the material most liable to damage determines the appropriate test.*

NOTE 2: *The material of the secondary packagings are not taken into consideration when selecting the test or conditioning for the test.*

Explanation for use of the table:

If the packaging to be tested consists of a fibreboard outer box with a plastics primary receptacle, five samples must undergo the water spray test (see 6.3.5.3.6.1) prior to dropping and another five must be conditioned to – 18 °C (see 6.3.5.3.6.2) prior to dropping. If the packaging is to contain dry ice then one further single sample shall be dropped five times after conditioning in accordance with 6.3.5.3.6.3.

Packagings prepared as for carriage shall be subjected to the tests in 6.3.5.3 and 6.3.5.4. For outer packagings, the headings in the table relate to fibreboard or similar materials whose performance may be rapidly affected by moisture; plastics which may embrittle at low temperature; and other materials such as metal whose performance is not affected by moisture or temperature.

6.3.5.3 *Drop test*

6.3.5.3.1 Samples shall be subjected to free-fall drops from a height of 9 m onto a non-resilient, horizontal, flat, massive and rigid surface in conformity with 6.1.5.3.4.

6.3.5.3.2 Where the samples are in the shape of a box, five shall be dropped one in each of the following orientations:

- (a) flat on the base;
- (b) flat on the top;
- (c) flat on the longest side;
- (d) flat on the shortest side;
- (e) on a corner.

6.3.5.3.3 Where the samples are in the shape of a drum, three shall be dropped one in each of the following orientations:

- (a) diagonally on the top chime, with the centre of gravity directly above the point of impact;
- (b) diagonally on the base chime;
- (c) flat on the side.

6.3.5.3.4 While the sample shall be released in the required orientation, it is accepted that for aerodynamic reasons the impact may not take place in that orientation.

6.3.5.3.5 Following the appropriate drop sequence, there shall be no leakage from the primary receptacle(s) which shall remain protected by cushioning/absorbent material in the secondary packaging.

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6.3.5.3.6 *Special preparation of test sample for the drop test*

6.3.5.3.6.1 Fibreboard - Water spray test

Fibreboard outer packagings: The sample shall be subjected to a water spray that simulates exposure to rainfall of approximately 5 cm per hour for at least one hour. It shall then be subjected to the test described in 6.3.5.3.1.

6.3.5.3.6.2 Plastics material – Cold conditioning

Plastics primary receptacles or outer packagings: The temperature of the test sample and its contents shall be reduced to – 18 °C or lower for a period of at least 24 hours and within 15 minutes of removal from that atmosphere the test sample shall be subjected to the test described in 6.3.5.3.1. Where the sample contains dry ice, the conditioning period shall be reduced to 4 hours.

6.3.5.3.6.3 Packagings intended to contain dry ice – Additional drop test

Where the packaging is intended to contain dry ice, a test additional to that specified in 6.3.5.3.1 and, when appropriate, in 6.3.5.3.6.1 or 6.3.5.3.6.2 shall be carried out. One sample shall be stored so that all the dry ice dissipates and then that sample shall be dropped in one of the orientations described in 6.3.5.3.2 which shall be that most likely to result in failure of the packaging.

6.3.5.4 *Puncture test*

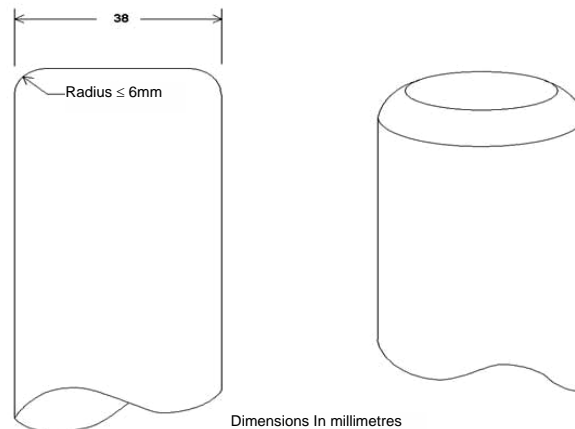
6.3.5.4.1 *Packagings with a gross mass of 7 kg or less*

Samples shall be placed on a level hard surface. A cylindrical steel rod with a mass of at least 7 kg, a diameter of 38 mm and whose impact end edges have a radius not exceeding 6 mm (see Figure 6.3.5.4.2), shall be dropped in a vertical free fall from a height of 1 m, measured from the impact end to the impact surface of the sample. One sample shall be placed on its base. A second sample shall be placed in an orientation perpendicular to that used for the first. In each instance the steel rod shall be aimed to impact the primary receptacle. Following each impact, penetration of the secondary packaging is acceptable, provided that there is no leakage from the primary receptacle(s).

6.3.5.4.2 *Packagings with a gross mass exceeding 7 kg*

Samples shall be dropped on to the end of a cylindrical steel rod. The rod shall be set vertically in a level hard surface. It shall have a diameter of 38 mm and the edges of the upper end a radius not exceeding 6 mm (see Figure 6.3.5.4.2). The rod shall protrude from the surface a distance at least equal to that between the centre of the primary receptacle(s) and the outer surface of the outer packaging with a minimum of 200 mm. One sample shall be dropped with its top face lowermost in a vertical free fall from a height of 1 m, measured from the top of the steel rod. A second sample shall be dropped from the same height in an orientation perpendicular to that used for the first. In each instance, the packaging shall be so orientated that the steel rod would be capable of penetrating the primary receptacle(s). Following each impact, penetration of the secondary packaging is acceptable provided that there is no leakage from the primary receptacle(s).

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Figure 6.3.5.4.2**6.3.5.5 Test report**

6.3.5.5.1 A written test report containing at least the following particulars shall be drawn up and shall be available to the users of the packaging:

1. Name and address of the test facility;
2. Name and address of applicant (where appropriate);
3. A unique test report identification;
4. Date of the test and of the report;
5. Manufacturer of the packaging;
6. Description of the packaging design type (e.g. dimensions, materials, closures, thickness, etc.), including method of manufacture (e.g. blow moulding) and which may include drawing(s) and/or photograph(s);
7. Maximum capacity;
8. Test contents;
9. Test descriptions and results;
10. The test report shall be signed with the name and status of the signatory.

6.3.5.5.2 The test report shall contain statements that the packaging prepared as for carriage was tested in accordance with the appropriate requirements of this Chapter and that the use of other packaging methods or components may render it invalid. A copy of the test report shall be available to the competent authority.

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CHAPTER 6.4

REQUIREMENTS FOR THE CONSTRUCTION, TESTING AND APPROVAL OF PACKAGES AND MATERIAL OF CLASS 7

6.4.1 *(Reserved)*

6.4.2 **General requirements**

- 6.4.2.1 The package shall be so designed in relation to its mass, volume and shape that it can be easily and safely carried. In addition, the package shall be so designed that it can be properly secured in or on the vehicle during carriage.
- 6.4.2.2 The design shall be such that any lifting attachments on the package will not fail when used in the intended manner and that, if failure of the attachments should occur, the ability of the package to meet other requirements of this Annex would not be impaired. The design shall take account of appropriate safety factors to cover snatch lifting.
- 6.4.2.3 Attachments and any other features on the outer surface of the package which could be used to lift it shall be designed either to support its mass in accordance with the requirements of 6.4.2.2 or shall be removable or otherwise rendered incapable of being used during carriage.
- 6.4.2.4 As far as practicable, the packaging shall be so designed and finished that the external surfaces are free from protruding features and can be easily decontaminated.
- 6.4.2.5 As far as practicable, the outer layer of the package shall be so designed as to prevent the collection and the retention of water.
- 6.4.2.6 Any features added to the package at the time of carriage which are not part of the package shall not reduce its safety.
- 6.4.2.7 The package shall be capable of withstanding the effects of any acceleration, vibration or vibration resonance which may arise under routine conditions of carriage without any deterioration in the effectiveness of the closing devices on the various receptacles or in the integrity of the package as a whole. In particular, nuts, bolts and other securing devices shall be so designed as to prevent them from becoming loose or being released unintentionally, even after repeated use.
- 6.4.2.8 The materials of the packaging and any components or structures shall be physically and chemically compatible with each other and with the radioactive contents. Account shall be taken of their behaviour under irradiation.
- 6.4.2.9 All valves through which the radioactive contents could escape shall be protected against unauthorized operation.
- 6.4.2.10 The design of the package shall take into account ambient temperatures and pressures that are likely to be encountered in routine conditions of carriage.
- 6.4.2.11 For radioactive material having other dangerous properties the package design shall take into account those properties; see 2.1.3.5.3 and 4.1.9.1.5.

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6.4.2.12 Manufacturers and subsequent distributors of packagings shall provide information regarding procedures to be followed and a description of the types and dimensions of closures (including required gaskets) and any other components needed to ensure that packages as presented for carriage are capable of passing the applicable performance tests of this Chapter.

6.4.3 *(Reserved)*

6.4.4 Requirements for excepted packages

An excepted package shall be designed to meet the requirements specified in 6.4.2.

6.4.5 Requirements for Industrial packages

6.4.5.1 Types IP-1, IP-2, and IP-3 packages shall meet the requirements specified in 6.4.2 and 6.4.7.2.

6.4.5.2 A Type IP-2 package shall, if it were subjected to the tests specified in 6.4.15.4 and 6.4.15.5, prevent:

- (a) Loss or dispersal of the radioactive contents; and
- (b) More than a 20% increase in the maximum radiation level at any external surface of the package.

6.4.5.3 A Type IP-3 package shall meet all the requirements specified in 6.4.7.2 to 6.4.7.15.

6.4.5.4 Alternative requirements for Types IP-2 and IP-3 packages

6.4.5.4.1 Packages may be used as Type IP-2 package provided that:

- (a) They satisfy the requirements of 6.4.5.1;
- (b) They are designed to satisfy the requirements prescribed for packing group I or II in Chapter 6.1; and
- (c) When subjected to the tests required for packing groups I or II in Chapter 6.1, they would prevent:
 - (i) Loss or dispersal of the radioactive contents; and
 - (ii) More than a 20% increase in the maximum radiation level at any external surface of the package.

6.4.5.4.2 Portable tanks may also be used as Types IP-2 or IP-3 packages, provided that:

- (a) They satisfy the requirements of 6.4.5.1;
- (b) They are designed to satisfy the requirements prescribed in Chapter 6.7 and are capable of withstanding a test pressure of 265 kPa; and
- (c) They are designed so that any additional shielding which is provided shall be capable of withstanding the static and dynamic stresses resulting from handling and routine conditions of carriage and of preventing more than a 20% increase in the maximum radiation level at any external surface of the portable tanks.

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- 6.4.5.4.3 Tanks, other than portable tanks, may also be used as Types IP-2 or IP-3 packages for carrying LSA-I and LSA-II liquids and gases as prescribed in Table 4.1.9.2.4, provided that:
- (a) They satisfy the requirements of 6.4.5.1;
 - (b) They are designed to satisfy the requirements prescribed in Chapter 6.8; and
 - (c) They are designed so that any additional shielding which is provided shall be capable of withstanding the static and dynamic stresses resulting from handling and routine conditions of carriage and of preventing more than a 20% increase in the maximum radiation level at any external surface of the tanks.
- 6.4.5.4.4 Containers with the characteristics of a permanent enclosure may also be used as Types IP-2 or IP-3 packages, provided that:
- (a) The radioactive contents are restricted to solid materials;
 - (b) They satisfy the requirements of 6.4.5.1; and
 - (c) They are designed to conform to ISO 1496-1:1990: "Series 1 Containers - Specifications and Testing - Part 1: General Cargo Containers" and subsequent amendments 1:1993, 2:1998, 3:2005, 4:2006 and 5:2006, excluding dimensions and ratings. They shall be designed such that if subjected to the tests prescribed in that document and the accelerations occurring during routine conditions of carriage they would prevent:
 - (i) loss or dispersal of the radioactive contents; and
 - (ii) more than a 20% increase in the maximum radiation level at any external surface of the containers.
- 6.4.5.4.5 Metal intermediate bulk containers may also be used as Types IP-2 or IP-3 packages provided that:
- (a) They satisfy the requirements of 6.4.5.1; and
 - (b) They are designed to satisfy the requirements prescribed in Chapter 6.5 for packing group I or II, and if they were subjected to the tests prescribed in that Chapter, but with the drop test conducted in the most damaging orientation, they would prevent:
 - (i) loss or dispersal of the radioactive contents; and
 - (ii) more than a 20% increase in the maximum radiation level at any external surface of the intermediate bulk container.

6.4.6 Requirements for packages containing uranium hexafluoride

- 6.4.6.1 Packages designed to contain uranium hexafluoride shall meet the requirements prescribed elsewhere in ADR which pertain to the radioactive and fissile properties of the material. Except as allowed in 6.4.6.4, uranium hexafluoride in quantities of 0.1 kg or more shall also be packaged and carried in accordance with the provisions of ISO 7195:2005 "Nuclear Energy – Packaging of uranium hexafluoride (UF₆) for transport", and the requirements of 6.4.6.2 and 6.4.6.3.
- 6.4.6.2 Each package designed to contain 0.1 kg or more of uranium hexafluoride shall be designed so that it would meet the following requirements:

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- (a) Withstand without leakage and without unacceptable stress, as specified in ISO 7195:2005, the structural test as specified in 6.4.21.5;
- (b) Withstand without loss or dispersal of the uranium hexafluoride the free drop test specified in 6.4.15.4; and
- (c) Withstand without rupture of the containment system the thermal test specified in 6.4.17.3.

6.4.6.3 Packages designed to contain 0.1 kg or more of uranium hexafluoride shall not be provided with pressure relief devices.

6.4.6.4 Subject to the approval of the competent authority, packages designed to contain 0.1 kg or more of uranium hexafluoride may be carried if:

- (a) The packages are designed to international or national standards other than ISO 7195:2005 provided an equivalent level of safety is maintained;
- (b) The packages are designed to withstand without leakage and without unacceptable stress a test pressure of less than 2.76 MPa as specified in 6.4.21.5; or
- (c) For packages designed to contain 9 000 kg or more of uranium hexafluoride, the packages do not meet the requirement of 6.4.6.2 (c).

In all other respects the requirements specified in 6.4.6.1 to 6.4.6.3 shall be satisfied.

6.4.7 Requirements for Type A packages

6.4.7.1 Type A packages shall be designed to meet the general requirements of 6.4.2 and of 6.4.7.2 to 6.4.7.17.

6.4.7.2 The smallest overall external dimension of the package shall not be less than 10 cm.

6.4.7.3 The outside of the package shall incorporate a feature such as a seal, which is not readily breakable and which, while intact, will be evidence that it has not been opened.

6.4.7.4 Any tie-down attachments on the package shall be so designed that, under normal and accident conditions of carriage, the forces in those attachments shall not impair the ability of the package to meet the requirements of ADR.

6.4.7.5 The design of the package shall take into account temperatures ranging from -40°C to +70°C for the components of the packaging. Attention shall be given to freezing temperatures for liquids and to the potential degradation of packaging materials within the given temperature range.

6.4.7.6 The design and manufacturing techniques shall be in accordance with national or international standards, or other requirements, acceptable to the competent authority.

6.4.7.7 The design shall include a containment system securely closed by a positive fastening device which cannot be opened unintentionally or by a pressure which may arise within the package.

6.4.7.8 Special form radioactive material may be considered as a component of the containment system.

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- 6.4.7.9 If the containment system forms a separate unit of the package, it shall be capable of being securely closed by a positive fastening device which is independent of any other part of the packaging.
- 6.4.7.10 The design of any component of the containment system shall take into account, where applicable, the radiolytic decomposition of liquids and other vulnerable materials and the generation of gas by chemical reaction and radiolysis.
- 6.4.7.11 The containment system shall retain its radioactive contents under a reduction of ambient pressure to 60 kPa.
- 6.4.7.12 All valves, other than pressure relief valves, shall be provided with an enclosure to retain any leakage from the valve.
- 6.4.7.13 A radiation shield which encloses a component of the package specified as a part of the containment system shall be so designed as to prevent the unintentional release of that component from the shield. Where the radiation shield and such component within it form a separate unit, the radiation shield shall be capable of being securely closed by a positive fastening device which is independent of any other packaging structure.
- 6.4.7.14 A package shall be so designed that if it were subjected to the tests specified in 6.4.15, it would prevent:

- (a) Loss or dispersal of the radioactive contents; and
- (b) More than a 20% increase in the maximum radiation level at any external surface of the package.

- 6.4.7.15 The design of a package intended for liquid radioactive material shall make provision for ullage to accommodate variations in the temperature of the contents, dynamic effects and filling dynamics.

Type A packages to contain liquids

- 6.4.7.16 A Type A package designed to contain liquid radioactive material shall, in addition:
- (a) Be adequate to meet the conditions specified in 6.4.7.14 (a) above if the package is subjected to the tests specified in 6.4.16; and
 - (b) Either
 - (i) be provided with sufficient absorbent material to absorb twice the volume of the liquid contents. Such absorbent material shall be suitably positioned so as to contact the liquid in the event of leakage; or
 - (ii) be provided with a containment system composed of primary inner and secondary outer containment components designed to enclose the liquid contents completely and ensure their retention, within the secondary outer containment components, even if the primary inner components leak.

Type A packages to contain gas

- 6.4.7.17 A package designed for gases shall prevent loss or dispersal of the radioactive contents if the package were subjected to the tests specified in 6.4.16. A Type A package designed for tritium gas or for noble gases shall be excepted from this requirement.

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6.4.8 Requirements for Type B(U) packages

- 6.4.8.1 Type B(U) packages shall be designed to meet the requirements specified in 6.4.2, and of 6.4.7.2 to 6.4.7.15, except as specified in 6.4.7.14 (a), and, in addition, the requirements specified in 6.4.8.2 to 6.4.8.15.
- 6.4.8.2 A package shall be so designed that, under the ambient conditions specified in 6.4.8.5 and 6.4.8.6 heat generated within the package by the radioactive contents shall not, under normal conditions of carriage, as demonstrated by the tests in 6.4.15, adversely affect the package in such a way that it would fail to meet the applicable requirements for containment and shielding if left unattended for a period of one week. Particular attention shall be paid to the effects of heat, which may:
- (a) Alter the arrangement, the geometrical form or the physical state of the radioactive contents or, if the radioactive material is enclosed in a can or receptacle (for example, clad fuel elements), cause the can, receptacle or radioactive material to deform or melt; or
 - (b) Lessen the efficiency of the packaging through differential thermal expansion or cracking or melting of the radiation shielding material; or
 - (c) In combination with moisture, accelerate corrosion.
- 6.4.8.3 A package shall be so designed that, under the ambient condition specified in 6.4.8.5 and in the absence of insolation, the temperature of the accessible surfaces of a package shall not exceed 50 °C, unless the package is carried under exclusive use.
- 6.4.8.4 The maximum temperature of any surface readily accessible during carriage of a package under exclusive use shall not exceed 85 °C in the absence of insolation under the ambient conditions specified in 6.4.8.5. Account may be taken of barriers or screens intended to give protection to persons without the need for the barriers or screens being subject to any test.
- 6.4.8.5 The ambient temperature shall be assumed to be 38 °C.
- 6.4.8.6 The solar insolation conditions shall be assumed to be as specified in Table 6.4.8.6.

Table 6.4.8.6: Insolation data

Case	Form and location of surface	Insolation for 12 hours per day (W/m ²)
1	Flat surfaces carried horizontally-downward facing	0
2	Flat surfaces carried horizontally-upward facing	800
3	Surfaces carried vertically	200 ^a
4	Other downward facing (not horizontal) surfaces	200 ^a
5	All other surfaces	400 ^a

^a Alternatively, a sine function may be used, with an absorption coefficient adopted and the effects of possible reflection from neighbouring objects neglected.

- 6.4.8.7 A package which includes thermal protection for the purpose of satisfying the requirements of the thermal test specified in 6.4.17.3 shall be so designed that such protection will remain effective if the package is subjected to the tests specified in 6.4.15 and 6.4.17.2 (a) and (b) or 6.4.17.2 (b) and (c), as appropriate. Any such protection on the exterior of the package shall not be rendered ineffective by ripping, cutting, skidding, abrasion or rough handling.

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- 6.4.8.8 A package shall be so designed that, if it were subjected to:
- (a) The tests specified in 6.4.15, it would restrict the loss of radioactive contents to not more than $10^{-6} A_2$ per hour; and
 - (b) The tests specified in 6.4.17.1, 6.4.17.2 (b), 6.4.17.3, and 6.4.17.4 and the tests in
 - (i) 6.4.17.2 (c), when the package has a mass not greater than 500 kg, an overall density not greater than 1 000 kg/m³ based on the external dimensions, and radioactive contents greater than 1 000 A_2 not as special form radioactive material, or
 - (ii) 6.4.17.2 (a), for all other packages,

it would meet the following requirements:

- retain sufficient shielding to ensure that the radiation level at 1 m from the surface of the package would not exceed 10 mSv/h with the maximum radioactive contents which the package is designed to contain; and
- restrict the accumulated loss of radioactive contents in a period of one week to not more than 10 A_2 for krypton-85 and not more than A_2 for all other radionuclides.

Where mixtures of different radionuclides are present, the provisions of 2.2.7.2.2.4 to 2.2.7.2.2.6 shall apply except that for krypton-85 an effective $A_2(i)$ value equal to 10 A_2 may be used. For case (a) above, the assessment shall take into account the external contamination limits of 4.1.9.1.2.

- 6.4.8.9 A package for radioactive contents with activity greater than $10^5 A_2$ shall be so designed that if it were subjected to the enhanced water immersion test specified in 6.4.18, there would be no rupture of the containment system.
- 6.4.8.10 Compliance with the permitted activity release limits shall depend neither upon filters nor upon a mechanical cooling system.
- 6.4.8.11 A package shall not include a pressure relief system from the containment system which would allow the release of radioactive material to the environment under the conditions of the tests specified in 6.4.15 and 6.4.17.
- 6.4.8.12 A package shall be so designed that if it were at the maximum normal operating pressure and it were subjected to the tests specified in 6.4.15 and 6.4.17, the level of strains in the containment system would not attain values which would adversely affect the package in such a way that it would fail to meet the applicable requirements.
- 6.4.8.13 A package shall not have a maximum normal operating pressure in excess of a gauge pressure of 700 kPa.
- 6.4.8.14 A package containing low dispersible radioactive material shall be so designed that any features added to the low dispersible radioactive material that are not part of it, or any internal components of the packaging shall not adversely affect the performance of the low dispersible radioactive material.
- 6.4.8.15 A package shall be designed for an ambient temperature range from -40 °C to +38 °C.

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6.4.9 Requirements for Type B(M) packages

- 6.4.9.1 Type B(M) packages shall meet the requirements for Type B(U) packages specified in 6.4.8.1, except that for packages to be carried solely within a specified country or solely between specified countries, conditions other than those given in 6.4.7.5, 6.4.8.4, 6.4.8.5, 6.4.8.6, and 6.4.8.9 to 6.4.8.15 above may be assumed with the approval of the competent authorities of these countries. Notwithstanding, the requirements for Type B(U) packages specified in 6.4.8.9 to 6.4.8.15 shall be met as far as practicable.
- 6.4.9.2 Intermittent venting of Type B(M) packages may be permitted during carriage, provided that the operational controls for venting are acceptable to the relevant competent authorities.

6.4.10 Requirements for Type C packages

- 6.4.10.1 Type C packages shall be designed to meet the requirements specified in 6.4.2 and of 6.4.7.2 to 6.4.7.15, except as specified in 6.4.7.14 (a), and of the requirements specified in 6.4.8.2 to 6.4.8.6, 6.4.8.10 to 6.4.8.15, and, in addition, of 6.4.10.2 to 6.4.10.4.
- 6.4.10.2 A package shall be capable of meeting the assessment criteria prescribed for tests in 6.4.8.8 (b) and 6.4.8.12 after burial in an environment defined by a thermal conductivity of $0.33 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ and a temperature of $38 \text{ }^\circ\text{C}$ in the steady state. Initial conditions for the assessment shall assume that any thermal insulation of the package remains intact, the package is at the maximum normal operating pressure and the ambient temperature is $38 \text{ }^\circ\text{C}$.
- 6.4.10.3 A package shall be so designed that, if it were at the maximum normal operating pressure and subjected to:
- (a) The tests specified in 6.4.15, it would restrict the loss of radioactive contents to not more than $10^{-6} A_2$ per hour; and
 - (b) The test sequences in 6.4.20.1, it would meet the following requirements:
 - (i) retain sufficient shielding to ensure that the radiation level at 1 m from the surface of the package would not exceed 10 mSv/h with the maximum radioactive contents which the package is designed to contain; and
 - (ii) restrict the accumulated loss of radioactive contents in a period of 1 week to not more than $10 A_2$ for krypton-85 and not more than A_2 for all other radionuclides.

Where mixtures of different radionuclides are present, the provisions of 2.2.7.2.2.4 to 2.2.7.2.2.6 shall apply except that for krypton-85 an effective $A_2(i)$ value equal to $10 A_2$ may be used. For case (a) above, the assessment shall take into account the external contamination limits of 4.1.9.1.2.

- 6.4.10.4 A package shall be so designed that there will be no rupture of the containment system following performance of the enhanced water immersion test specified in 6.4.18.

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6.4.11 Requirements for packages containing fissile material

6.4.11.1 Fissile material shall be carried so as to:

- (a) Maintain sub-criticality during normal and accident conditions of carriage; in particular, the following contingencies shall be considered:
 - (i) water leaking into or out of packages;
 - (ii) the loss of efficiency of built-in neutron absorbers or moderators;
 - (iii) rearrangement of the contents either within the package or as a result of loss from the package;
 - (iv) reduction of spaces within or between packages;
 - (v) packages becoming immersed in water or buried in snow; and
 - (vi) temperature changes; and
- (b) Meet the requirements:
 - (i) of 6.4.7.2 for packages containing fissile material;
 - (ii) prescribed elsewhere in ADR which pertain to the radioactive properties of the material; and
 - (iii) specified in 6.4.11.3 to 6.4.11.12, unless excepted by 6.4.11.2.

6.4.11.2 Fissile material meeting one of the provisions (a) to (d) of 2.2.7.2.3.5 is excepted from the requirement to be carried in packages that comply with 6.4.11.3 to 6.4.11.12 as well as the other requirements of ADR that apply to fissile material. Only one type of exception is allowed per consignment.

6.4.11.3 Where the chemical or physical form, isotopic composition, mass or concentration, moderation ratio or density, or geometric configuration is not known, the assessments of 6.4.11.7 to 6.4.11.12 shall be performed assuming that each parameter that is not known has the value which gives the maximum neutron multiplication consistent with the known conditions and parameters in these assessments.

6.4.11.4 For irradiated nuclear fuel the assessments of 6.4.11.7 to 6.4.11.12 shall be based on an isotopic composition demonstrated to provide:

- (a) The maximum neutron multiplication during the irradiation history; or
- (b) A conservative estimate of the neutron multiplication for the package assessments. After irradiation but prior to shipment, a measurement shall be performed to confirm the conservatism of the isotopic composition.

6.4.11.5 The package, after being subjected to the tests specified in 6.4.15, shall:

- (a) Preserve the minimum overall outside dimensions of the package to at least 10 cm; and
- (b) Prevent the entry of a 10 cm cube.

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- 6.4.11.6 The package shall be designed for an ambient temperature range of -40°C to $+38^{\circ}\text{C}$ unless the competent authority specifies otherwise in the certificate of approval for the package design.
- 6.4.11.7 For a package in isolation, it shall be assumed that water can leak into or out of all void spaces of the package, including those within the containment system. However, if the design incorporates special features to prevent such leakage of water into or out of certain void spaces, even as a result of error, absence of leakage may be assumed in respect of those void spaces. Special features shall include the following:
- (a) Multiple high standard water barriers, not less than two of which would remain watertight if the package were subject to the tests prescribed in 6.4.11.12 (b), a high degree of quality control in the manufacture, maintenance and repair of packagings and tests to demonstrate the closure of each package before each shipment; or
 - (b) For packages containing uranium hexafluoride only, with maximum enrichment of 5 mass percent uranium-235:
 - (i) packages where, following the tests prescribed in 6.4.11.12 (b), there is no physical contact between the valve and any other component of the packaging other than at its original point of attachment and where, in addition, following the test prescribed in 6.4.17.3 the valves remain leaktight; and
 - (ii) a high degree of quality control in the manufacture, maintenance and repair of packagings coupled with tests to demonstrate closure of each package before each shipment.
- 6.4.11.8 It shall be assumed that the confinement system shall be closely reflected by at least 20 cm of water or such greater reflection as may additionally be provided by the surrounding material of the packaging. However, when it can be demonstrated that the confinement system remains within the packaging following the tests prescribed in 6.4.11.12 (b), close reflection of the package by at least 20 cm of water may be assumed in 6.4.11.9 (c).
- 6.4.11.9 The package shall be subcritical under the conditions of 6.4.11.7 and 6.4.11.8 with the package conditions that result in the maximum neutron multiplication consistent with:
- (a) Routine conditions of carriage (incident free);
 - (b) The tests specified in 6.4.11.11 (b);
 - (c) The tests specified in 6.4.11.12 (b).
- 6.4.11.10 *(Reserved)*
- 6.4.11.11 For normal conditions of carriage a number "N" shall be derived, such that five times "N" packages shall be subcritical for the arrangement and package conditions that provide the maximum neutron multiplication consistent with the following:
- (a) There shall not be anything between the packages, and the package arrangement shall be reflected on all sides by at least 20 cm of water; and
 - (b) The state of the packages shall be their assessed or demonstrated condition if they had been subjected to the tests specified in 6.4.15.

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- 6.4.11.12 For accident conditions of carriage a number "N" shall be derived, such that two times "N" packages shall be subcritical for the arrangement and package conditions that provide the maximum neutron multiplication consistent with the following:
- (a) Hydrogenous moderation between packages, and the package arrangement reflected on all sides by at least 20 cm of water; and
 - (b) The tests specified in 6.4.15 followed by whichever of the following is the more limiting:
 - (i) the tests specified in 6.4.17.2 (b) and, either 6.4.17.2 (c) for packages having a mass not greater than 500 kg and an overall density not greater than 1 000 kg/m³ based on the external dimensions, or 6.4.17.2 (a) for all other packages; followed by the test specified in 6.4.17.3 and completed by the tests specified in 6.4.19.1 to 6.4.19.3; or
 - (ii) the test specified in 6.4.17.4; and
 - (c) Where any part of the fissile material escapes from the containment system following the tests specified in 6.4.11.12 (b), it shall be assumed that fissile material escapes from each package in the array and all of the fissile material shall be arranged in the configuration and moderation that results in the maximum neutron multiplication with close reflection by at least 20 cm of water.
- 6.4.11.13 The criticality safety index (CSI) for packages containing fissile material shall be obtained by dividing the number 50 by the smaller of the two values of N derived in 6.4.11.11 and 6.4.11.12 (i.e. $CSI = 50/N$). The value of the criticality safety index may be zero, provided that an unlimited number of packages is subcritical (i.e. N is effectively equal to infinity in both cases).

6.4.12 Test procedures and demonstration of compliance

- 6.4.12.1 Demonstration of compliance with the performance standards required in 2.2.7.2.3.1.3, 2.2.7.2.3.1.4, 2.2.7.2.3.3.1, 2.2.7.2.3.3.2, 2.2.7.2.3.4.1, 2.2.7.2.3.4.2, and 6.4.2 to 6.4.11 must be accomplished by any of the methods listed below or by a combination thereof:
- (a) Performance of tests with specimens representing LSA-III material, or special form radioactive material, or low dispersible radioactive material or with prototypes or samples of the packaging, where the contents of the specimen or the packaging for the tests shall simulate as closely as practicable the expected range of radioactive contents and the specimen or packaging to be tested shall be prepared as presented for carriage;
 - (b) Reference to previous satisfactory demonstrations of a sufficiently similar nature;
 - (c) Performance of tests with models of appropriate scale incorporating those features which are significant with respect to the item under investigation when engineering experience has shown results of such tests to be suitable for design purposes. When a scale model is used, the need for adjusting certain test parameters, such as penetrator diameter or compressive load, shall be taken into account;
 - (d) Calculation, or reasoned argument, when the calculation procedures and parameters are generally agreed to be reliable or conservative.

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6.4.12.2 After the specimen, prototype or sample has been subjected to the tests, appropriate methods of assessment shall be used to assure that the requirements for the test procedures have been fulfilled in compliance with the performance and acceptance standards prescribed in 2.2.7.2.3.1.3, 2.2.7.2.3.1.4, 2.2.7.2.3.3.1, 2.2.7.2.3.3.2, 2.2.7.2.3.4.1, 2.2.7.2.3.4.2, and 6.4.2 to 6.4.11.

6.4.12.3 All specimens shall be inspected before testing in order to identify and record faults or damage including the following:

- (a) Divergence from the design;
- (b) Defects in manufacture;
- (c) Corrosion or other deterioration; and
- (d) Distortion of features.

The containment system of the package shall be clearly specified. The external features of the specimen shall be clearly identified so that reference may be made simply and clearly to any part of such specimen.

6.4.13 Testing the integrity of the containment system and shielding and evaluating criticality safety

After each of the applicable tests specified in 6.4.15 to 6.4.21:

- (a) Faults and damage shall be identified and recorded;
- (b) It shall be determined whether the integrity of the containment system and shielding has been retained to the extent required in 6.4.2 to 6.4.11 for the package under test; and
- (c) For packages containing fissile material, it shall be determined whether the assumptions and conditions used in the assessments required by 6.4.11.1 to 6.4.11.13 for one or more packages are valid.

6.4.14 Target for drop tests

The target for the drop tests specified in 2.2.7.2.3.3.5 (a), 6.4.15.4, 6.4.16 (a), 6.4.17.2 and 6.4.20.2 shall be a flat, horizontal surface of such a character that any increase in its resistance to displacement or deformation upon impact by the specimen would not significantly increase the damage to the specimen.

6.4.15 Tests for demonstrating ability to withstand normal conditions of carriage

6.4.15.1 The tests are: the water spray test, the free drop test, the stacking test and the penetration test. Specimens of the package shall be subjected to the free drop test, the stacking test and the penetration test, preceded in each case by the water spray test. One specimen may be used for all the tests, provided that the requirements of 6.4.15.2 are fulfilled.

6.4.15.2 The time interval between the conclusion of the water spray test and the succeeding test shall be such that the water has soaked in to the maximum extent, without appreciable drying of the exterior of the specimen. In the absence of any evidence to the contrary, this interval shall be taken to be two hours if the water spray is applied from four directions

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simultaneously. No time interval shall elapse, however, if the water spray is applied from each of the four directions consecutively.

6.4.15.3 Water spray test: The specimen shall be subjected to a water spray test that simulates exposure to rainfall of approximately 5 cm per hour for at least one hour.

6.4.15.4 Free drop test: The specimen shall drop onto the target so as to suffer maximum damage in respect of the safety features to be tested.

- (a) The height of drop measured from the lowest point of the specimen to the upper surface of the target shall be not less than the distance specified in Table 6.4.15.4 for the applicable mass. The target shall be as defined in 6.4.14;
- (b) For rectangular fibreboard or wood packages not exceeding a mass of 50 kg, a separate specimen shall be subjected to a free drop onto each corner from a height of 0.3 m;
- (c) For cylindrical fibreboard packages not exceeding a mass of 100 kg, a separate specimen shall be subjected to a free drop onto each of the quarters of each rim from a height of 0.3 m.

Table 6.4.15.4: Free drop distance for testing packages to normal conditions of carriage

Package mass (kg)	Free drop distance (m)
Package mass < 5 000	1.2
5 000 ≤ Package mass < 10 000	0.9
10 000 ≤ Package mass < 15 000	0.6
15 000 ≤ Package mass	0.3

6.4.15.5 Stacking test: Unless the shape of the packaging effectively prevents stacking, the specimen shall be subjected, for a period of 24 h, to a compressive load equal to the greater of the following:

- (a) A total weight equal to 5 times the maximum weight of the package; and
- (b) The equivalent of 13 kPa multiplied by the vertically projected area of the package.

The load shall be applied uniformly to two opposite sides of the specimen, one of which shall be the base on which the package would typically rest.

6.4.15.6 Penetration test: The specimen shall be placed on a rigid, flat, horizontal surface which will not move significantly while the test is being carried out.

- (a) A bar of 3.2 cm in diameter with a hemispherical end and a mass of 6 kg shall be dropped and directed to fall, with its longitudinal axis vertical, onto the centre of the weakest part of the specimen, so that, if it penetrates sufficiently far, it will hit the containment system. The bar shall not be significantly deformed by the test performance;
- (b) The height of drop of the bar measured from its lower end to the intended point of impact on the upper surface of the specimen shall be 1 m.

6.4.16 Additional tests for Type A packages designed for liquids and gases

A specimen or separate specimens shall be subjected to each of the following tests unless it can be demonstrated that one test is more severe for the specimen in question than the other, in which case one specimen shall be subjected to the more severe test.

- (a) Free drop test: The specimen shall drop onto the target so as to suffer the maximum damage in respect of containment. The height of the drop measured from the lowest part of the specimen to the upper surface of the target shall be 9 m. The target shall be as defined in 6.4.14;
- (b) Penetration test: The specimen shall be subjected to the test specified in 6.4.15.6 except that the height of drop shall be increased to 1.7 m from the 1 m specified in 6.4.15.6 (b).

6.4.17 Tests for demonstrating ability to withstand accident conditions in carriage

6.4.17.1 The specimen shall be subjected to the cumulative effects of the tests specified in 6.4.17.2 and 6.4.17.3, in that order. Following these tests, either this specimen or a separate specimen shall be subjected to the effect(s) of the water immersion test(s) as specified in 6.4.17.4 and, if applicable, 6.4.18.

6.4.17.2 Mechanical test: The mechanical test consists of three different drop tests. Each specimen shall be subjected to the applicable drops as specified in 6.4.8.8 or 6.4.11.12. The order in which the specimen is subjected to the drops shall be such that, on completion of the mechanical test, the specimen shall have suffered such damage as will lead to the maximum damage in the thermal test which follows.

- (a) For drop I, the specimen shall drop onto the target so as to suffer the maximum damage, and the height of the drop measured from the lowest point of the specimen to the upper surface of the target shall be 9 m. The target shall be as defined in 6.4.14;
- (b) For drop II, the specimen shall drop so as to suffer the maximum damage onto a bar rigidly mounted perpendicularly on the target. The height of the drop measured from the intended point of impact of the specimen to the upper surface of the bar shall be 1 m. The bar shall be of solid mild steel of circular section, (15.0 cm ± 0.5 cm) in diameter and 20 cm long unless a longer bar would cause greater damage, in which case a bar of sufficient length to cause maximum damage shall be used. The upper end of the bar shall be flat and horizontal with its edge rounded off to a radius of not more than 6 mm. The target on which the bar is mounted shall be as described in 6.4.14;
- (c) For drop III, the specimen shall be subjected to a dynamic crush test by positioning the specimen on the target so as to suffer maximum damage by the drop of a 500 kg mass from 9 m onto the specimen. The mass shall consist of a solid mild steel plate 1 m by 1 m and shall fall in a horizontal attitude. The height of the drop shall be measured from the underside of the plate to the highest point of the specimen. The target on which the specimen rests shall be as defined in 6.4.14.

6.4.17.3 Thermal test: The specimen shall be in thermal equilibrium under conditions of an ambient temperature of 38 °C, subject to the solar insolation conditions specified in Table 6.4.8.6 and subject to the design maximum rate of internal heat generation within the package from the radioactive contents. Alternatively, any of these parameters are allowed to have different values prior to and during the test, providing due account is taken of them in the subsequent assessment of package response.

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The thermal test shall then consist of:

- (a) Exposure of a specimen for a period of 30 minutes to a thermal environment which provides a heat flux at least equivalent to that of a hydrocarbon fuel/air fire in sufficiently quiescent ambient conditions to give a minimum average flame emissivity coefficient of 0.9 and an average temperature of at least 800 °C, fully engulfing the specimen, with a surface absorptivity coefficient of 0.8 or that value which the package may be demonstrated to possess if exposed to the fire specified, followed by;
- (b) Exposure of the specimen to an ambient temperature of 38 °C, subject to the solar insolation conditions specified in Table 6.4.8.6 and subject to the design maximum rate of internal heat generation within the package by the radioactive contents for a sufficient period to ensure that temperatures in the specimen are everywhere decreasing and/or are approaching initial steady state conditions. Alternatively, any of these parameters are allowed to have different values following cessation of heating, providing due account is taken of them in the subsequent assessment of package response.

During and following the test the specimen shall not be artificially cooled and any combustion of materials of the specimen shall be permitted to proceed naturally.

6.4.17.4 Water immersion test: The specimen shall be immersed under a head of water of at least 15 m for a period of not less than eight hours in the attitude which will lead to maximum damage. For demonstration purposes, an external gauge pressure of at least 150 kPa shall be considered to meet these conditions.

6.4.18 Enhanced water immersion test for Type B(U) and Type B(M) packages containing more than 10⁵ A₂ and Type C packages

Enhanced water immersion test: The specimen shall be immersed under a head of water of at least 200 m for a period of not less than one hour. For demonstration purposes, an external gauge pressure of at least 2 MPa shall be considered to meet these conditions.

6.4.19 Water leakage test for packages containing fissile material

6.4.19.1 Packages for which water in-leakage or out-leakage to the extent which results in greatest reactivity has been assumed for purposes of assessment under 6.4.11.7 to 6.4.11.12 shall be excepted from the test.

6.4.19.2 Before the specimen is subjected to the water leakage test specified below, it shall be subjected to the tests in 6.4.17.2 (b), and either 6.4.17.2 (a) or (c) as required by 6.4.11.12, and the test specified in 6.4.17.3.

6.4.19.3 The specimen shall be immersed under a head of water of at least 0.9 m for a period of not less than 8 hours and in the attitude for which maximum leakage is expected.

6.4.20 Tests for Type C packages

6.4.20.1 Specimens shall be subjected to the effects of each of the following test sequences in the orders specified:

- (a) The tests specified in 6.4.17.2 (a), 6.4.17.2 (c), 6.4.20.2 and 6.4.20.3; and
- (b) The test specified in 6.4.20.4.

Separate specimens are allowed to be used for each of the sequences (a) and (b).

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- 6.4.20.2 Puncture/tearing test: The specimen shall be subjected to the damaging effects of a solid probe made of mild steel. The orientation of the probe to the surface of the specimen shall be as to cause maximum damage at the conclusion of the test sequence specified in 6.4.20.1 (a).
- (a) The specimen, representing a package having a mass less than 250 kg, shall be placed on a target and subjected to a probe having a mass of 250 kg falling from a height of 3 m above the intended impact point. For this test the probe shall be a 20 cm diameter cylindrical bar with the striking end forming a frustum of a right circular cone with the following dimensions: 30 cm height and 2.5 cm in diameter at the top with its edge rounded off to a radius of not more than 6 mm. The target on which the specimen is placed shall be as specified in 6.4.14;
- (b) For packages having a mass of 250 kg or more, the base of the probe shall be placed on a target and the specimen dropped onto the probe. The height of the drop, measured from the point of impact with the specimen to the upper surface of the probe shall be 3 m. For this test the probe shall have the same properties and dimensions as specified in (a) above, except that the length and mass of the probe shall be such as to incur maximum damage to the specimen. The target on which the base of the probe is placed shall be as specified in 6.4.14.
- 6.4.20.3 Enhanced thermal test: The conditions for this test shall be as specified in 6.4.17.3, except that the exposure to the thermal environment shall be for a period of 60 minutes.
- 6.4.20.4 Impact test: The specimen shall be subject to an impact on a target at a velocity of not less than 90 m/s, at such an orientation as to suffer maximum damage. The target shall be as defined in 6.4.14, except that the target surface may be at any orientation as long as the surface is normal to the specimen path.
- 6.4.21 Inspections for packagings designed to contain 0.1 kg or more of uranium hexafluoride**
- 6.4.21.1 Every manufactured packaging and its service and structural equipment shall, either jointly or separately, undergo an inspection initially before being put into service and periodically thereafter. These inspections shall be performed and certified by agreement with the competent authority.
- 6.4.21.2 The initial inspection shall consist of a check of the design characteristics, a structural test, a leakproofness test, a water capacity test and a check of satisfactory operation of the service equipment.
- 6.4.21.3 The periodic inspections shall consist of a visual examination, a structural test, a leakproofness test and a check of satisfactory operation of the service equipment. The maximum intervals for periodic inspections shall be five years. Packagings which have not been inspected within this five-year period shall be examined before carriage in accordance with a programme approved by the competent authority. They shall not be refilled before completion of the full programme for periodic inspections.
- 6.4.21.4 The check of design characteristics shall demonstrate compliance with the design type specifications and the manufacturing programme.
- 6.4.21.5 For the initial structural test, packagings designed to contain 0.1 kg or more of uranium hexafluoride shall be tested hydraulically at an internal pressure of at least 1.38 MPa but, when the test pressure is less than 2.76 MPa, the design shall require multilateral approval. For retesting packagings, any other equivalent non-destructive testing may be applied subject to multilateral approval.

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- 6.4.21.6 The leakproofness test shall be performed in accordance with a procedure which is capable of indicating leakages in the containment system with a sensitivity of 0.1 Pa.l/s (10^{-6} bar.l/s).
- 6.4.21.7 The water capacity of the packagings shall be established with an accuracy of $\pm 0.25\%$ at a reference temperature of 15 °C. The volume shall be stated on the plate described in 6.4.21.8.
- 6.4.21.8 A plate made of non-corroding metal shall be durably attached to every packaging in a readily accessible place. The method of attaching the plate must not impair the strength of the packaging. The following particulars, at least, shall be marked on the plate by stamping or by any other equivalent method:
- Approval number;
 - Manufacturer's serial number;
 - Maximum working pressure (gauge pressure);
 - Test pressure (gauge pressure);
 - Contents: uranium hexafluoride;
 - Capacity in litres;
 - Maximum permissible filling mass of uranium hexafluoride;
 - Tare mass;
 - Date (month, year) of the initial test and the most recent periodic test;
 - Stamp of the expert who performed the tests.

6.4.22 Approvals of package designs and materials

- 6.4.22.1 The approval of designs for packages containing 0.1 kg or more of uranium hexafluoride requires that:
- (a) Each design that meets the requirements of 6.4.6.4 shall require multilateral approval;
 - (b) Each design that meets the requirements of 6.4.6.1 to 6.4.6.3 shall require unilateral approval by the competent authority of the country of origin of the design, unless multilateral approval is otherwise required by ADR.
- 6.4.22.2 Each Type B(U) and Type C package design shall require unilateral approval, except that:
- (a) A package design for fissile material, which is also subject to 6.4.22.4, 6.4.23.7, and 5.1.5.2.1 shall require multilateral approval; and
 - (b) A Type B(U) package design for low dispersible radioactive material shall require multilateral approval.
- 6.4.22.3 Each Type B(M) package design, including those for fissile material which are also subject to the requirements of 6.4.22.4, 6.4.23.7, and 5.1.5.2.1 and those for low dispersible radioactive material, shall require multilateral approval.
- 6.4.22.4 Each package design for fissile material which is not excepted according to 6.4.11.2 from the requirements that apply specifically to packages containing fissile material shall require multilateral approval.
- 6.4.22.5 The design for special form radioactive material shall require unilateral approval. The design for low dispersible radioactive material shall require multilateral approval (see also 6.4.23.8).

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6.4.22.6 Any design that requires unilateral approval originating in a country Contracting Party to ADR shall be approved by the competent authority of this country; if the country where the package has been designed is not a Contracting Party to ADR, carriage is possible on condition that:

- (a) A certificate has been supplied by this country, proving that the package design satisfies the technical requirements of ADR, and that this certificate is countersigned by the competent authority of the first country Contracting Party to ADR reached by the consignment;
- (b) If no certificate and no existing package design approval by a country Contracting Party to ADR has been supplied, the package design is approved by the competent authority of the first country Contracting Party to ADR reached by the consignment.

6.4.22.7 For designs approved under the transitional measures see 1.6.6.

6.4.23 Applications and approvals for radioactive material carriage

6.4.23.1 *(Reserved)*

6.4.23.2 An application for shipment approval shall include:

- (a) The period of time, related to the shipment, for which the approval is sought;
- (b) The actual radioactive contents, the expected modes of carriage, the type of vehicle, and the probable or proposed route; and
- (c) The details of how the precautions and administrative or operational controls, referred to in the package design approval certificates issued under 5.1.5.2.1, are to be put into effect.

6.4.23.3 An application for approval of shipments under special arrangement shall include all the information necessary to satisfy the competent authority that the overall level of safety in carriage is at least equivalent to that which would be provided if all the applicable requirements of ADR had been met.

The application shall also include:

- (a) A statement of the respects in which, and of the reasons why, the shipment cannot be made in full accordance with the applicable requirements of ADR; and
- (b) A statement of any special precautions or special administrative or operational controls which are to be employed during carriage to compensate for the failure to meet the applicable requirements of ADR.

6.4.23.4 An application for approval of Type B(U) or Type C package design shall include:

- (a) A detailed description of the proposed radioactive contents with reference to their physical and chemical states and the nature of the radiation emitted;
- (b) A detailed statement of the design, including complete engineering drawings and schedules of materials and methods of manufacture;
- (c) A statement of the tests which have been done and their results, or evidence based on calculative methods or other evidence that the design is adequate to meet the applicable requirements;

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- (d) The proposed operating and maintenance instructions for the use of the packaging;
- (e) If the package is designed to have a maximum normal operating pressure in excess of 100 kPa gauge, a specification of the materials of manufacture of the containment system, the samples to be taken, and the tests to be made;
- (f) Where the proposed radioactive contents are irradiated fuel, a statement and a justification of any assumption in the safety analysis relating to the characteristics of the fuel and a description of any pre-shipment measurement as required by 6.4.11.4 (b);
- (g) Any special stowage provisions necessary to ensure the safe dissipation of heat from the package considering the various modes of carriage to be used and type of vehicle or container;
- (h) A reproducible illustration, not larger than 21 cm by 30 cm, showing the make-up of the package; and
- (i) A specification of the applicable quality assurance programme as required in 1.7.3.

6.4.23.5 An application for approval of a Type B(M) package design shall include, in addition to the general information required for package approval in 6.4.23.4 for Type B(U) packages:

- (a) A list of the requirements specified in 6.4.7.5, 6.4.8.4, 6.4.8.5, 6.4.8.6 and 6.4.8.9 to 6.4.8.15 with which the package does not conform;
- (b) Any proposed supplementary operational controls to be applied during carriage not regularly provided for in this Annex, but which are necessary to ensure the safety of the package or to compensate for the deficiencies listed in (a) above;
- (c) A statement relative to any restrictions on the mode of carriage and to any special loading, carriage, unloading or handling procedures; and
- (d) The range of ambient conditions (temperature, solar radiation) which are expected to be encountered during carriage and which have been taken into account in the design.

6.4.23.6 The application for approval of designs for packages containing 0.1 kg or more of uranium hexafluoride shall include all information necessary to satisfy the competent authority that the design meets the applicable requirements of 6.4.6.1, and a description of the applicable quality assurance programme as required in 1.7.3.

6.4.23.7 An application for a fissile package approval shall include all information necessary to satisfy the competent authority that the design meets the applicable requirements of 6.4.11.1, and a specification of the applicable quality assurance programme as required by 1.7.3.

6.4.23.8 An application for approval of design for special form radioactive material and design for low dispersible radioactive material shall include:

- (a) A detailed description of the radioactive material or, if a capsule, the contents; particular reference shall be made to both physical and chemical states;
- (b) A detailed statement of the design of any capsule to be used;
- (c) A statement of the tests which have been done and their results, or evidence based on calculative methods to show that the radioactive material is capable of meeting the performance standards, or other evidence that the special form radioactive material or low dispersible radioactive material meets the applicable requirements of ADR;

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- (d) A specification of the applicable quality assurance programme as required in 1.7.3; and
- (e) Any proposed pre-shipment actions for use in the consignment of special form radioactive material or low dispersible radioactive material.

6.4.23.9 Each approval certificate issued by a competent authority shall be assigned an identification mark. The identification mark shall be of the following generalized type:

VRI/Number/Type Code

- (a) Except as provided in 6.4.23.10 (b), VRI represents the international vehicle registration identification code of the country issuing the certificate¹;
- (b) The number shall be assigned by the competent authority, and shall be unique and specific with regard to the particular design or shipment. The shipment approval identification mark shall be clearly related to the design approval identification mark;
- (c) The following type codes shall be used in the order listed to indicate the types of approval certificates issued:

AF	Type A package design for fissile material
B(U)	Type B(U) package design [B(U) F if for fissile material]
B(M)	Type B(M) package design [B(M) F if for fissile material]
C	Type C package design (CF if for fissile material)
IF	Industrial package design for fissile material
S	Special form radioactive material
LD	Low dispersible radioactive material
T	Shipment
X	Special arrangement

In the case of package designs for non-fissile or fissile excepted uranium hexafluoride, where none of the above codes apply, then the following type codes shall be used:

H(U)	Unilateral approval
H(M)	Multilateral approval;

- (d) For package design and special form radioactive material approval certificates, other than those issued under the transitional provisions of 1.6.6.2 and 1.6.6.3, and for low dispersible radioactive material approval certificates, the symbols "-96" shall be added to the type code.

6.4.23.10 These type codes shall be applied as follows:

- (a) Each certificate and each package shall bear the appropriate identification mark, comprising the symbols prescribed in 6.4.23.9 (a), (b), (c) and (d) above, except that, for packages, only the applicable design type codes including, if applicable, the symbols "-96", shall appear following the second stroke, that is, the "T" or "X" shall not appear in the identification marking on the package. Where the design approval and shipment approval are combined, the applicable type codes do not need to be repeated. For example:

A/132/B(M)F-96: A Type B(M) package design approved for fissile material, requiring multilateral approval, for which the competent authority of Austria has assigned the design number 132 (to be

¹ See the Vienna Convention on Road Traffic (1968).

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- marked on both the package and on the package design approval certificate);
- A/132/B(M)F-96T: The shipment approval issued for a package bearing the identification mark elaborated above (to be marked on the certificate only);
- A/137/X: A special arrangement approval issued by the competent authority of Austria, to which the number 137 has been assigned (to be marked on the certificate only);
- A/139/IF-96: An industrial package design for fissile material approved by the competent authority of Austria, to which package design number 139 has been assigned (to be marked on both the package and on the package design approval certificate); and
- A/145/H(U)-96: A package design for fissile excepted uranium hexafluoride approved by the competent authority of Austria, to which package design number 145 has been assigned (to be marked on both the package and on the package design approval certificate);
- (b) Where multilateral approval is effected by validation according to 6.4.23.16, only the identification mark issued by the country of origin of the design or shipment shall be used. Where multilateral approval is effected by issue of certificates by successive countries, each certificate shall bear the appropriate identification mark and the package whose design was so approved shall bear all appropriate identification marks. For example:
- A/132/B(M)F-96
CH/28/B(M)F-96
- would be the identification mark of a package which was originally approved by Austria and was subsequently approved, by separate certificate, by Switzerland. Additional identification marks would be tabulated in a similar manner on the package;
- (c) The revision of a certificate shall be indicated by a parenthetical expression following the identification mark on the certificate. For example, A/132/B(M)F-96 (Rev.2) would indicate revision 2 of the Austrian package design approval certificate; or A/132/B(M)F-96 (Rev.0) would indicate the original issuance of the Austrian package design approval certificate. For original issuances, the parenthetical entry is optional and other words such as "original issuance" may also be used in place of "Rev.0". Certificate revision numbers may only be issued by the country issuing the original approval certificate;
- (d) Additional symbols (as may be necessitated by national regulations) may be added in brackets to the end of the identification mark; for example, A/132/B(M)F-96(SP503);
- (e) It is not necessary to alter the identification mark on the packaging each time that a revision to the design certificate is made. Such re-marking shall be required only in those cases where the revision to the package design certificate involves a change in the letter type codes for the package design following the second stroke.

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- 6.4.23.11 Each approval certificate issued by a competent authority for special form radioactive material or low dispersible radioactive material shall include the following information:
- (a) Type of certificate;
 - (b) The competent authority identification mark;
 - (c) The issue date and an expiry date;
 - (d) List of applicable national and international regulations, including the edition of the IAEA Regulations for the Safe Transport of Radioactive Material under which the special form radioactive material or low dispersible radioactive material is approved;
 - (e) The identification of the special form radioactive material or low dispersible radioactive material;
 - (f) A description of the special form radioactive material or low dispersible radioactive material;
 - (g) Design specifications for the special form radioactive material or low dispersible radioactive material which may include references to drawings;
 - (h) A specification of the radioactive contents which includes the activities involved and which may include the physical and chemical form;
 - (i) A specification of the applicable quality assurance programme as required in 1.7.3;
 - (j) Reference to information provided by the applicant relating to specific actions to be taken prior to shipment;
 - (k) If deemed appropriate by the competent authority, reference to the identity of the applicant;
 - (l) Signature and identification of the certifying official.
- 6.4.23.12 Each approval certificate issued by a competent authority for a special arrangement shall include the following information:
- (a) Type of certificate;
 - (b) The competent authority identification mark;
 - (c) The issue date and an expiry date;
 - (d) Mode(s) of carriage;
 - (e) Any restrictions on the modes of carriage, type of vehicle, container, and any necessary routing instructions;
 - (f) List of applicable national and international regulations, including the edition of the IAEA Regulations for the Safe Transport of Radioactive Material under which the special arrangement is approved;
 - (g) The following statement:
"This certificate does not relieve the consignor from compliance with any requirement of the government of any country through or into which the package will be carried.";

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- (h) References to certificates for alternative radioactive contents, other competent authority validation, or additional technical data or information, as deemed appropriate by the competent authority;
- (i) Description of the packaging by a reference to the drawings or a specification of the design. If deemed appropriate by the competent authority, a reproducible illustration, not larger than 21 cm by 30 cm, showing the make-up of the package shall also be provided, accompanied by a brief description of the packaging, including materials of manufacture, gross mass, general outside dimensions and appearance;
- (j) A specification of the authorized radioactive contents, including any restrictions on the radioactive contents which might not be obvious from the nature of the packaging. This shall include the physical and chemical forms, the activities involved (including those of the various isotopes, if appropriate), amounts in grams (for fissile material or for each fissile nuclide when appropriate), and whether special form radioactive material or low dispersible radioactive material, if applicable;
- (k) Additionally, for packages containing fissile material:
 - (i) a detailed description of the authorized radioactive contents;
 - (ii) the value of the criticality safety index;
 - (iii) reference to the documentation that demonstrates the criticality safety of the contents;
 - (iv) any special features, on the basis of which the absence of water from certain void spaces has been assumed in the criticality assessment;
 - (v) any allowance (based on 6.4.11.4 (b)) for a change in neutron multiplication assumed in the criticality assessment as a result of actual irradiation experience; and
 - (vi) the ambient temperature range for which the special arrangement has been approved;
- (l) A detailed listing of any supplementary operational controls required for preparation, loading, carriage, unloading and handling of the consignment, including any special stowage provisions for the safe dissipation of heat;
- (m) If deemed appropriate by the competent authority, reasons for the special arrangement;
- (n) Description of the compensatory measures to be applied as a result of the shipment being under special arrangement;
- (o) Reference to information provided by the applicant relating to the use of the packaging or specific actions to be taken prior to the shipment;
- (p) A statement regarding the ambient conditions assumed for purposes of design if these are not in accordance with those specified in 6.4.8.5, 6.4.8.6, and 6.4.8.15, as applicable;
- (q) Any emergency arrangements deemed necessary by the competent authority;
- (r) A specification of the applicable quality assurance programme as required in 1.7.3;

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(s) If deemed appropriate by the competent authority, reference to the identity of the applicant and to the identity of the carrier;

(t) Signature and identification of the certifying official.

6.4.23.13 Each approval certificate for a shipment issued by a competent authority shall include the following information:

(a) Type of certificate;

(b) The competent authority identification mark(s);

(c) The issue date and an expiry date;

(d) List of applicable national and international regulations, including the edition of the IAEA Regulations for the Safe Transport of Radioactive Material under which the shipment is approved;

(e) Any restrictions on the modes of carriage, type of vehicle, container, and any necessary routing instructions;

(f) The following statement:

"This certificate does not relieve the consignor from compliance with any requirement of the government of any country through or into which the package will be carried.";

(g) A detailed listing of any supplementary operational controls required for preparation, loading, carriage, unloading and handling of the consignment, including any special stowage provisions for the safe dissipation of heat or maintenance of criticality safety;

(h) Reference to information provided by the applicant relating to specific actions to be taken prior to shipment;

(i) Reference to the applicable design approval certificate(s);

(j) A specification of the actual radioactive contents, including any restrictions on the radioactive contents which might not be obvious from the nature of the packaging. This shall include the physical and chemical forms, the total activities involved (including those of the various isotopes, if appropriate), amounts in grams (for fissile material or for each fissile nuclide when appropriate), and whether special form radioactive material or low dispersible radioactive material, if applicable;

(k) Any emergency arrangements deemed necessary by the competent authority;

(l) A specification of the applicable quality assurance programme as required in 1.7.3;

(m) If deemed appropriate by the competent authority, reference to the identity of the applicant;

(n) Signature and identification of the certifying official.

6.4.23.14 Each approval certificate of the design of a package issued by a competent authority shall include the following information:

(a) Type of certificate;

(b) The competent authority identification mark;

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- (c) The issue date and an expiry date;
- (d) Any restriction on the modes of carriage, if appropriate;
- (e) List of applicable national and international regulations, including the edition of the IAEA Regulations for the Safe Transport of Radioactive Material under which the design is approved;
- (f) The following statement:

"This certificate does not relieve the consignor from compliance with any requirement of the government of any country through or into which the package will be carried.";
- (g) References to certificates for alternative radioactive contents, other competent authority validation, or additional technical data or information, as deemed appropriate by the competent authority;
- (h) A statement authorizing shipment where shipment approval is required under 5.1.5.1.2, if deemed appropriate;
- (i) Identification of the packaging;
- (j) Description of the packaging by a reference to the drawings or specification of the design. If deemed appropriate by the competent authority, a reproducible illustration, not larger than 21 cm by 30 cm, showing the make-up of the package shall also be provided, accompanied by a brief description of the packaging, including materials of manufacture, gross mass, general outside dimensions and appearance;
- (k) Specification of the design by reference to the drawings;
- (l) A specification of the authorized radioactive content, including any restrictions on the radioactive contents which might not be obvious from the nature of the packaging. This shall include the physical and chemical forms, the activities involved (including those of the various isotopes, if appropriate), amounts in grams (for fissile material or for each fissile nuclide when appropriate), and whether special form radioactive material or low dispersible radioactive material, if applicable;
- (m) A description of the containment system;
- (n) Additionally, for packages containing fissile material:
 - (i) a detailed description of the authorized radioactive contents;
 - (ii) a description of the confinement system;
 - (iii) the value of the criticality safety index;
 - (iv) reference to the documentation that demonstrates the criticality safety of the contents;
 - (v) any special features, on the basis of which the absence of water from certain void spaces has been assumed in the criticality assessment;
 - (vi) any allowance (based on 6.4.11.4 (b)) for a change in neutron multiplication assumed in the criticality assessment as a result of actual irradiation experience; and
 - (vii) the ambient temperature range for which the package design has been approved;

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- (o) For Type B(M) packages, a statement specifying those requirements of 6.4.7.5, 6.4.8.4, 6.4.8.5, 6.4.8.6 and 6.4.8.9 to 6.4.8.15 with which the package does not conform and any amplifying information which may be useful to other competent authorities;
 - (p) For packages containing more than 0.1 kg of uranium hexafluoride, a statement specifying those prescriptions of 6.4.6.4 which apply if any and any amplifying information which may be useful to other competent authorities;
 - (q) A detailed listing of any supplementary operational controls required for preparation, loading, carriage, unloading and handling of the consignment, including any special stowage provisions for the safe dissipation of heat;
 - (r) Reference to information provided by the applicant relating to the use of the packaging or specific actions to be taken prior to shipment;
 - (s) A statement regarding the ambient conditions assumed for purposes of design if these are not in accordance with those specified in 6.4.8.5, 6.4.8.6 and 6.4.8.15, as applicable;
 - (t) A specification of the applicable quality assurance programme as required in 1.7.3;
 - (u) Any emergency arrangements deemed necessary by the competent authority;
 - (v) If deemed appropriate by the competent authority, reference to the identity of the applicant;
 - (w) Signature and identification of the certifying official.
- 6.4.23.15 The competent authority shall be informed of the serial number of each packaging manufactured to a design approved by them under 1.6.6.2.1, 1.6.6.2.2, 6.4.22.2, 6.4.22.3 and 6.4.22.4.
- 6.4.23.16 Multilateral approval may be by validation of the original certificate issued by the competent authority of the country of origin of the design or shipment. Such validation may take the form of an endorsement on the original certificate or the issuance of a separate endorsement, annex, supplement, etc., by the competent authority of the country through or into which the shipment is made.

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CHAPTER 6.5**REQUIREMENTS FOR THE CONSTRUCTION AND TESTING
OF INTERMEDIATE BULK CONTAINERS (IBCs)****6.5.1 General requirements****6.5.1.1 Scope**

6.5.1.1.1 The requirements of this Chapter apply to intermediate bulk containers (IBCs) the use of which is expressly authorized for the carriage of certain dangerous goods according to the packing instructions indicated in Column (8) of Table A in Chapter 3.2. Portable tanks and tank-containers which meet the requirements of Chapter 6.7 or 6.8 respectively are not considered to be IBCs. IBCs which meet the requirements of this Chapter are not considered to be containers for the purposes of ADR. The letters IBC only will be used in the rest of the text to refer to intermediate bulk containers.

6.5.1.1.2 Exceptionally, IBCs and their service equipment not conforming strictly to the requirements herein, but having acceptable alternatives, may be considered by the competent authority for approval. In addition, in order to take into account progress in science and technology, the use of alternative arrangements which offer at least equivalent safety in use in respect of compatibility with the properties of the substances carried and equivalent or superior resistance to impact, loading and fire, may be considered by the competent authority.

6.5.1.1.3 The construction, equipment, testing, marking and operation of IBCs shall be subject to acceptance by the competent authority of the country in which the IBCs are approved.

NOTE: Parties performing inspections and tests in other countries, after the IBC has been put into service, need not be accepted by the competent authority of the country in which the IBC has been approved, but the inspections and tests have to be performed according to the rules specified in the IBC's approval.

6.5.1.1.4 Manufacturers and subsequent distributors of IBCs shall provide information regarding procedures to be followed and a description of the types and dimensions of closures (including required gaskets) and any other components needed to ensure that IBCs as presented for carriage are capable of passing the applicable performance tests of this Chapter.

6.5.1.2 *(Reserved)*

6.5.1.3 *(Reserved)*

6.5.1.4 Designatory code system for IBCs

6.5.1.4.1 The code shall consist of two Arabic numerals as specified in (a), followed by a capital letter(s) specified in (b), followed, when specified in an individual section, by an Arabic numeral indicating the category of IBC.

(a) Type	For solids, filled or discharged		For liquids
	by gravity	under pressure of more than 10 kPa (0.1 bar)	
Rigid	11	21	31
Flexible	13	-	-

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(b) Materials

- A. Steel (all types and surface treatments)
- B. Aluminium
- C. Natural wood
- D. Plywood
- F. Reconstituted wood
- G. Fibreboard
- H. Plastics material
- L. Textile
- M. Paper, multiwall
- N. Metal (other than steel or aluminium).

6.5.1.4.2 For composite IBCs, two capital letters in Latin characters shall be used in sequence in the second position of the code. The first shall indicate the material of the inner receptacle of the IBC and the second that of the outer packaging of the IBC.

6.5.1.4.3 The following types and codes of IBC are assigned:

Material	Category	Code	Sub-section
Metal			
A. Steel	for solids, filled or discharged by gravity	11A	6.5.5.1
	for solids, filled or discharged under pressure	21A	
	for liquids	31A	
B. Aluminium	for solids, filled or discharged by gravity	11B	
	for solids, filled or discharged under pressure	21B	
	for liquids	31B	
N. Other than steel or aluminium	for solids, filled or discharged by gravity	11N	
	for solids, filled or discharged under pressure	21N	
	for liquids	31N	
Flexible			
H. Plastics	woven plastics without coating or liner	13H1	6.5.5.2
	woven plastics, coated	13H2	
	woven plastics with liner	13H3	
	woven plastics, coated and with liner	13H4	
	plastics film	13H5	
L. Textile	without coating or liner	13L1	
	coated	13L2	
	with liner	13L3	
	coated and with liner	13L4	
M. Paper	multiwall	13M1	
	multiwall, water resistant	13M2	
H. Rigid plastics	for solids, filled or discharged by gravity, fitted with structural equipment	11H1	6.5.5.3
	for solids, filled or discharged by gravity, freestanding	11H2	
	for solids, filled or discharged under pressure, fitted with structural equipment	21H1	
	for solids, filled or discharged under pressure, freestanding	21H2	
	for liquids, fitted with structural equipment	31H1	
	for liquids, freestanding	31H2	

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Material	Category	Code	Sub-section
HZ. Composite with plastics inner receptacle ^a	for solids, filled or discharged by gravity, with rigid plastics inner receptacle	11HZ1	6.5.5.4
	for solids, filled or discharged by gravity, with flexible plastics inner receptacle	11HZ2	
	for solids, filled or discharged under pressure, with rigid plastics inner receptacle	21HZ1	
	for solids, filled or discharged under pressure, with flexible plastics inner receptacle	21HZ2	
	for liquids, with rigid plastics inner receptacle	31HZ1	
	for liquids, with flexible plastics inner receptacle	31HZ2	
G. Fibreboard	for solids, filled or discharged by gravity	11G	6.5.5.5
Wooden			
C. Natural wood	for solids, filled or discharged by gravity with inner liner	11C	6.5.5.6
D. Plywood	for solids, filled or discharged by gravity, with inner liner	11D	
F. Reconstituted wood	for solids, filled or discharged by gravity, with inner liner	11F	

^a The code shall be completed by replacing the letter Z by a capital letter in accordance with 6.5.1.4.1 (b) to indicate the nature of the material used for the outer casing.

6.5.1.4.4 The letter "W" may follow the IBC code. The letter "W" signifies that the IBC, although of the same type indicated by the code, is manufactured to a specification different from those in 6.5.5 and is considered equivalent in accordance with the requirements in 6.5.1.1.2.

6.5.2 Marking

6.5.2.1 Primary marking

6.5.2.1.1 Each IBC manufactured and intended for use according to ADR shall bear markings which are durable, legible and placed in a location so as to be readily visible. Letters, numerals and symbols shall be at least 12 mm high and shall show:

- (a) The United Nations packaging symbol



;

This symbol shall not be used for any purpose other than certifying that a packaging, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6 or 6.7¹. For metal IBCs on which the marking is stamped or embossed, the capital letters "UN" may be applied instead of the symbol;

- (b) The code designating the type of IBC according to 6.5.1.4;
- (c) A capital letter designating the packing group(s) for which the design type has been approved:
- (i) X for packing groups I, II and III (IBCs for solids only);
 - (ii) Y for packing groups II and III;

¹ This symbol is also used to certify that flexible bulk containers authorized for others modes of transport complies with the requirements in Chapter 6.8 of the UN Model Regulations.






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- (iii) Z for packing group III only;
- (d) The month and year (last two digits) of manufacture;
- (e) The State authorizing the allocation of the mark; indicated by the distinguishing sign for motor vehicles in international traffic²;
- (f) The name or symbol of the manufacturer and other identification of the IBC as specified by the competent authority;
- (g) The stacking test load in kg. For IBCs not designed for stacking, the figure "0" shall be shown;
- (h) The maximum permissible gross mass in kg.

The primary marking required above shall be applied in the sequence of the subparagraphs below. The marking required by 6.5.2.2 and any further marking authorized by a competent authority shall still enable the parts of the mark to be correctly identified.

Each element of the marking applied in accordance with (a) to (h) and with 6.5.2.2 shall be clearly separated, e.g. by a slash or space, so as to be easily identifiable.

6.5.2.1.2 *Examples of markings for various types of IBC in accordance with 6.5.2.1.1 (a) to (h) above:*

	11A/Y/02 99 NL/Mulder 007 5500/1500	For a metal IBC for solids discharged by gravity and made from steel/for packing groups II and III/ manufactured in February 1999/authorized by the Netherlands/manufactured by Mulder and of a design type to which the competent authority has allocated serial number 007/the stacking test load in kg/the maximum permissible gross mass in kg.
	13H3/Z/03 01 F/Meunier 1713 0/1500	For a flexible IBC for solids discharged for instance by gravity and made from woven plastics with a liner/not designed to be stacked.
	31H1/Y/04 99 GB/9099 10800/1200	For a rigid plastics IBC for liquids made from plastics with structural equipment withstanding the stack load.
	31HA1/Y/05 01 D/Muller 1683 10800/1200	For a composite IBC for liquids with a rigid plastics inner receptacle and a steel outer casing.
	11C/X/01 02 S/Aurigny 9876 3000/910	For a wooden IBC for solids with an inner liner authorized for packing groups I, II and III solids.

² *Distinguishing sign for motor vehicles in international traffic prescribed in the Vienna Convention on Road Traffic (1968).*

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6.5.2.2 Additional marking

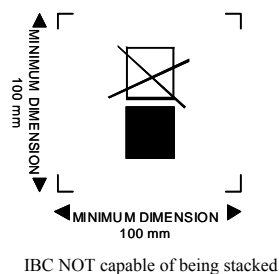
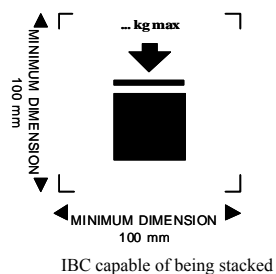
6.5.2.2.1 Each IBC shall bear the markings required in 6.5.2.1 and, in addition, the following information which may appear on a corrosion-resistant plate permanently attached in a place readily accessible for inspection:

Additional marking	Category of IBC				
	Metal	Rigid plastics	Composite	Fibreboard	Wooden
Capacity in litres ^a at 20 °C	X	X	X		
Tare mass in kg ^a	X	X	X	X	X
Test (gauge) pressure, in kPa or bar ^a , if applicable		X	X		
Maximum filling / discharge pressure in kPa or bar ^a , if applicable	X	X	X		
Body material and its minimum thickness in mm	X				
Date of last leakproofness test, if applicable (month and year)	X	X	X		
Date of last inspection (month and year)	X	X	X		
Serial number of the manufacturer	X				
Maximum permitted stacking load ^b	X	X	X	X	X

^a The unit used shall be indicated.

^b See 6.5.2.2.2. This additional marking shall apply to all IBCs manufactured, repaired or remanufactured as from 1 January 2011 (see also 1.6.1.15).

6.5.2.2.2 The maximum permitted stacking load applicable when the IBC is in use shall be displayed on a symbol as follows:



The symbol shall be not less than 100 mm × 100 mm, be durable and clearly visible. The letters and numbers indicating the mass shall be at least 12 mm high.

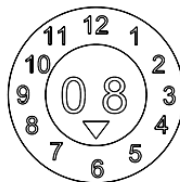
The mass marked above the symbol shall not exceed the load imposed during the design type test (see 6.5.6.6.4) divided by 1.8.

NOTE: The provisions of 6.5.2.2.2 shall apply to all IBCs manufactured, repaired or remanufactured as from 1 January 2011 (see also 1.6.1.15).

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- 6.5.2.2.3 In addition to the markings required in 6.5.2.1, flexible IBCs may bear a pictogram indicating recommended lifting methods.
- 6.5.2.2.4 The inner receptacle of composite IBCs manufactured after 1 January 2011 shall bear the markings indicated in 6.5.2.1.1 (b), (c), (d) where this date is that of the manufacture of the plastics inner receptacle, (e) and (f). The UN packaging symbol shall not be applied. The marking shall be applied in the sequence shown in 6.5.2.1.1. It shall be durable, legible and placed in a location so as to be readily visible when the inner receptacle is placed in the outer casing.

The date of the manufacture of the plastics inner receptacle may alternatively be marked on the inner receptacle adjacent to the remainder of the marking. An example of an appropriate marking method is:



- 6.5.2.2.5 Where a composite IBCs is designed in such a manner that the outer casing is intended to be dismantled for carriage when empty (such as for return of the IBC for reuse to the original consignor), each of the parts intended to be detached when so dismantled shall be marked with the month and year of manufacture and the name or symbol of the manufacturer and other identification of the IBC as specified by the competent authority (see 6.5.2.1.1 (f)).

6.5.2.3 *Conformity to design type*

The marking indicates that IBCs correspond to a successfully tested design type and that the requirements referred to in the certificate have been met.

6.5.2.4 *Marking of remanufactured composite IBCs (31HZ1)*

The marking specified in 6.5.2.1.1 and 6.5.2.2 shall be removed from the original IBC or made permanently illegible and new markings shall be applied to an IBC remanufactured in accordance with ADR.

6.5.3 **Construction requirements**

6.5.3.1 *General requirements*

- 6.5.3.1.1 IBCs shall be resistant to or adequately protected from deterioration due to the external environment.
- 6.5.3.1.2 IBCs shall be so constructed and closed that none of the contents can escape under normal conditions of carriage including the effect of vibration, or by changes in temperature, humidity or pressure.
- 6.5.3.1.3 IBCs and their closures shall be constructed of materials compatible with their contents, or be protected internally, so that they are not liable:
- To be attacked by the contents so as to make their use dangerous;
 - To cause the contents to react or decompose, or form harmful or dangerous compounds with the IBCs.

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- 6.5.3.1.4 Gaskets, where used, shall be made of materials not subject to attack by the contents of the IBCs.
- 6.5.3.1.5 All service equipment shall be so positioned or protected as to minimize the risk of escape of the contents owing to damage during handling and carriage.
- 6.5.3.1.6 IBCs, their attachments and their service and structural equipment shall be designed to withstand, without loss of contents, the internal pressure of the contents and the stresses of normal handling and carriage. IBCs intended for stacking shall be designed for stacking. Any lifting or securing features of IBCs shall be of sufficient strength to withstand the normal conditions of handling and carriage without gross distortion or failure and shall be so positioned that no undue stress is caused in any part of the IBC.
- 6.5.3.1.7 Where an IBC consists of a body within a framework it shall be so constructed that:
- (a) The body does not chafe or rub against the framework so as to cause material damage to the body;
 - (b) The body is retained within the framework at all times;
 - (c) The items of equipment are fixed in such a way that they cannot be damaged if the connections between body and frame allow relative expansion or movement.
- 6.5.3.1.8 Where a bottom discharge valve is fitted, it shall be capable of being made secure in the closed position and the whole discharge system shall be suitably protected from damage. Valves having lever closures shall be able to be secured against accidental opening and the open or closed position shall be readily apparent. For IBCs containing liquids, a secondary means of sealing the discharge aperture shall also be provided, e.g. a blank flange or equivalent device.

6.5.4 Testing, certification and inspection

- 6.5.4.1 *Quality assurance:* the IBCs shall be manufactured, remanufactured, repaired and tested under a quality assurance programme which satisfies the competent authority, in order to ensure that each manufactured, remanufactured or repaired IBC meets the requirements of this Chapter.

NOTE: ISO 16106:2006 "Packaging – Transport packages for dangerous goods – Dangerous goods packagings, intermediate bulk containers (IBCs) and large packagings – Guidelines for the application of ISO 9001" provides acceptable guidance on procedures which may be followed.

- 6.5.4.2 *Test requirements:* IBCs shall be subject to design type tests and, if applicable, to initial and periodic inspections and tests in accordance with 6.5.4.4.
- 6.5.4.3 *Certification:* in respect of each design type of IBC a certificate and mark (as in 6.5.2) shall be issued attesting that the design type, including its equipment, meets the test requirements.

6.5.4.4 Inspection and testing

NOTE: See also 6.5.4.5 for tests and inspections on repaired IBCs.

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6.5.4.4.1 Every metal, rigid plastics and composite IBC shall be inspected to the satisfaction of the competent authority:

- (a) Before it is put into service (including after remanufactured), and thereafter at intervals not exceeding five years, with regard to:
 - (i) conformity to design type including marking;
 - (ii) internal and external condition;
 - (iii) proper functioning of service equipment.

Thermal insulation, if any, need be removed only to the extent necessary for a proper examination of the body of the IBC.

(b) At intervals of not more than two and a half years, with regard to:

- (i) external condition;
- (ii) proper functioning of service equipment.

Thermal insulation, if any, need be removed only to the extent necessary for a proper examination of the body of the IBC.

Each IBC shall correspond in all respects to its design type.

6.5.4.4.2 Every metal, rigid plastics and composite IBC for liquids, or for solids which are filled or discharged under pressure, shall undergo a suitable leakproofness test at least equally effective as the test prescribed in 6.5.6.7.3 and be capable of meeting the test level indicated in 6.5.6.7.3:

- (a) Before it is first used for carriage;
- (b) At intervals of not more than two and a half years.

For this test the IBC shall be fitted with the primary bottom closure. The inner receptacle of a composite IBC may be tested without the outer casing, provided that the test results are not affected.

6.5.4.4.3 A report of each inspection and test shall be kept by the owner of the IBC at least until the next inspection or test. The report shall include the results of the inspection and test and shall identify the party performing the inspection and test (see also the marking requirements in 6.5.2.2.1).

6.5.4.4.4 The competent authority may at any time require proof, by tests in accordance with this Chapter, that IBCs meet the requirements of the design type tests.

6.5.4.5 *Repaired IBCs*

6.5.4.5.1 When an IBC is impaired as a result of impact (e.g. accident) or any other cause, it shall be repaired or otherwise maintained (see definition of "*Routine maintenance of IBCs*" in 1.2.1), so as to conform to the design type. The bodies of rigid plastics IBCs and the inner receptacles of composite IBCs that are impaired shall be replaced.

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- 6.5.4.5.2 In addition to any other testing and inspection requirements in ADR, an IBC shall be subjected to the full testing and inspection requirements set out in 6.5.4.4, and the required reports shall be prepared, whenever it is repaired.
- 6.5.4.5.3 The Party performing the tests and inspections after the repair shall durably mark the IBC near the manufacturer's UN design type marking to show:
- (a) The State in which the tests and inspections were carried out;
 - (b) The name or authorized symbol of the party performing the tests and inspections; and
 - (c) The date (month, year) of the tests and inspections.
- 6.5.4.5.4 Test and inspections performed in accordance with 6.5.4.5.2 may be considered to satisfy the requirements for the two and a half and five year periodic tests and inspections.

6.5.5 Specific requirements for IBCs

6.5.5.1 Specific requirements for metal IBCs

- 6.5.5.1.1 These requirements apply to metal IBCs intended for the carriage of solids and liquids. There are three categories of metal IBCs:
- (a) Those for solids which are filled or discharged by gravity (11A, 11B, 11N);
 - (b) Those for solids which are filled or discharged at a gauge pressure greater than 10 kPa (0.1 bar) (21A, 21B, 21N); and
 - (c) Those for liquids (31A, 31B, 31N).
- 6.5.5.1.2 Bodies shall be made of suitable ductile metal in which the weldability has been fully demonstrated. Welds shall be skilfully made and afford complete safety. Low-temperature performance of the material shall be taken into account when appropriate.
- 6.5.5.1.3 Care shall be taken to avoid damage by galvanic action due to the juxtaposition of dissimilar metals.
- 6.5.5.1.4 Aluminium IBCs intended for the carriage of flammable liquids shall have no movable parts, such as covers, closures, etc., made of unprotected steel liable to rust, which might cause a dangerous reaction by coming into frictional or percussive contact with the aluminium.
- 6.5.5.1.5 Metal IBCs shall be made of metals which meet the following requirements:
- (a) for steel the elongation at fracture, in %, shall not be less than $\frac{10000}{R_m}$ with an absolute minimum of 20%;
where R_m = guaranteed minimum tensile strength of the steel to be used, in N/mm²;
 - (b) for aluminium and its alloy the elongation at fracture, in %, shall not be less than $\frac{10000}{6R_m}$ with an absolute minimum of 8%.
- Specimens used to determine the elongation at fracture shall be taken transversely to the direction of rolling and be so secured that:

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$$L_o = 5d \quad \text{or}$$

$$L_o = 5.65\sqrt{A}$$

where: L_o = gauge length of the specimen before the test

d = diameter

A = cross-sectional area of test specimen.

6.5.5.1.6 Minimum wall thickness:

- (a) for a reference steel having a product of $R_m \times A_o = 10\,000$, the wall thickness shall not be less than:

Capacity (C) in litres	Wall thickness (T) in mm			
	Types 11A, 11B, 11N		Types 21A, 21B, 21N, 31A, 31B, 31N	
	Unprotected	Protected	Unprotected	Protected
$C \leq 1000$	2.0	1.5	2.5	2.0
$1000 < C \leq 2000$	$T = C/2000 + 1.5$	$T = C/2000 + 1.0$	$T = C/2000 + 2.0$	$T = C/2000 + 1.5$
$2000 < C \leq 3000$	$T = C/2000 + 1.5$	$T = C/2000 + 1.0$	$T = C/1000 + 1.0$	$T = C/2000 + 1.5$

where: A_o = minimum elongation (as a percentage) of the reference steel to be used on fracture under tensile stress (see 6.5.5.1.5);

- (b) for metals other than the reference steel described in (a), the minimum wall thickness is given by the following equivalence formula:

$$e_1 = \frac{21.4 \times e_0}{\sqrt[3]{R_{m1} \times A_1}}$$

where: e_1 = required equivalent wall thickness of the metal to be used (in mm);

e_0 = required minimum wall thickness for the reference steel (in mm);

R_{m1} = guaranteed minimum tensile strength of the metal to be used (in N/mm^2) (see (c));

A_1 = minimum elongation (as a percentage) of the metal to be used on fracture under tensile stress (see 6.5.5.1.5).

However, in no case shall the wall thickness be less than 1.5 mm.

- (c) For purposes of the calculation described in (b), the guaranteed minimum tensile strength of the metal to be used (R_{m1}) shall be the minimum value according to national or international material standards. However, for austenitic steels, the specified value for R_m according to the material standards may be increased by up to 15% when a greater value is attested in the material inspection certificate. When no material standard exists for the material in question, the value of R_m shall be the minimum value attested in the material inspection certificate.

- 6.5.5.1.7 Pressure-relief requirements: IBCs for liquids shall be capable of releasing a sufficient amount of vapour in the event of fire engulfment to ensure that no rupture of the body will occur. This can be achieved by conventional pressure relief devices or by other constructional means. The start-to-discharge pressure shall not be higher than 65 kPa

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(0.65 bar) and no lower than the total gauge pressure experienced in the IBC (i.e. the vapour pressure of the filling substance plus the partial pressure of the air or other inert gases, minus 100 kPa (1 bar)) at 55 °C, determined on the basis of a maximum degree of filling as defined in 4.1.1.4. The required relief devices shall be fitted in the vapour space.

6.5.5.2 *Specific requirements for flexible IBCs*

6.5.5.2.1 These requirements apply to flexible IBCs of the following types:

13H1	woven plastics without coating or liner
13H2	woven plastics, coated
13H3	woven plastics with liner
13H4	woven plastics, coated and with liner
13H5	plastics film
13L1	textile without coating or liner
13L2	textile, coated
13L3	textile with liner
13L4	textile, coated and with liner
13M1	paper, multiwall
13M2	paper, multiwall, water resistant

Flexible IBCs are intended for the carriage of solids only.

6.5.5.2.2 Bodies shall be manufactured from suitable materials. The strength of the material and the construction of the flexible IBC shall be appropriate to its capacity and its intended use.

6.5.5.2.3 All materials used in the construction of flexible IBCs of types 13M1 and 13M2 shall, after complete immersion in water for not less than 24 hours, retain at least 85% of the tensile strength as measured originally on the material conditioned to equilibrium at 67% relative humidity or less.

6.5.5.2.4 Seams shall be formed by stitching, heat sealing, gluing or any equivalent method. All stitched seam-ends shall be secured.

6.5.5.2.5 Flexible IBCs shall provide adequate resistance to ageing and to degradation caused by ultraviolet radiation or the climatic conditions, or by the substance contained, thereby rendering them appropriate to their intended use.

6.5.5.2.6 For flexible plastics IBCs where protection against ultraviolet radiation is required, it shall be provided by the addition of carbon black or other suitable pigments or inhibitors. These additives shall be compatible with the contents and remain effective throughout the life of the body. Where use is made of carbon black, pigments or inhibitors other than those used in the manufacture of the tested design type, re-testing may be waived if changes in the carbon black content, the pigment content or the inhibitor content do not adversely affect the physical properties of the material of construction.

6.5.5.2.7 Additives may be incorporated into the material of the body to improve the resistance to ageing or to serve other purposes, provided that these do not adversely affect the physical or chemical properties of the material.

6.5.5.2.8 No material recovered from used receptacles shall be used in the manufacture of IBC bodies. Production residues or scrap from the same manufacturing process may, however, be used. Component parts such as fittings and pallet bases may also be used provided such components have not in any way been damaged in previous use.

6.5.5.2.9 When filled, the ratio of height to width shall be not more than 2:1.

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6.5.5.2.10 The liner shall be made of a suitable material. The strength of the material used and the construction of the liner shall be appropriate to the capacity of the IBC and the intended use. Joins and closures shall be siftproof and capable of withstanding pressures and impacts liable to occur under normal conditions of handling and carriage.

6.5.5.3 *Specific requirements for rigid plastics IBCs*

6.5.5.3.1 These requirements apply to rigid plastics IBCs for the carriage of solids or liquids. Rigid plastics IBCs are of the following types:

- 11H1 fitted with structural equipment designed to withstand the whole load when IBCs are stacked, for solids which are filled or discharged by gravity
- 11H2 freestanding, for solids which are filled or discharged by gravity
- 21H1 fitted with structural equipment designed to withstand the whole load when IBCs are stacked, for solids which are filled or discharged under pressure
- 21H2 freestanding, for solids which are filled or discharged under pressure
- 31H1 fitted with structural equipment designed to withstand the whole load when IBCs are stacked, for liquids
- 31H2 freestanding, for liquids.

6.5.5.3.2 The body shall be manufactured from suitable plastics material of known specifications and be of adequate strength in relation to its capacity and its intended use. The material shall be adequately resistant to ageing and to degradation caused by the substance contained or, where relevant, by ultraviolet radiation. Low temperature performance shall be taken into account when appropriate. Any permeation of the substance contained shall not constitute a danger under normal conditions of carriage.

6.5.5.3.3 Where protection against ultraviolet radiation is required, it shall be provided by the addition of carbon black or other suitable pigments or inhibitors. These additives shall be compatible with the contents and remain effective throughout the life of the body. Where use is made of carbon black, pigments or inhibitors other than those used in the manufacture of the tested design type, re-testing may be waived if changes in the carbon black content, the pigment content or the inhibitor content do not adversely affect the physical properties of the material of construction.

6.5.5.3.4 Additives may be incorporated in the material of the body to improve the resistance to ageing or to serve other purposes, provided that these do not adversely affect the physical or chemical properties of the material.

6.5.5.3.5 No used material other than production residues or regrind from the same manufacturing process may be used in the manufacture of rigid plastics IBCs.

6.5.5.4 *Specific requirements for composite IBCs with plastics inner receptacles*

6.5.5.4.1 These requirements apply to composite IBCs for the carriage of solids and liquids of the following types:

- 11HZ1 Composite IBCs with a rigid plastics inner receptacle, for solids filled or discharged by gravity
- 11HZ2 Composite IBCs with a flexible plastics inner receptacle, for solids filled or discharged by gravity
- 21HZ1 Composite IBCs with a rigid plastics inner receptacle, for solids filled or discharged under pressure
- 21HZ2 Composite IBCs with a flexible plastics inner receptacle, for solids filled or discharged under pressure
- 31HZ1 Composite IBCs with a rigid plastics inner receptacle, for liquids
- 31HZ2 Composite IBCs with a flexible plastics inner receptacle, for liquids.

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This code shall be completed by replacing the letter Z by a capital letter in accordance with 6.5.1.4.1 (b) to indicate the nature of the material used for the outer casing.

- 6.5.5.4.2 The inner receptacle is not intended to perform a containment function without its outer casing. A "rigid" inner receptacle is a receptacle which retains its general shape when empty without closures in place and without benefit of the outer casing. Any inner receptacle that is not "rigid" is considered to be "flexible".
- 6.5.5.4.3 The outer casing normally consists of rigid material formed so as to protect the inner receptacle from physical damage during handling and carriage but is not intended to perform the containment function. It includes the base pallet where appropriate.
- 6.5.5.4.4 A composite IBC with a fully enclosing outer casing shall be so designed that the integrity of the inner receptacle may be readily assessed following the leakproofness and hydraulic pressure tests.
- 6.5.5.4.5 IBCs of type 31HZ2 shall be limited to a capacity of not more than 1 250 litres.
- 6.5.5.4.6 The inner receptacle shall be manufactured from suitable plastics material of known specifications and be of adequate strength in relation to its capacity and its intended use. The material shall be adequately resistant to ageing and to degradation caused by the substance contained or, where relevant, by ultraviolet radiation. Low temperature performance shall be taken into account when appropriate. Any permeation of the substance contained shall not constitute a danger under normal conditions of carriage.
- 6.5.5.4.7 Where protection against ultraviolet radiation is required, it shall be provided by the addition of carbon black or other suitable pigments or inhibitors. These additives shall be compatible with the contents and remain effective throughout the life of the inner receptacle. Where use is made of carbon black, pigments or inhibitors, other than those used in the manufacture of the tested design type, retesting may be waived if changes in carbon black content, the pigment content or the inhibitor content do not adversely affect the physical properties of the material of construction.
- 6.5.5.4.8 Additives may be incorporated in the material of the inner receptacle to improve the resistance to ageing or to serve other purposes, provided that these do not adversely affect the physical or chemical properties of the material.
- 6.5.5.4.9 No used material other than production residues or regrind from the same manufacturing process may be used in the manufacture of inner receptacles.
- 6.5.5.4.10 The inner receptacle of IBCs type 31HZ2 shall consist of at least three plies of film.
- 6.5.5.4.11 The strength of the material and the construction of the outer casing shall be appropriate to the capacity of the composite IBC and its intended use.
- 6.5.5.4.12 The outer casing shall be free of any projection that might damage the inner receptacle.
- 6.5.5.4.13 Metal outer casings shall be constructed of a suitable metal of adequate thickness.
- 6.5.5.4.14 Outer casings of natural wood shall be of well seasoned wood, commercially dry and free from defects that would materially lessen the strength of any part of the casing. The tops and bottoms may be made of water resistant reconstituted wood such as hardboard, particle board or other suitable type.
- 6.5.5.4.15 Outer casings of plywood shall be made of well seasoned rotary cut, sliced or sawn veneer, commercially dry and free from defects that would materially lessen the strength of the casing. All adjacent plies shall be glued with water resistant adhesive. Other suitable

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materials may be used with plywood for the construction of casings. Casings shall be firmly nailed or secured to corner posts or ends or be assembled by equally suitable devices.

- 6.5.5.4.16 The walls of outer casings of reconstituted wood shall be made of water resistant reconstituted wood such as hardboard, particle board or other suitable type. Other parts of the casings may be made of other suitable material.
- 6.5.5.4.17 For fibreboard outer casings, strong and good quality solid or double-faced corrugated fibreboard (single or multiwall) shall be used appropriate to the capacity of the casing and to its intended use. The water resistance of the outer surface shall be such that the increase in mass, as determined in a test carried out over 30 minutes by the Cobb method of determining water absorption, is not greater than 155 g/m² (see ISO 535:1991). It shall have proper bending qualities. Fibreboard shall be cut, creased without scoring, and slotted so as to permit assembly without cracking, surface breaks or undue bending. The fluting of corrugated fibreboard shall be firmly glued to the facings.
- 6.5.5.4.18 The ends of fibreboard outer casings may have a wooden frame or be entirely of wood. Reinforcements of wooden battens may be used.
- 6.5.5.4.19 Manufacturing joins in the fibreboard outer casing shall be taped, lapped and glued, or lapped and stitched with metal staples. Lapped joins shall have an appropriate overlap. Where closing is effected by gluing or taping, a water resistant adhesive shall be used.
- 6.5.5.4.20 Where the outer casing is of plastics material, the relevant requirements of 6.5.5.4.6 to 6.5.5.4.9 apply, on the understanding that, in this case, the requirements applicable to the inner receptacle are applicable to the outer casing of composite IBCs.
- 6.5.5.4.21 The outer casing of an IBC type 31HZ2 shall enclose the inner receptacle on all sides.
- 6.5.5.4.22 Any integral pallet base forming part of an IBC or any detachable pallet shall be suitable for mechanical handling with the IBC filled to its maximum permissible gross mass.
- 6.5.5.4.23 The pallet or integral base shall be designed so as to avoid any protrusion of the base of the IBC that might be liable to damage in handling.
- 6.5.5.4.24 The outer casing shall be secured to any detachable pallet to ensure stability in handling and carriage. Where a detachable pallet is used, its top surface shall be free from sharp protrusions that might damage the IBC.
- 6.5.5.4.25 Strengthening devices such as timber supports to increase stacking performance may be used but shall be external to the inner receptacle.
- 6.5.5.4.26 Where IBCs are intended for stacking, the bearing surface shall be such as to distribute the load in a safe manner. Such IBCs shall be designed so that the load is not supported by the inner receptacle.

6.5.5.5 *Specific requirements for fibreboard IBCs*

- 6.5.5.5.1 These requirements apply to fibreboard IBCs for the carriage of solids which are filled or discharged by gravity. Fibreboard IBCs are of the following type: 11G.
- 6.5.5.5.2 Fibreboard IBCs shall not incorporate top lifting devices.
- 6.5.5.5.3 The body shall be made of strong and good quality solid or double-faced corrugated fibreboard (single or multiwall), appropriate to the capacity of the IBC and to its intended use. The water resistance of the outer surface shall be such that the increase in mass, as determined in a test carried out over a period of 30 minutes by the Cobb method of

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determining water absorption, is not greater than 155 g/m² (see ISO 535:1991). It shall have proper bending qualities. Fibreboard shall be cut, creased without scoring, and slotted so as to permit assembly without cracking, surface breaks or undue bending. The fluting or corrugated fibreboard shall be firmly glued to the facings.

- 6.5.5.5.4 The walls, including top and bottom, shall have a minimum puncture resistance of 15 J measured according to ISO 3036:1975.
- 6.5.5.5.5 Manufacturing joins in the body of IBCs shall be made with an appropriate overlap and shall be taped, glued, stitched with metal staples or fastened by other means at least equally effective. Where joins are effected by gluing or taping, a water resistant adhesive shall be used. Metal staples shall pass completely through all pieces to be fastened and be formed or protected so that any inner liner cannot be abraded or punctured by them.
- 6.5.5.5.6 The liner shall be made of a suitable material. The strength of the material used and the construction of the liner shall be appropriate to the capacity of the IBC and the intended use. Joins and closures shall be siftproof and capable of withstanding pressures and impacts liable to occur under normal conditions of handling and carriage.
- 6.5.5.5.7 Any integral pallet base forming part of an IBC or any detachable pallet shall be suitable for mechanical handling with the IBC filled to its maximum permissible gross mass.
- 6.5.5.5.8 The pallet or integral base shall be designed so as to avoid any protrusion of the base of the IBC that might be liable to damage in handling.
- 6.5.5.5.9 The body shall be secured to any detachable pallet to ensure stability in handling and carriage. Where a detachable pallet is used, its top surface shall be free from sharp protrusions that might damage the IBC.
- 6.5.5.5.10 Strengthening devices such as timber supports to increase stacking performance may be used but shall be external to the liner.
- 6.5.5.5.11 Where IBCs are intended for stacking, the bearing surface shall be such as to distribute the load in a safe manner.

6.5.5.6 *Specific requirements for wooden IBCs*

- 6.5.5.6.1 These requirements apply to wooden IBCs for the carriage of solids which are filled or discharged by gravity. Wooden IBCs are of the following types:

11C	Natural wood with inner liner
11D	Plywood with inner liner
11F	Reconstituted wood with inner liner.

- 6.5.5.6.2 Wooden IBCs shall not incorporate top lifting devices.
- 6.5.5.6.3 The strength of the materials used and the method of construction of the body shall be appropriate to the capacity and intended use of the IBC.
- 6.5.5.6.4 Natural wood shall be well seasoned, commercially dry and free from defects that would materially lessen the strength of any part of the IBC. Each part of the IBC shall consist of one piece or be equivalent thereto. Parts are considered equivalent to one piece when a suitable method of glued assembly is used (as for instance Lindermann joint, tongue and groove joint, ship lap or rabbet joint); or butt joint with at least two corrugated metal fasteners at each joint, or when other methods at least equally effective are used.

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- 6.5.5.6.5 Bodies of plywood shall be at least 3-ply. They shall be made of well seasoned rotary cut, sliced or sawn veneer, commercially dry and free from defects that would materially lessen the strength of the body. All adjacent plies shall be glued with water resistant adhesive. Other suitable materials may be used with plywood for the construction of the body.
- 6.5.5.6.6 Bodies of reconstituted wood shall be made of water resistant reconstituted wood such as hardboard, particle board or other suitable type.
- 6.5.5.6.7 IBCs shall be firmly nailed or secured to corner posts or ends or be assembled by equally suitable devices.
- 6.5.5.6.8 The liner shall be made of a suitable material. The strength of the material used and the construction of the liner shall be appropriate to the capacity of the IBC and the intended use. Joins and closures shall be siftproof and capable of withstanding pressures and impacts liable to occur under normal conditions of handling and carriage.
- 6.5.5.6.9 Any integral pallet base forming part of an IBC or any detachable pallet shall be suitable for mechanical handling with the IBC filled to its maximum permissible gross mass.
- 6.5.5.6.10 The pallet or integral base shall be designed so as to avoid any protrusion of the base of the IBC that might be liable to damage in handling.
- 6.5.5.6.11 The body shall be secured to any detachable pallet to ensure stability in handling and carriage. Where a detachable pallet is used, its top surface shall be free from sharp protrusions that might damage the IBC.
- 6.5.5.6.12 Strengthening devices such as timber supports to increase stacking performance may be used but shall be external to the liner.
- 6.5.5.6.13 Where IBCs are intended for stacking, the bearing surface shall be such as to distribute the load in a safe manner.

6.5.6 Test requirements for IBCs

6.5.6.1 *Performance and frequency of tests*

- 6.5.6.1.1 Each IBC design type shall successfully pass the tests prescribed in this Chapter before being used and being approved by the competent authority allowing the allocation of the mark. An IBC design type is defined by the design, size, material and thickness, manner of construction and means of filling and discharging but may include various surface treatments. It also includes IBCs which differ from the design type only in their lesser external dimensions.
- 6.5.6.1.2 Tests shall be carried out on IBCs prepared for carriage. IBCs shall be filled as indicated in the relevant sections. The substances to be carried in the IBCs may be replaced by other substances except where this would invalidate the results of the tests. For solids, when another substance is used it shall have the same physical characteristics (mass, grain size, etc.) as the substance to be carried. It is permissible to use additives, such as bags of lead shot, to achieve the requisite total package mass, so long as they are placed so that the test results are not affected.

6.5.6.2 *Design type tests*

- 6.5.6.2.1 One IBC of each design type, size, wall thickness and manner of construction shall be submitted to the tests listed in the order shown in 6.5.6.3.7 and as set out in 6.5.6.4 to 6.5.6.13. These design type tests shall be carried out as required by the competent authority.

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- 6.5.6.2.2 To prove sufficient chemical compatibility with the contained goods or standard liquids in accordance with 6.5.6.3.3 or 6.5.6.3.5 for rigid plastics IBCs of type 31H2 and for composite IBCs of types 31HH1 and 31HH2, a second IBC can be used when the IBCs are designed to be stacked. In such case both IBCs shall be subjected to a preliminary storage.
- 6.5.6.2.3 The competent authority may permit the selective testing of IBCs which differ only in minor respects from a tested type, e.g. with small reductions in external dimensions.
- 6.5.6.2.4 If detachable pallets are used in the tests, the test report issued in accordance with 6.5.6.14 shall include a technical description of the pallets used.

6.5.6.3 *Preparation of IBCs for testing*

- 6.5.6.3.1 Paper and fibreboard IBCs and composite IBCs with fibreboard outer casings shall be conditioned for at least 24 hours in an atmosphere having a controlled temperature and relative humidity (r.h.). There are three options, one of which shall be chosen. The preferred atmosphere is 23 ± 2 °C and $50\% \pm 2\%$ r.h. The two other options are 20 ± 2 °C and $65\% \pm 2\%$ r.h.; or 27 ± 2 °C and $65\% \pm 2\%$ r.h.

NOTE: Average values shall fall within these limits. Short-term fluctuations and measurement limitations may cause individual measurements to vary by up to $\pm 5\%$ relative humidity without significant impairment of test reproducibility.

- 6.5.6.3.2 Additional steps shall be taken to ascertain that the plastics material used in the manufacture of rigid plastics IBCs (types 31H1 and 31H2) and composite IBCs (types 31HZ1 and 31HZ2) complies respectively with the requirements in 6.5.5.3.2 to 6.5.5.3.4 and 6.5.5.4.6 to 6.5.5.4.9.
- 6.5.6.3.3 To prove there is sufficient chemical compatibility with the contained goods, the sample IBC shall be subjected to a preliminary storage for six months, during which the samples shall remain filled with the substances they are intended to contain or with substances which are known to have at least as severe a stress-cracking, weakening or molecular degradation influence on the plastics materials in question, and after which the samples shall be submitted to the applicable tests listed in the table in 6.5.6.3.7.
- 6.5.6.3.4 Where the satisfactory behaviour of the plastics material has been established by other means, the above compatibility test may be dispensed with. Such procedures shall be at least equivalent to the above compatibility test and recognized by the competent authority.
- 6.5.6.3.5 For polyethylene rigid plastics IBCs (types 31H1 and 31H2) in accordance with 6.5.5.3 and composite IBCs with polyethylene inner receptacle (types 31HZ1 and 31HZ2) in accordance with 6.5.5.4, chemical compatibility with filling liquids assimilated in accordance with 4.1.1.21 may be verified as follows with standard liquids (see 6.1.6).

The standard liquids are representative for the processes of deterioration on polyethylene, as there are softening through swelling, cracking under stress, molecular degradation and combinations thereof.

The sufficient chemical compatibility of the IBCs may be verified by storage of the required test samples for three weeks at 40 °C with the appropriate standard liquid(s); where this standard liquid is water, storage in accordance with this procedure is not required. Storage is not required either for test samples which are used for the stacking test in case of the standard liquids wetting solution and acetic acid. After this storage, the test samples shall undergo the tests prescribed in 6.5.6.4 to 6.5.6.9.

The compatibility test for tert-Butyl hydroperoxide with more than 40% peroxide content and peroxyacetic acids of Class 5.2 shall not be carried out using standard liquids. For these

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substances, sufficient chemical compatibility of the test samples shall be verified during a storage period of six months at ambient temperature with the substances they are intended to carry.

Results of the procedure in accordance with this paragraph from polyethylene IBCs can be approved for an equal design type, the internal surface of which is fluorinated.

6.5.6.3.6 For IBC design types, made of polyethylene, as specified in 6.5.6.3.5, which have passed the test in 6.5.6.3.5, the chemical compatibility with filling substances may also be verified by laboratory tests proving that the effect of such filling substances on the test specimens is less than that of the appropriate standard liquid(s) taking into account the relevant processes of deterioration. The same conditions as those set out in 4.1.1.21.2 shall apply with respect to relative density and vapour pressure.

6.5.6.3.7 *Design type tests required and sequential order*

Type of IBC	Vibration ^f	Bottom lift	Top lift ^a	Stacking ^b	Leak-proofness	Hydraulic pressure	Drop	Tear	Topple	Righting ^c
Metal:										
11A, 11B, 11N	-	1st ^a	2nd	3rd	-	-	4th ^e	-	-	-
21A, 21B, 21N	-	1st ^a	2nd	3rd	4th	5th	6th ^e	-	-	-
31A, 31B, 31N	1st	2nd ^a	3rd	4th	5th	6th	7th ^e	-	-	-
Flexible ^d	-	-	x ^c	x	-	-	x	x	x	x
Rigid plastics:										
11H1, 11H2	-	1st ^a	2nd	3rd	-	-	4th	-	-	-
21H1, 21H2	-	1st ^a	2nd	3rd	4th	5th	6th	-	-	-
31H1, 31H2	1st	2nd ^a	3rd	4th ^g	5th	6th	7th	-	-	-
Composite:										
11HZ1, 11HZ2	-	1st ^a	2nd	3rd	-	-	4th ^e	-	-	-
21HZ1, 21HZ2	-	1st ^a	2nd	3rd	4th	5th	6th ^e	-	-	-
31HZ1, 31HZ2	1st	2nd ^a	3rd	4th ^g	5th	6th	7th ^e	-	-	-
Fibreboard	-	1st	-	2nd	-	-	3rd	-	-	-
Wooden	-	1st	-	2nd	-	-	3rd	-	-	-

^a When IBCs are designed for this method of handling.

^b When IBCs are designed to be stacked.

^c When IBCs are designed to be lifted from the top or the side.

^d Required test indicated by x; an IBC which has passed one test may be used for other tests, in any order.

^e Another IBC of the same design may be used for the drop test.

^f Another IBC of the same design may be used for the vibration test.

^g The second IBC in accordance with 6.5.6.2.2 can be used out of the sequential order direct after the preliminary storage.

6.5.6.4 *Bottom lift test*

6.5.6.4.1 *Applicability*

For all fibreboard and wooden IBCs, and for all types of IBC which are fitted with means of lifting from the base, as a design type test.

6.5.6.4.2 *Preparation of the IBC for test*

The IBC shall be filled. A load shall be added and evenly distributed. The mass of the filled IBC and the load shall be 1.25 times the maximum permissible gross mass.

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6.5.6.4.3 *Method of testing*

The IBC shall be raised and lowered twice by a lift truck with the forks centrally positioned and spaced at three quarters of the dimension of the side of entry (unless the points of entry are fixed). The forks shall penetrate to three quarters of the direction of entry. The test shall be repeated from each possible direction of entry.

6.5.6.4.4 *Criteria for passing the test*

No permanent deformation which renders the IBC, including the base pallet, if any, unsafe for carriage and no loss of contents.

6.5.6.5 *Top lift test*

6.5.6.5.1 *Applicability*

For all types of IBC which are designed to be lifted from the top and for flexible IBCs designed to be lifted from the top or the side, as a design type test.

6.5.6.5.2 *Preparation of the IBC for test*

Metal, rigid plastics and composite IBCs shall be filled. A load shall be added and evenly distributed. The mass of the filled IBC and the load shall be twice the maximum permissible gross mass. Flexible IBCs shall be filled with a representative material and then shall be loaded to six times their maximum permissible gross mass, the load being evenly distributed.

6.5.6.5.3 *Methods of testing*

Metal and flexible IBCs shall be lifted in the manner for which they are designed until clear of the floor and maintained in that position for a period of five minutes.

Rigid plastics and composite IBCs shall be lifted:

- (a) by each pair of diagonally opposite lifting devices, so that the hoisting forces are applied vertically, for a period of five minutes; and
- (b) by each pair of diagonally opposite lifting devices, so that the hoisting forces are applied toward the centre at 45° to the vertical, for a period of five minutes.

6.5.6.5.4 Other methods of top lift testing and preparation at least equally effective may be used for flexible IBCs.

6.5.6.5.5 *Criteria for passing the test*

- (a) Metal, rigid plastics and composite IBCs: the IBC remains safe for normal conditions of carriage, there is no observable permanent deformation of the IBC, including the base pallet, if any, and no loss of contents;
- (b) Flexible IBCs: no damage to the IBC or its lifting devices which renders the IBC unsafe for carriage or handling and no loss of contents.

6.5.6.6 *Stacking test*

6.5.6.6.1 *Applicability*

For all types of IBC which are designed to be stacked on each other, as a design type test.

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6.5.6.6.2 *Preparation of the IBC for test*

The IBC shall be filled to its maximum permissible gross mass. If the specific gravity of the product being used for testing makes this impracticable, the IBC shall additionally be loaded so that it is tested at its maximum permissible gross mass the load being evenly distributed.

6.5.6.6.3 *Method of testing*

(a) The IBC shall be placed on its base on level hard ground and subjected to a uniformly distributed superimposed test load (see 6.5.6.6.4). For rigid plastics IBCs of type 31H2 and composite IBCs of types 31HH1 and 31HH2, a stacking test shall be carried out with the original filling substance or a standard liquid (see 6.1.6) in accordance with 6.5.6.3.3 or 6.5.6.3.5 using the second IBC in accordance with 6.5.6.2.2 after the preliminary storage. IBCs shall be subjected to the test load for a period of at least:

- (i) 5 minutes, for metal IBCs;
- (ii) 28 days at 40 °C, for rigid plastics IBCs of types 11H2, 21H2 and 31H2 and for composite IBCs with outer casings of plastics material which bear the stacking load (i.e., types 11HH1, 11HH2, 21HH1, 21HH2, 31HH1 and 31HH2);
- (iii) 24 hours, for all other types of IBCs;

(b) The load shall be applied by one of the following methods:

- (i) one or more IBCs of the same type filled to the maximum permissible gross mass stacked on the test IBC;
- (ii) appropriate weights loaded on to either a flat plate or a reproduction of the base of the IBC, which is stacked on the test IBC.

6.5.6.6.4 *Calculation of superimposed test load*

The load to be placed on the IBC shall be 1.8 times the combined maximum permissible gross mass of the number of similar IBCs that may be stacked on top of the IBC during carriage.

6.5.6.6.5 *Criteria for passing the test*

- (a) All types of IBCs other than flexible IBCs: no permanent deformation which renders the IBC including the base pallet, if any, unsafe for carriage and no loss of contents;
- (b) Flexible IBCs: no deterioration of the body which renders the IBC unsafe for carriage and no loss of contents.

6.5.6.7 *Leakproofness test*

6.5.6.7.1 *Applicability*

For those types of IBC used for liquids or for solids filled or discharged under pressure, as a design type test and periodic test.

6.5.6.7.2 *Preparation of the IBC for test*

The test shall be carried out before the fitting of any thermal insulation equipment. Vented closures shall either be replaced by similar non-vented closures or the vent shall be sealed.

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6.5.6.7.3 *Method of testing and pressure to be applied*

The test shall be carried out for a period of at least 10 minutes using air at a gauge pressure of not less than 20 kPa (0.2 bar). The air tightness of the IBC shall be determined by a suitable method such as by air-pressure differential test or by immersing the IBC in water or, for metal IBCs, by coating the seams and joints with a soap solution. In the case of immersing a correction factor shall be applied for the hydrostatic pressure.

6.5.6.7.4 *Criterion for passing the test*

No leakage of air.

6.5.6.8 *Internal pressure (hydraulic) test*

6.5.6.8.1 *Applicability*

For those types of IBCs used for liquids or for solids filled or discharged under pressure, as a design type test.

6.5.6.8.2 *Preparation of the IBC for test*

The test shall be carried out before the fitting of any thermal insulation equipment. Pressure-relief devices shall be removed and their apertures plugged, or shall be rendered inoperative.

6.5.6.8.3 *Method of testing*

The test shall be carried out for a period of at least 10 minutes applying a hydraulic pressure not less than that indicated in 6.5.6.8.4. The IBCs shall not be mechanically restrained during the test.

6.5.6.8.4 *Pressures to be applied*

6.5.6.8.4.1 Metal IBCs:

- (a) For IBCs of types 21A, 21B and 21N, for packing group I solids, a 250 kPa (2.5 bar) gauge pressure;
- (b) For IBCs of types 21A, 21B, 21N, 31A, 31B and 31N, for packing groups II or III substances, a 200 kPa (2 bar) gauge pressure;
- (c) In addition, for IBCs of types 31A, 31B and 31N, a 65kPa (0.65 bar) gauge pressure. This test shall be performed before the 200 kPa (2 bar) test.

6.5.6.8.4.2 Rigid plastics and composite IBCs:

- (a) For IBCs of types 21H1, 21H2, 21HZ1 and 21HZ2: 75 kPa (0.75 bar) (gauge);
- (b) For IBCs of types 31H1, 31H2, 31HZ1 and 31HZ2: whichever is the greater of two values, the first as determined by one of the following methods:
 - (i) the total gauge pressure measured in the IBC (i.e. the vapour pressure of the filling substance and the partial pressure of the air or other inert gases, minus 100 kPa) at 55 °C multiplied by a safety factor of 1.5; this total gauge pressure shall be determined on the basis of a maximum degree of filling in accordance with 4.1.1.4 and a filling temperature of 15 °C;

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- (ii) 1.75 times the vapour pressure at 50 °C of the substance to be carried minus 100 kPa, but with a minimum test pressure of 100 kPa;
- (iii) 1.5 times the vapour pressure at 55 °C of the substance to be carried minus 100 kPa, but with a minimum test pressure of 100 kPa;

and the second as determined by the following method:

- (iv) twice the static pressure of the substance to be carried, with a minimum of twice the static pressure of water;

6.5.6.8.5 *Criteria for passing the test(s):*

- (a) For IBCs of types 21A, 21B, 21N, 31A, 31B and 31N, when subjected to the test pressure specified in 6.5.6.8.4.1 (a) or (b): no leakage;
- (b) For IBCs of types 31A, 31B and 31N, when subjected to the test pressure specified in 6.5.6.8.4.1 (c): no permanent deformation which renders the IBC unsafe for carriage and no leakage;
- (c) For rigid plastics and composite IBCs: no permanent deformation which would render the IBC unsafe for carriage and no leakage.

6.5.6.9 *Drop test*

6.5.6.9.1 *Applicability*

For all types of IBCs, as a design type test.

6.5.6.9.2 *Preparation of the IBC for test*

- (a) Metal IBCs: the IBC shall be filled to not less than 95% of its maximum capacity for solids or 98% of its maximum capacity for liquids. Pressure-relief devices shall be removed and their apertures plugged, or shall be rendered inoperative;
- (b) Flexible IBCs: the IBC shall be filled to the maximum permissible gross mass, the contents being evenly distributed;
- (c) Rigid plastics and composite IBCs: the IBC shall be filled to not less than 95% of its maximum capacity for solids or 98% of its maximum capacity for liquids. Arrangements provided for pressure relief may be removed and plugged or rendered inoperative. Testing of IBCs shall be carried out when the temperature of the test sample and its contents has been reduced to minus 18 °C or lower. Where test samples of composite IBCs are prepared in this way the conditioning specified in 6.5.6.3.1 may be waived. Test liquids shall be kept in the liquid state, if necessary by the addition of anti-freeze. This conditioning may be disregarded if the materials in question are of sufficient ductility and tensile strength at low temperatures;
- (d) Fibreboard and wooden IBCs: The IBC shall be filled to not less than 95% of its maximum capacity.

6.5.6.9.3 *Method of testing*

The IBC shall be dropped on its base onto a non-resilient, horizontal, flat, massive and rigid surface in conformity with the requirements of 6.1.5.3.4, in such a manner as to ensure that the point of impact is that part of the base of the IBC considered to be the most vulnerable. IBCs of 0.45 m³ or less capacity shall also be dropped:

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- (a) Metal IBCs: on the most vulnerable part other than the part of the base tested in the first drop;
- (b) Flexible IBCs: on the most vulnerable side;
- (c) Rigid plastics, composite, fibreboard and wooden IBCs: flat on a side, flat on the top and on a corner.

The same or different IBCs may be used for each drop.

6.5.6.9.4 *Drop height*

For solids and liquids, if the test is performed with the solid or liquid to be carried or with another substance having essentially the same physical characteristics:

Packing group I	Packing group II	Packing group III
1.8 m	1.2 m	0.8 m

For liquids if the test is performed with water:

- (a) Where the substances to be carried have a relative density not exceeding 1.2:

Packing group II	Packing group III
1.2 m	0.8 m

- (b) Where the substances to be carried have a relative density exceeding 1.2, the drop heights shall be calculated on the basis of the relative density (d) of the substance to be carried rounded up to the first decimal as follows:

Packing group II	Packing group III
$d \times 1.0$ m	$d \times 0.67$ m

6.5.6.9.5 *Criteria for passing the test(s):*

- (a) Metal IBCs: no loss of contents;
- (b) Flexible IBCs: no loss of contents. A slight discharge, e.g. from closures or stitch holes, upon impact shall not be considered to be a failure of the IBC provided that no further leakage occurs after the IBC has been raised clear of the ground;
- (c) Rigid plastics, composite, fibreboard and wooden IBCs: no loss of contents. A slight discharge from a closure upon impact shall not be considered to be a failure of the IBC provided that no further leakage occurs;
- (d) All IBCs: no damage which renders the IBC unsafe to be carried for salvage or for disposal, and no loss of contents. In addition, the IBC shall be capable of being lifted by an appropriate means until clear of the floor for five minutes.

NOTE: The criteria in (d) apply to design types for IBCs manufactured as from 1 January 2011.

6.5.6.10 *Tear test*

6.5.6.10.1 *Applicability*

For all types of flexible IBCs, as a design type test.

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6.5.6.10.2 *Preparation of the IBC for test*

The IBC shall be filled to not less than 95% of its capacity and to its maximum permissible gross mass, the contents being evenly distributed.

6.5.6.10.3 *Method of testing*

Once the IBC is placed on the ground, a 100 mm knife score, completely penetrating the wall of a wide face, is made at a 45° angle to the principal axis of the IBC, halfway between the bottom surface and the top level of the contents. The IBC shall then be subjected to a uniformly distributed superimposed load equivalent to twice the maximum permissible gross mass. The load shall be applied for at least five minutes. An IBC which is designed to be lifted from the top or the side shall then, after removal of the superimposed load, be lifted clear of the floor and maintained in that position for a period of five minutes.

6.5.6.10.4 *Criteria for passing the test*

The cut shall not propagate more than 25% of its original length.

6.5.6.11 *Topple test***6.5.6.11.1** *Applicability*

For all types of flexible IBC, as a design type test.

6.5.6.11.2 *Preparation of the IBC for test*

The IBC shall be filled to not less than 95% of its capacity and to its maximum permissible gross mass, the contents being evenly distributed.

6.5.6.11.3 *Method of testing*

The IBC shall be caused to topple on to any part of its top on to a rigid, non-resilient, smooth, flat and horizontal surface.

6.5.6.11.4 *Topple height*

Packing group I	Packing group II	Packing group III
1.8 m	1.2 m	0.8 m

6.5.6.11.5 *Criteria for passing the test*

No loss of contents. A slight discharge, e.g. from closures or stitch holes, upon impact shall not be considered to be a failure of the IBC provided that no further leakage occurs.

6.5.6.12 *Righting test***6.5.6.12.1** *Applicability*

For all flexible IBCs designed to be lifted from the top or side, as a design type test.

6.5.6.12.2 *Preparation of the IBC for test*

The IBC shall be filled to not less than 95% of its capacity and to its maximum permissible gross mass, the contents being evenly distributed.

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6.5.6.12.3 *Method of testing*

The IBC, lying on its side, shall be lifted at a speed of at least 0.1 m/s to upright position, clear of the floor, by one lifting device or by two lifting devices when four are provided.

6.5.6.12.4 *Criteria for passing the test*

No damage to the IBC or its lifting devices which renders the IBC unsafe for carriage or handling.

6.5.6.13 *Vibration test*

6.5.6.13.1 *Applicability*

For all IBCs used for liquids, as a design type test.

NOTE: *This test applies to design types for IBCs manufactured after 31 December 2010 (see also 1.6.1.14).*

6.5.6.13.2 *Preparation of the IBC for test*

A sample IBC shall be selected at random and shall be fitted and closed as for carriage. The IBC shall be filled with water to not less than 98% of its maximum capacity.

6.5.6.13.3 *Test method and duration*

6.5.6.13.3.1 The IBC shall be placed in the center of the test machine platform with a vertical sinusoidal, double amplitude (peak-to-peak displacement) of 25 mm ± 5%. If necessary, restraining devices shall be attached to the platform to prevent the specimen from moving horizontally off the platform without restricting vertical movement.

6.5.6.13.3.2 The test shall be conducted for one hour at a frequency that causes part of the base of the IBC to be momentarily raised from the vibrating platform for part of each cycle to such a degree that a metal shim can be completely inserted intermittently at, at least, one point between the base of the IBC and the test platform. The frequency may need to be adjusted after the initial set point to prevent the packaging from going into resonance. Nevertheless, the test frequency shall continue to allow placement of the metal shim under the IBC as described in this paragraph. The continuing ability to insert the metal shim is essential to passing the test. The metal shim used for this test shall be at least 1.6 mm thick, 50 mm wide, and be of sufficient length to be inserted between the IBC and the test platform a minimum of 100 mm to perform the test.

6.5.6.13.4 *Criteria for passing the test*

No leakage or rupture shall be observed. In addition, no breakage or failure of structural components, such as broken welds or failed fastenings, shall be observed.

6.5.6.14 *Test report*

6.5.6.14.1 A test report containing at least the following particulars shall be drawn up and shall be made available to the users of the IBC:

1. Name and address of the test facility;
2. Name and address of applicant (where appropriate);
3. A unique test report identification;
4. Date of the test report;
5. Manufacturer of the IBC;

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6. Description of the IBC design type (e.g. dimensions, materials, closures, thickness, etc.) including method of manufacture (e.g. blow moulding) and which may include drawing(s) and/or photograph(s);
7. Maximum capacity;
8. Characteristics of test contents, e.g. viscosity and relative density for liquids and particle size for solids;
9. Test descriptions and results;
10. The test report shall be signed with the name and status of the signatory.

6.5.6.14.2 The test report shall contain statements that the IBC prepared as for carriage was tested in accordance with the appropriate requirements of this Chapter and that the use of other packaging methods or components may render it invalid. A copy of the test report shall be available to the competent authority.

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CHAPTER 6.6

REQUIREMENTS FOR THE CONSTRUCTION AND TESTING OF LARGE PACKAGINGS

6.6.1 General

6.6.1.1 The requirements of this Chapter do not apply to:

- packagings for Class 2, except large packagings for articles, including aerosols;
- packagings for Class 6.2, except large packagings for clinical waste of UN No. 3291;
- Class 7 packages containing radioactive material.

6.6.1.2 Large packagings shall be manufactured, tested and remanufactured under a quality assurance programme which satisfies the competent authority in order to ensure that each manufactured or remanufactured large packaging meets the requirements of this Chapter.

NOTE: ISO 16106:2006 "Packaging – Transport packages for dangerous goods – Dangerous goods packagings, intermediate bulk containers (IBCs) and large packagings – Guidelines for the application of ISO 9001" provides acceptable guidance on procedures which may be followed.

6.6.1.3 The specific requirements for large packagings in 6.6.4 are based on large packagings currently used. In order to take into account progress in science and technology, there is no objection to the use of large packagings having specifications different from those in 6.6.4 provided they are equally effective, acceptable to the competent authority and able successfully to withstand the tests described in 6.6.5. Methods of testing other than those described in ADR are acceptable provided they are equivalent and are recognized by the competent authority.

6.6.1.4 Manufacturers and subsequent distributors of packagings shall provide information regarding procedures to be followed and a description of the types and dimensions of closures (including required gaskets) and any other components needed to ensure that packages as presented for carriage are capable of passing the applicable performance tests of this Chapter.

6.6.2 Code for designating types of large packagings

6.6.2.1 The code used for large packagings consist of:

- (a) Two Arabic numerals:
 - 50 for rigid large packagings; or
 - 51 for flexible large packagings; and
- (b) A capital letter in Latin character indicating the nature of the material, e.g. wood, steel etc. The capital letters used shall be those shown in 6.1.2.6.

6.6.2.2 The letter "W" may follow the Large Packaging code. The letter "W" signifies that the large packaging, although of the same type indicated by the code, is manufactured to a specification different from those in 6.6.4 and is considered equivalent in accordance with the requirements in 6.6.1.3.

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6.6.3 Marking**6.6.3.1 Primary marking**

Each large packaging manufactured and intended for use in accordance with the provisions of ADR shall bear markings which are durable, legible and placed in a location so as to be readily visible. Letters, numerals and symbols shall be at least 12 mm high and shall show:

- (a) The United Nations packaging symbol



;

This symbol shall not be used for any purpose other than certifying that a packaging, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6 or 6.7¹. For metal large packagings on which the marking is stamped or embossed, the capital letters "UN" may be applied instead of the symbol;

- (b) The number "50" designating a large rigid packaging or "51" for flexible large packagings, followed by the material type in accordance with 6.5.1.4.1 (b);
- (c) A capital letter designating the packing group(s) for which the design type has been approved:
 X for packing groups I, II and III
 Y for packing groups II and III
 Z for packing group III only;
- (d) The month and year (last two digits) of manufacture;
- (e) The State authorizing the allocation of the mark; indicated by the distinguishing sign for motor vehicles in international traffic²;
- (f) The name or symbol of the manufacturer and other identification of the large packagings as specified by the competent authority;
- (g) The stacking test load in kg. For large packagings not designed for stacking the figure "0" shall be shown;
- (h) The maximum permissible gross mass in kilograms.

The primary marking required above shall be applied in the sequence of the sub-paragraphs.

Each element of the marking applied in accordance with (a) to (h) shall be clearly separated, e.g. by a slash or space, so as to be easily identifiable.

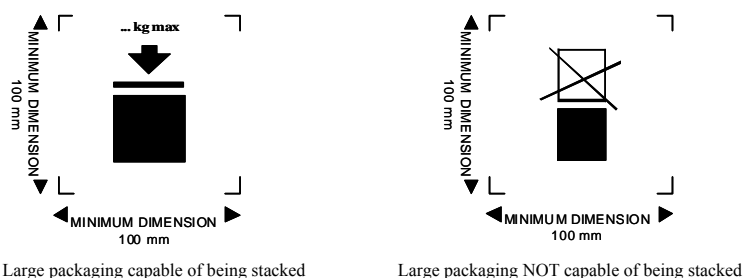
¹ This symbol is also used to certify that flexible bulk containers authorized for others modes of transport complies with the requirements in Chapter 6.8 of the UN Model Regulations.

² Distinguishing sign for motor vehicles in international traffic prescribed in the Vienna Convention on Road Traffic (1968).

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6.6.3.2 *Examples of the marking:*

	50A/X/05 01/N/PQRS 2500/1000	For a large steel packaging suitable for stacking; stacking load: 2 500 kg; maximum gross mass: 1 000 kg.
	50H/Y/04 02/D/ABCD 987 0/800	For a large plastics packaging not suitable for stacking; maximum gross mass: 800 kg.
	51H/Z/06 01/S/1999 0/500	For a large flexible packaging not suitable for stacking; maximum gross mass: 500 kg.

6.6.3.3 *The maximum permitted stacking load applicable when the large packaging is in use shall be displayed on a symbol as follows:*

The symbol shall be not less than 100 mm × 100 mm, be durable and clearly visible. The letters and numbers indicating the mass shall be at least 12 mm high.

The mass marked above the symbol shall not exceed the load imposed during the design type test (see 6.6.5.3.3.4) divided by 1.8.

6.6.4 **Specific requirements for large packagings****6.6.4.1** *Specific requirements for metal large packagings*

50A steel
50B aluminium
50N metal (other than steel or aluminium)

6.6.4.1.1 The large packaging shall be made of suitable ductile metal in which the weldability has been fully demonstrated. Welds shall be skilfully made and afford complete safety. Low-temperature performance shall be taken into account when appropriate.

6.6.4.1.2 Care shall be taken to avoid damage by galvanic action due to the juxtaposition of dissimilar metals.

6.6.4.2 *Specific requirements for flexible material large packagings*

51H flexible plastics
51M flexible paper

6.6.4.2.1 The large packaging shall be manufactured from suitable materials. The strength of the material and the construction of the flexible large packagings shall be appropriate to its capacity and its intended use.

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- 6.6.4.2.2 All materials used in the construction of flexible large packagings of types 51M shall, after complete immersion in water for not less than 24 hours, retain at least 85% of the tensile strength as measured originally on the material conditioned to equilibrium at 67% relative humidity or less.
- 6.6.4.2.3 Seams shall be formed by stitching, heat sealing, glueing or any equivalent method. All stitched seam-ends shall be secured.
- 6.6.4.2.4 Flexible large packagings shall provide adequate resistance to ageing and to degradation caused by ultraviolet radiation or the climatic conditions, or by the substance contained, thereby rendering them appropriate to their intended use.
- 6.6.4.2.5 For plastics flexible large packagings where protection against ultraviolet radiation is required, it shall be provided by the addition of carbon black or other suitable pigments or inhibitors. These additives shall be compatible with the contents and remain effective throughout the life of the large packaging. Where use is made of carbon black, pigments or inhibitors other than those used in the manufacture of the tested design type, re-testing may be waived if changes in the carbon black content, the pigment content or the inhibitor content do not adversely affect the physical properties of the material of construction.
- 6.6.4.2.6 Additives may be incorporated into the material of the large packaging to improve the resistance to ageing or to serve other purposes, provided that these do not adversely affect the physical or chemical properties of the material.
- 6.6.4.2.7 When filled, the ratio of height to width shall be not more than 2:1.

6.6.4.3 *Specific requirements for plastics large packagings*

50H rigid plastics

- 6.6.4.3.1 The large packaging shall be manufactured from suitable plastics material of known specifications and be of adequate strength in relation to its capacity and its intended use. The material shall be adequately resistant to ageing and to degradation caused by the substance contained or, where relevant, by ultraviolet radiation. Low temperature performance shall be taken into account when appropriate. Any permeation of the substance contained shall not constitute a danger under normal conditions of carriage.
- 6.6.4.3.2 Where protection against ultraviolet radiation is required, it shall be provided by the addition of carbon black or other suitable pigments or inhibitors. These additives shall be compatible with the contents and remain effective throughout the life of the outer packaging. Where use is made of carbon black, pigments or inhibitors other than those used in the manufacture of the tested design type, re-testing may be waived if changes in the carbon black content, the pigment content or the inhibitor content do not adversely affect the physical properties of the material of construction.
- 6.6.4.3.3 Additives may be incorporated in the material of the large packaging to improve the resistance to ageing or to serve other purposes, provided that these do not adversely affect the physical or chemical properties of the material.

6.6.4.4 *Specific requirements for fibreboard large packagings*

50G rigid fibreboard

- 6.6.4.4.1 Strong and good quality solid or double-faced corrugated fibreboard (single or multiwall) shall be used, appropriate to the capacity of the large packagings and to their intended use. The water resistance of the outer surface shall be such that the increase in mass, as determined in a test carried out over a period of 30 minutes by the Cobb method of

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determining water absorption, is not greater than 155 g/m² - see ISO 535:1991. It shall have proper bending qualities. Fibreboard shall be cut, creased without scoring, and slotted so as to permit assembly without cracking, surface breaks or undue bending. The fluting or corrugated fibreboard shall be firmly glued to the facings.

- 6.6.4.4.2 The walls, including top and bottom, shall have a minimum puncture resistance of 15 J measured according to ISO 3036:1975.
- 6.6.4.4.3 Manufacturing joins in the outer packaging of large packagings shall be made with an appropriate overlap and shall be taped, glued, stitched with metal staples or fastened by other means at least equally effective. Where joins are effected by gluing or taping, a water resistant adhesive shall be used. Metal staples shall pass completely through all pieces to be fastened and be formed or protected so that any inner liner cannot be abraded or punctured by them.
- 6.6.4.4.4 Any integral pallet base forming part of a large packaging or any detachable pallet shall be suitable for mechanical handling with the large packaging filled to its maximum permissible gross mass.
- 6.6.4.4.5 The pallet or integral base shall be designed so as to avoid any protrusion of the base of the large packaging that might be liable to damage in handling.
- 6.6.4.4.6 The body shall be secured to any detachable pallet to ensure stability in handling and carriage. Where a detachable pallet is used, its top surface shall be free from sharp protrusions that might damage the large packaging.
- 6.6.4.4.7 Strengthening devices such as timber supports to increase stacking performance may be used but shall be external to the liner.
- 6.6.4.4.8 Where large packagings are intended for stacking, the bearing surface shall be such as to distribute the load in a safe manner.

6.6.4.5 *Specific requirements for wooden large packagings*

50C natural wood
50D plywood
50F reconstituted wood

- 6.6.4.5.1 The strength of the materials used and the method of construction shall be appropriate to the capacity and intended use of the large packagings.
- 6.6.4.5.2 Natural wood shall be well seasoned, commercially dry and free from defects that would materially lessen the strength of any part of the large packagings. Each part of the large packagings shall consist of one piece or be equivalent thereto. Parts are considered equivalent to one piece when a suitable method of glued assembly is used as for instance Lindermann joint, tongue and groove joint, ship lap or rabbet joint; or butt joint with at least two corrugated metal fasteners at each joint, or when other methods at least equally effective are used.
- 6.6.4.5.3 Large packagings of plywood shall be at least 3-ply. They shall be made of well seasoned rotary cut, sliced or sawn veneer, commercially dry and free from defects that would materially lessen the strength of the large packaging. All adjacent plies shall be glued with water resistant adhesive. Other suitable materials may be used with plywood for the construction of the large packaging.
- 6.6.4.5.4 Large packagings of reconstituted wood shall be made of water resistant reconstituted wood such as hardboard, particle board or other suitable type.

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- 6.6.4.5.5 Large packagings shall be firmly nailed or secured to corner posts or ends or be assembled by equally suitable devices.
- 6.6.4.5.6 Any integral pallet base forming part of a large packaging or any detachable pallet shall be suitable for mechanical handling with the large packaging filled to its maximum permissible gross mass.
- 6.6.4.5.7 The pallet or integral base shall be designed so as to avoid any protrusion of the base of the large packaging that might be liable to damage in handling.
- 6.6.4.5.8 The body shall be secured to any detachable pallet to ensure stability in handling and carriage. Where a detachable pallet is used, its top surface shall be free from sharp protrusions that might damage the large packaging.
- 6.6.4.5.9 Strengthening devices such as timber supports to increase stacking performance may be used but shall be external to the liner.
- 6.6.4.5.10 Where large packagings are intended for stacking, the bearing surface shall be such as to distribute the load in a safe manner.

6.6.5 Test requirements for large packagings

6.6.5.1 Performance and frequency of test

- 6.6.5.1.1 The design type of each large packaging shall be tested as provided in 6.6.5.3 in accordance with procedures established by the competent authority allowing the allocation of the mark and shall be approved by this competent authority.
- 6.6.5.1.2 Each large packaging design type shall successfully pass the tests prescribed in this Chapter before being used. A large packaging design type is defined by the design, size, material and thickness, manner of construction and packing, but may include various surface treatments. It also includes large packagings which differ from the design type only in their lesser design height.
- 6.6.5.1.3 Tests shall be repeated on production samples at intervals established by the competent authority. For such tests on fibreboard large packagings, preparation at ambient conditions is considered equivalent to the provisions of 6.6.5.2.4.
- 6.6.5.1.4 Tests shall also be repeated after each modification which alters the design, material or manner of construction of large packagings.
- 6.6.5.1.5 The competent authority may permit the selective testing of large packagings that differ only in minor respects from a tested type, e.g. smaller sizes of inner packagings or inner packagings of lower net mass; and large packagings which are produced with small reductions in external dimension(s).
- 6.6.5.1.6 *(Reserved)*
NOTE: For the conditions for assembling different inner packagings in a large packaging and permissible variations in inner packagings, see 4.1.1.5.1.
- 6.6.5.1.7 The competent authority may at any time require proof, by tests in accordance with this section, that serially-produced large packagings meet the requirements of the design type tests.
- 6.6.5.1.8 Provided the validity of the test results is not affected and with the approval of the competent authority, several tests may be made on one sample.

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6.6.5.2 *Preparation for testing*

6.6.5.2.1 Tests shall be carried out on large packagings prepared as for carriage including the inner packagings or articles used. Inner packagings shall be filled to not less than 98% of their maximum capacity for liquids or 95% for solids. For large packagings where the inner packagings are designed to carry liquids and solids, separate testing is required for both liquid and solid contents. The substances in the inner packagings or the articles to be carried in the large packagings may be replaced by other material or articles except where this would invalidate the results of the tests. When other inner packagings or articles are used they shall have the same physical characteristics (mass, etc) as the inner packagings or articles to be carried. It is permissible to use additives, such as bags of lead shot, to achieve the requisite total package mass, so long as they are placed so that the test results are not affected.

6.6.5.2.2 In the drop tests for liquids, when another substance is used, it shall be of similar relative density and viscosity to those of the substance being carried. Water may also be used for the liquid drop test under the conditions in 6.6.5.3.4.4.

6.6.5.2.3 Large packagings made of plastics materials and large packagings containing inner packagings of plastic materials - other than bags intended to contain solids or articles - shall be drop tested when the temperature of the test sample and its contents has been reduced to -18 °C or lower. This conditioning may be disregarded if the materials in question are of sufficient ductility and tensile strength at low temperatures. Where test sample are prepared in this way, the conditioning in 6.6.5.2.4 may be waived. Test liquids shall be kept in the liquid state by the addition of anti-freeze if necessary.

6.6.5.2.4 Large packagings of fibreboard shall be conditioned for at least 24 hours in an atmosphere having a controlled temperature and relative humidity (r.h.). There are three options, one of which shall be chosen.

The preferred atmosphere is 23 °C ± 2 °C and 50% ± 2% r.h. The two other options are: 20 °C ± 2 °C and 65% ± 2% r.h.; or 27 °C ± 2 °C and 65% ± 2% r.h.

NOTE: Average values shall fall within these limits. Short term fluctuations and measurement limitations may cause individual measurements to vary by up to ±5% relative humidity without significant impairment of test reproducibility.

6.6.5.3 *Test requirements*

6.6.5.3.1 *Bottom lift test*

6.6.5.3.1.1 Applicability

For all types of large packagings which are fitted with means of lifting from the base, as a design type test.

6.6.5.3.1.2 Preparation of large packaging for test

The large packaging shall be loaded to 1.25 times its maximum permissible gross mass, the load being evenly distributed.

6.6.5.3.1.3 Method of testing

The large packaging shall be raised and lowered twice by a lift truck with the forks centrally positioned and spaced at three quarters of the dimension of the side of entry (unless the points of entry are fixed). The forks shall penetrate to three quarters of the direction of entry. The test shall be repeated from each possible direction of entry.

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6.6.5.3.1.4 Criteria for passing the test

No permanent deformation which renders the large packaging unsafe for carriage and no loss of contents.

6.6.5.3.2 *Top lift test*

6.6.5.3.2.1 Applicability

For types of large packagings which are intended to be lifted from the top and fitted with means of lifting, as a design type test.

6.6.5.3.2.2 Preparation of large packaging for test

The large packaging shall be loaded to twice its maximum permissible gross mass. A flexible large packaging shall be loaded to six times its maximum permissible gross mass, the load being evenly distributed.

6.6.5.3.2.3 Method of testing

The large packaging shall be lifted in the manner for which it is designed until clear of the floor and maintained in that position for a period of five minutes.

6.6.5.3.2.4 *Criteria for passing the test*

- (a) Metal and rigid plastics large packagings: no permanent deformation which renders the large packaging, including the base pallet, if any, unsafe for carriage and no loss of contents;
- (b) Flexible large packagings: no damage to the large packaging or its lifting devices which renders the large packaging unsafe for carriage or handling and no loss of contents.

6.6.5.3.3 *Stacking test*

6.6.5.3.3.1 Applicability

For all types of large packagings which are designed to be stacked on each other, as a design type test.

6.6.5.3.3.2 Preparation of large packaging for test

The large packaging shall be filled to its maximum permissible gross mass.

6.6.5.3.3.3 Method of testing

The large packaging shall be placed on its base on level hard ground and subjected to a uniformly distributed superimposed test load (see 6.6.5.3.3.4) for a period of at least five minutes, large packagings of wood, fibreboard and plastics materials for a period of 24 h.

6.6.5.3.3.4 Calculation of superimposed test load

The load to be placed on the large packagings shall be 1.8 times the combined maximum permissible gross mass of the number of similar large packagings that may be stacked on top of the large packagings during carriage.

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6.6.5.3.3.5 Criteria for passing the test

- (a) All types of large packagings other than flexible large packagings: no permanent deformation which renders the large packaging including the base pallet, if any, unsafe for carriage and no loss of contents;
- (b) Flexible large packagings: no deterioration of the body which renders the large packaging unsafe for carriage and no loss of contents.

6.6.5.3.4 *Drop test*

6.6.5.3.4.1 Applicability

For all types of large packagings as a design type test.

6.6.5.3.4.2 Preparation of large packaging for testing

The large packaging shall be filled in accordance with 6.6.5.2.1

6.6.5.3.4.3 Method of testing

The large packaging shall be dropped onto a non resilient, horizontal, flat, massive and rigid surface in conformity with the requirements of 6.1.5.3.4, in such a manner as to ensure that the point of impact is that part of the base of the large packaging considered to be the most vulnerable.

6.6.5.3.4.4 Drop height

NOTE: *Large packagings for substances and articles of Class 1 shall be tested at the packing group II performance level.*

6.6.5.3.4.4.1 For inner packagings containing solid or liquid substances or articles, if the test is performed with the solid, liquid or articles to be carried, or with another substance or article having essentially the same characteristics:

Packing group I	Packing group II	Packing group III
1.8 m	1.2 m	0.8 m

6.6.5.3.4.4.2 For inner packagings containing liquids if the test is performed with water:

- (a) Where the substances to be carried have a relative density not exceeding 1.2:

Packing group I	Packing group II	Packing group III
1.8 m	1.2 m	0.8 m

- (b) Where the substances to be carried have a relative density exceeding 1.2, the drop height shall be calculated on the basis of the relative density (d) of the substance to be carried, rounded up to the first decimal, as follows:

Packing group I	Packing group II	Packing group III
$d \times 1.5$ (m)	$d \times 1.0$ (m)	$d \times 0.67$ (m)

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6.6.5.3.4.5 Criteria for passing the test

6.6.5.3.4.5.1 The large packaging shall not exhibit any damage liable to affect safety during carriage. There shall be no leakage of the filling substance from inner packaging(s) or article(s).

6.6.5.3.4.5.2 No rupture is permitted in large packagings for articles of Class 1 which would permit the spillage of loose explosive substances or articles from the large packaging.

6.6.5.3.4.5.3 Where a large packaging undergoes a drop test, the sample passes the test if the entire contents are retained even if the closure is no longer sift-proof.

6.6.5.4 *Certification and test report*

6.6.5.4.1 In respect of each design type of large packaging a certificate and mark (as in 6.6.3) shall be issued attesting that the design type including its equipment meets the test requirements.

6.6.5.4.2 A test report containing at least the following particulars shall be drawn up and shall be made available to the users of the large packaging:

1. Name and address of the test facility;
2. Name and address of applicant (where appropriate);
3. A unique test report identification;
4. Date of the test report;
5. Manufacturer of the large packaging;
6. Description of the large packaging design type (e.g. dimensions, materials, closures, thickness, etc) and/or photograph(s);
7. Maximum capacity/maximum permissible gross mass;
8. Characteristics of test contents, e.g. types and descriptions of inner packagings or articles used;
9. Test descriptions and results;
10. The test report shall be signed with the name and status of the signatory.

6.6.5.4.3 The test report shall contain statements that the large packaging prepared as for carriage was tested in accordance with the appropriate provisions of this Chapter and that the use of other packaging methods or components may render it invalid. A copy of the test report shall be available to the competent authority.

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CHAPTER 6.7

REQUIREMENTS FOR THE DESIGN, CONSTRUCTION, INSPECTION AND TESTING OF PORTABLE TANKS AND UN MULTIPLE-ELEMENT GAS CONTAINERS (MEGCs)

NOTE: *For fixed tanks (tank-vehicles), demountable tanks and tank-containers and tank swap bodies, with shells made of metallic materials, and battery-vehicles and multiple element gas containers (MEGCs) other than UN MEGCs, see Chapter 6.8; for fibre-reinforced plastics tanks, see Chapter 6.9; for vacuum operated waste tanks, see Chapter 6.10.*

6.7.1 Application and general requirements

6.7.1.1 The requirements of this Chapter apply to portable tanks intended for the carriage of dangerous goods, and to MEGCs intended for the carriage of non-refrigerated gases of Class 2, by all modes of carriage. In addition to the requirements of this Chapter, unless otherwise specified, the applicable requirements of the International Convention for Safe Containers (CSC) 1972, as amended, shall be fulfilled by any multimodal portable tank or MEGC which meets the definition of a "container" within the terms of that Convention. Additional requirements may apply to offshore portable tanks or MEGCs that are handled in open seas.

6.7.1.2 In recognition of scientific and technological advances, the technical requirements of this Chapter may be varied by alternative arrangements. These alternative arrangements shall offer a level of safety not less than that given by the requirements of this Chapter with respect to the compatibility with substances carried and the ability of the portable tank or MEGC to withstand impact, loading and fire conditions. For international carriage, alternative arrangement portable tanks or MEGCs shall be approved by the applicable competent authorities.

6.7.1.3 When a substance is not assigned a portable tank instruction (T1 to T23, T50 or T75) in Column (10) of Table A of in Chapter 3.2, interim approval for carriage may be issued by the competent authority of the country of origin. The approval shall be included in the documentation of the consignment and contain as a minimum the information normally provided in the portable tank instructions and the conditions under which the substance shall be carried.

6.7.2 Requirements for the design, construction, inspection and testing of portable tanks intended for the carriage of substances of Class 1 and Classes 3 to 9

6.7.2.1 Definitions

For the purposes of this section:

Alternative arrangement means an approval granted by the competent authority for a portable tank or MEGC that has been designed, constructed or tested to technical requirements or testing methods other than those specified in this Chapter:

Portable tank means a multimodal tank used for the carriage of substances of Class 1 and Classes 3 to 9. The portable tank includes a shell fitted with service equipment and structural equipment necessary for the carriage of dangerous substances. The portable tank shall be capable of being filled and discharged without the removal of its structural equipment. It shall possess stabilizing members external to the shell, and shall be capable of being lifted when full. It shall be designed primarily to be loaded onto a vehicle, wagon or sea-going or inland navigation vessel and shall be equipped with skids, mountings or accessories to

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facilitate mechanical handling. Tank-vehicles, tank-wagons, non-metallic tanks and intermediate bulk containers (IBCs) are not considered to fall within the definition for portable tanks;

Shell means the part of the portable tank which retains the substance intended for carriage (tank proper), including openings and their closures, but does not include service equipment or external structural equipment;

Service equipment means measuring instruments and filling, discharge, venting, safety, heating, cooling and insulating devices;

Structural equipment means the reinforcing, fastening, protective and stabilizing members external to the shell;

Maximum allowable working pressure (MAWP) means a pressure that shall be not less than the highest of the following pressures measured at the top of the shell while in operating position:

- (a) The maximum effective gauge pressure allowed in the shell during filling or discharge; or
- (b) The maximum effective gauge pressure to which the shell is designed which shall be not less than the sum of:
 - (i) the absolute vapour pressure (in bar) of the substance at 65 °C, minus 1 bar; and
 - (ii) the partial pressure (in bar) of air or other gases in the ullage space being determined by a maximum ullage temperature of 65 °C and a liquid expansion due to an increase in mean bulk temperature of $t_r - t_f$ (t_f = filling temperature, usually 15 °C; t_r = maximum mean bulk temperature, 50 °C);

Design pressure means the pressure to be used in calculations required by a recognized pressure vessel code. The design pressure shall be not less than the highest of the following pressures:

- (a) The maximum effective gauge pressure allowed in the shell during filling or discharge; or
- (b) The sum of:
 - (i) the absolute vapour pressure (in bar) of the substance at 65 °C, minus 1 bar;
 - (ii) the partial pressure (in bar) of air or other gases in the ullage space being determined by a maximum ullage temperature of 65 °C and a liquid expansion due to an increase in mean bulk temperature of $t_r - t_f$ (t_f = filling temperature usually 15 °C; t_r = maximum mean bulk temperature, 50 °C); and
 - (iii) a head pressure determined on the basis of the static forces specified in 6.7.2.2.12, but not less than 0.35 bar; or
- (c) Two thirds of the minimum test pressure specified in the applicable portable tank instruction in 4.2.5.2.6;

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Test pressure means the maximum gauge pressure at the top of the shell during the hydraulic pressure test equal to not less than 1.5 times the design pressure. The minimum test pressure for portable tanks intended for specific substances is specified in the applicable portable tank instruction in 4.2.5.2.6;

Leakproofness test means a test using gas subjecting the shell and its service equipment to an effective internal pressure of not less than 25% of the MAWP;

Maximum permissible gross mass (MPGM) means the sum of the tare mass of the portable tank and the heaviest load authorized for carriage;

Reference steel means a steel with a tensile strength of 370 N/mm² and an elongation at fracture of 27%;

Mild steel means a steel with a guaranteed minimum tensile strength of 360 N/mm² to 440 N/mm² and a guaranteed minimum elongation at fracture conforming to 6.7.2.3.3.3;

Design temperature range for the shell shall be -40 °C to 50 °C for substances carried under ambient conditions. For the other substances handled under elevated temperature conditions the design temperature shall be not less than the maximum temperature of the substance during filling, discharge or carriage. More severe design temperatures shall be considered for portable tanks subjected to severe climatic conditions;

Fine grain steel means steel which has a ferritic grain size of 6 or finer when determined in accordance with ASTM E 112-96 or as defined in EN 10028-3, Part 3;

Fusible element means a non-reclosable pressure relief device that is thermally actuated;

Offshore portable tank means a portable tank specially designed for repeated use for carriage to, from and between offshore facilities. An offshore portable tank is designed and constructed in accordance with the guidelines for the approval of containers handled in open seas specified by the International Maritime Organization in document MSC/Circ.860.

6.7.2.2 General design and construction requirements

- 6.7.2.2.1 Shells shall be designed and constructed in accordance with the requirements of a pressure vessel code recognized by the competent authority. Shells shall be made of metallic materials suitable for forming. The materials shall in principle conform to national or international material standards. For welded shells only a material whose weldability has been fully demonstrated shall be used. Welds shall be skilfully made and afford complete safety. When the manufacturing process or the materials make it necessary, the shells shall be suitably heat-treated to guarantee adequate toughness in the weld and in the heat affected zones. In choosing the material, the design temperature range shall be taken into account with respect to risk of brittle fracture, to stress corrosion cracking and to resistance to impact. When fine grain steel is used, the guaranteed value of the yield strength shall be not more than 460 N/mm² and the guaranteed value of the upper limit of the tensile strength shall be not more than 725 N/mm² according to the material specification. Aluminium may only be used as a construction material when indicated in a portable tank special provision assigned to a specific substance in Column (11) of Table A of Chapter 3.2 or when approved by the competent authority. When aluminium is authorized, it shall be insulated to prevent significant loss of physical properties when subjected to a heat load of 110 kW/m² for a period of not less than 30 minutes. The insulation shall remain effective at all temperatures less than 649 °C and shall be jacketed with a material with a melting point of not less than 700 °C. Portable tank materials shall be suitable for the external environment in which they may be carried.

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- 6.7.2.2.2 Portable tank shells, fittings, and pipework shall be constructed from materials which are:
- (a) Substantially immune to attack by the substance(s) intended to be carried; or
 - (b) Properly passivated or neutralized by chemical reaction; or
 - (c) Lined with corrosion-resistant material directly bonded to the shell or attached by equivalent means.
- 6.7.2.2.3 Gaskets shall be made of materials not subject to attack by the substance(s) intended to be carried.
- 6.7.2.2.4 When shells are lined, the lining shall be substantially immune to attack by the substance(s) intended to be carried, homogeneous, non porous, free from perforations, sufficiently elastic and compatible with the thermal expansion characteristics of the shell. The lining of every shell, shell fittings and piping shall be continuous, and shall extend around the face of any flange. Where external fittings are welded to the tank, the lining shall be continuous through the fitting and around the face of external flanges.
- 6.7.2.2.5 Joints and seams in the lining shall be made by fusing the material together or by other equally effective means.
- 6.7.2.2.6 Contact between dissimilar metals which could result in damage by galvanic action shall be avoided.
- 6.7.2.2.7 The materials of the portable tank, including any devices, gaskets, linings and accessories, shall not adversely affect the substance(s) intended to be carried in the portable tank.
- 6.7.2.2.8 Portable tanks shall be designed and constructed with supports to provide a secure base during carriage and with suitable lifting and tie-down attachments.
- 6.7.2.2.9 Portable tanks shall be designed to withstand, without loss of contents, at least the internal pressure due to the contents, and the static, dynamic and thermal loads during normal conditions of handling and carriage. The design shall demonstrate that the effects of fatigue, caused by repeated application of these loads through the expected life of the portable tank, have been taken into account.
- 6.7.2.2.10 A shell which is to be equipped with a vacuum-relief device shall be designed to withstand, without permanent deformation, an external pressure of not less than 0.21 bar above the internal pressure. The vacuum-relief device shall be set to relieve at a vacuum setting not greater than minus (-) 0.21 bar unless the shell is designed for a higher external over pressure, in which case the vacuum-relief pressure of the device to be fitted shall be not greater than the tank design vacuum pressure. A shell used for the carriage of solid substances (powdery or granular) of packing groups II or III only, which do not liquefy during carriage, may be designed for a lower external pressure, subject to the approval of the competent authority. In this case, the vacuum valve shall be set to relieve at this lower pressure. A shell that is not to be fitted with a vacuum-relief device shall be designed to withstand, without permanent deformation an external pressure of not less than 0.4 bar above the internal pressure.
- 6.7.2.2.11 Vacuum-relief devices used on portable tanks intended for the carriage of substances meeting the flash-point criteria of Class 3, including elevated temperature substances carried at or above their flash-point, shall prevent the immediate passage of flame into the shell, or the portable tank shall have a shell capable of withstanding, without leakage an internal explosion resulting from the passage of flame into the shell.

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- 6.7.2.2.12 Portable tanks and their fastenings shall, under the maximum permissible load, be capable of absorbing the following separately applied static forces:
- (a) In the direction of travel: twice the MPGM multiplied by the acceleration due to gravity (g)¹;
 - (b) Horizontally at right angles to the direction of travel: the MPGM (when the direction of travel is not clearly determined, the forces shall be equal to twice the MPGM) multiplied by the acceleration due to gravity (g)¹;
 - (c) Vertically upwards: the MPGM multiplied by the acceleration due to gravity (g)¹; and
 - (d) Vertically downwards: twice the MPGM (total loading including the effect of gravity) multiplied by the acceleration due to gravity (g)¹.
- 6.7.2.2.13 Under each of the forces in 6.7.2.2.12, the safety factor to be observed shall be as follows:
- (a) For metals having a clearly defined yield point, a safety factor of 1.5 in relation to the guaranteed yield strength; or
 - (b) For metals with no clearly defined yield point, a safety factor of 1.5 in relation to the guaranteed 0.2% proof strength and, for austenitic steels, the 1% proof strength.
- 6.7.2.2.14 The values of yield strength or proof strength shall be the values according to national or international material standards. When austenitic steels are used, the specified minimum values of yield strength or proof strength according to the material standards may be increased by up to 15% when these greater values are attested in the material inspection certificate. When no material standard exists for the metal in question, the value of yield strength or proof strength used shall be approved by the competent authority.
- 6.7.2.2.15 Portable tanks shall be capable of being electrically earthed when intended for the carriage of substances meeting the flash-point criteria of Class 3 including elevated temperature substances carried at or above their flash-point. Measures shall be taken to prevent dangerous electrostatic discharge.
- 6.7.2.2.16 When required for certain substances by the applicable portable tank instruction indicated in Column (10) of Table A of Chapter 3.2 and described in 4.2.5.2.6 or by a portable tank special provision indicated in Column (11) of Table A of Chapter 3.2 and described in 4.2.5.3, portable tanks shall be provided with additional protection, which may take the form of additional shell thickness or a higher test pressure, the additional shell thickness or higher test pressure being determined in the light of the inherent risks associated with the carriage of the substances concerned.
- 6.7.2.3** *Design criteria*
- 6.7.2.3.1 Shells shall be of a design capable of being stress-analysed mathematically or experimentally by resistance strain gauges, or by other methods approved by the competent authority.
- 6.7.2.3.2 Shells shall be designed and constructed to withstand a hydraulic test pressure not less than 1.5 times the design pressure. Specific requirements are laid down for certain substances in the applicable portable tank instruction indicated in Column (10) of Table A of Chapter 3.2 and described in 4.2.5.2.6 or by a portable tank special provision indicated in Column (11) of Table A of Chapter 3.2 and described in 4.2.5.3. Attention is drawn to the minimum shell thickness requirements specified in 6.7.2.4.1 to 6.7.2.4.10.

¹ For calculation purposes $g = 9.81 \text{ m/s}^2$.

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6.7.2.3.3 For metals exhibiting a clearly defined yield point or characterized by a guaranteed proof strength (0.2% proof strength, generally, or 1% proof strength for austenitic steels) the primary membrane stress σ (sigma) in the shell shall not exceed 0.75 Re or 0.50 Rm, whichever is lower, at the test pressure, where:

Re = yield strength in N/mm², or 0.2% proof strength or, for austenitic steels, 1% proof strength;

Rm = minimum tensile strength in N/mm².

6.7.2.3.3.1 The values of Re and Rm to be used shall be the specified minimum values according to national or international material standards. When austenitic steels are used, the specified minimum values for Re and Rm according to the material standards may be increased by up to 15% when greater values are attested in the material inspection certificate. When no material standard exists for the metal in question, the values of Re and Rm used shall be approved by the competent authority or its authorized body.

6.7.2.3.3.2 Steels which have a Re/Rm ratio of more than 0.85 are not allowed for the construction of welded shells. The values of Re and Rm to be used in determining this ratio shall be the values specified in the material inspection certificate.

6.7.2.3.3.3 Steels used in the construction of shells shall have an elongation at fracture, in %, of not less than 10 000/Rm with an absolute minimum of 16% for fine grain steels and 20% for other steels. Aluminium and aluminium alloys used in the construction of shells shall have an elongation at fracture, in %, of not less than 10 000/6Rm with an absolute minimum of 12%.

6.7.2.3.3.4 For the purpose of determining actual values for materials, it shall be noted that for sheet metal, the axis of the tensile test specimen shall be at right angles (transversely) to the direction of rolling. The permanent elongation at fracture shall be measured on test specimens of rectangular cross sections in accordance with ISO 6892:1998 using a 50 mm gauge length.

6.7.2.4 *Minimum shell thickness*

6.7.2.4.1 The minimum shell thickness shall be the greater thickness based on:

- (a) The minimum thickness determined in accordance with the requirements of 6.7.2.4.2 to 6.7.2.4.10;
- (b) The minimum thickness determined in accordance with the recognized pressure vessel code including the requirements in 6.7.2.3; and
- (c) The minimum thickness specified in the applicable portable tank instruction indicated in Column (10) of Table A of Chapter 3.2 and described in 4.2.5.2.6 or by a portable tank special provision indicated in Column (11) of Table A of Chapter 3.2 and described in 4.2.5.3.

6.7.2.4.2 The cylindrical portions, ends (heads) and manhole covers of shells not more than 1.80 m in diameter shall be not less than 5 mm thick in the reference steel or of equivalent thickness in the metal to be used. Shells more than 1.80 m in diameter shall be not less than 6 mm thick in the reference steel or of equivalent thickness in the metal to be used, except that for powdered or granular solid substances of packing group II or III the minimum thickness requirement may be reduced to not less than 5 mm thick in the reference steel or of equivalent thickness in the metal to be used.

6.7.2.4.3 When additional protection against shell damage is provided, portable tanks with test pressures less than 2.65 bar may have the minimum shell thickness reduced, in proportion to the protection provided, as approved by the competent authority. However, shells not more

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than 1.80 m in diameter shall be not less than 3 mm thick in the reference steel or of equivalent thickness in the metal to be used. Shells more than 1.80 m in diameter shall be not less than 4 mm thick in the reference steel or of equivalent thickness in the metal to be used.

- 6.7.2.4.4 The cylindrical portions, ends (heads) and manhole covers of all shells shall be not less than 3 mm thick regardless of the material of construction.
- 6.7.2.4.5 The additional protection referred to in 6.7.2.4.3 may be provided by overall external structural protection, such as suitable "sandwich" construction with the outer sheathing (jacket) secured to the shell, double wall construction or by enclosing the shell in a complete framework with longitudinal and transverse structural members.
- 6.7.2.4.6 The equivalent thickness of a metal other than the thickness prescribed for the reference steel in 6.7.2.4.2 shall be determined using the following formula:

$$e_1 = \frac{21.4e_0}{\sqrt[3]{Rm_1 \times A_1}}$$

where:

- e_1 = required equivalent thickness (in mm) of the metal to be used;
- e_0 = minimum thickness (in mm) of the reference steel specified in the applicable portable tank instruction indicated in Column (10) of Table A of Chapter 3.2 and described in 4.2.5.2.6 or by a portable tank special provision indicated in Column (11) of Table A of Chapter 3.2 and described in 4.2.5.3;
- Rm_1 = guaranteed minimum tensile strength (in N/mm²) of the metal to be used (see 6.7.2.3.3);
- A_1 = guaranteed minimum elongation at fracture (in %) of the metal to be used according to national or international standards.

- 6.7.2.4.7 When in the applicable portable tank instruction in 4.2.5.2.6, a minimum thickness of 8 mm or 10 mm is specified, it shall be noted that these thicknesses are based on the properties of the reference steel and a shell diameter of 1.80 m. When a metal other than mild steel (see 6.7.2.1) is used or the shell has a diameter of more than 1.80 m, the thickness shall be determined using the following formula:

$$e_1 = \frac{21.4e_0 d_1}{1,8 \sqrt[3]{Rm_1 \times A_1}}$$

where:

- e_1 = required equivalent thickness (in mm) of the metal to be used;
- e_0 = minimum thickness (in mm) of the reference steel specified in the applicable portable tank instruction indicated in Column (10) of Table A of Chapter 3.2 and described in 4.2.5.2.6 or by a portable tank special provision indicated in Column (11) of Table A of Chapter 3.2 and described in 4.2.5.3;
- d_1 = diameter of the shell (in m), but not less than 1.80 m;
- Rm_1 = guaranteed minimum tensile strength (in N/mm²) of the metal to be used (see 6.7.2.3.3);
- A_1 = guaranteed minimum elongation at fracture (in %) of the metal to be used according to national or international standards.

- 6.7.2.4.8 In no case shall the wall thickness be less than that prescribed in 6.7.2.4.2, 6.7.2.4.3 and 6.7.2.4.4. All parts of the shell shall have a minimum thickness as determined by 6.7.2.4.2 to 6.7.2.4.4. This thickness shall be exclusive of any corrosion allowance.

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6.7.2.4.9 When mild steel is used (see 6.7.2.1), calculation using the formula in 6.7.2.4.6 is not required.

6.7.2.4.10 There shall be no sudden change of plate thickness at the attachment of the ends (heads) to the cylindrical portion of the shell.

6.7.2.5 Service equipment

6.7.2.5.1 Service equipment shall be so arranged as to be protected against the risk of being wrenched off or damaged during handling and carriage. When the connection between the frame and the shell allows relative movement between the sub-assemblies, the equipment shall be so fastened as to permit such movement without risk of damage to working parts. The external discharge fittings (pipe sockets, shut-off devices), the internal stop-valve and its seating shall be protected against the danger of being wrenched off by external forces (for example using shear sections). The filling and discharge devices (including flanges or threaded plugs) and any protective caps shall be capable of being secured against unintended opening.

6.7.2.5.2 All openings in the shell, intended for filling or discharging the portable tank shall be fitted with a manually operated stop-valve located as close to the shell as reasonably practicable. Other openings, except for openings leading to venting or pressure-relief devices, shall be equipped with either a stop-valve or another suitable means of closure located as close to the shell as reasonably practicable.

6.7.2.5.3 All portable tanks shall be fitted with a manhole or other inspection openings of a suitable size to allow for internal inspection and adequate access for maintenance and repair of the interior. Compartmented portable tanks shall have a manhole or other inspection openings for each compartment.

6.7.2.5.4 As far as reasonably practicable, external fittings shall be grouped together. For insulated portable tanks, top fittings shall be surrounded by a spill collection reservoir with suitable drains.

6.7.2.5.5 Each connection to a portable tank shall be clearly marked to indicate its function.

6.7.2.5.6 Each stop-valve or other means of closure shall be designed and constructed to a rated pressure not less than the MAWP of the shell taking into account the temperatures expected during carriage. All stop-valves with screwed spindles shall close by a clockwise motion of the handwheel. For other stop-valves the position (open and closed) and direction of closure shall be clearly indicated. All stop-valves shall be designed to prevent unintentional opening.

6.7.2.5.7 No moving parts, such as covers, components of closures, etc., shall be made of unprotected corrodible steel when they are liable to come into frictional or percussive contact with aluminium portable tanks intended for the carriage of substances meeting the flash-point criteria of Class 3 including elevated temperature substances carried at or above their flash-point.

6.7.2.5.8 Piping shall be designed, constructed and installed so as to avoid the risk of damage due to thermal expansion and contraction, mechanical shock and vibration. All piping shall be of a suitable metallic material. Welded pipe joints shall be used wherever possible.

6.7.2.5.9 Joints in copper tubing shall be brazed or have an equally strong metal union. The melting point of brazing materials shall be no lower than 525 °C. The joints shall not decrease the strength of the tubing as may happen when cutting threads.

6.7.2.5.10 The burst pressure of all piping and pipe fittings shall be not less than the highest of four times the MAWP of the shell or four times the pressure to which it may be subjected in service by the action of a pump or other device (except pressure-relief devices).

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6.7.2.5.11 Ductile metals shall be used in the construction of valves and accessories.

6.7.2.6 *Bottom openings*

6.7.2.6.1 Certain substances shall not be carried in portable tanks with bottom openings. When the applicable portable tank instruction identified in Column (10) of Table A of Chapter 3.2 and described in 4.2.5.2.6 indicates that bottom openings are prohibited there shall be no openings below the liquid level of the shell when it is filled to its maximum permissible filling limit. When an existing opening is closed it shall be accomplished by internally and externally welding one plate to the shell.

6.7.2.6.2 Bottom discharge outlets for portable tanks carrying certain solid, crystallizable or highly viscous substances shall be equipped with not less than two serially fitted and mutually independent shut-off devices. The design of the equipment shall be to the satisfaction of the competent authority or its authorized body and shall include:

- (a) An external stop-valve, fitted as close to the shell as reasonably practicable, and so designed as to prevent any unintended opening through impact or other inadvertent act; and
- (b) A liquid tight closure at the end of the discharge pipe, which may be a bolted blank flange or a screw cap.

6.7.2.6.3 Every bottom discharge outlet, except as provided in 6.7.2.6.2, shall be equipped with three serially fitted and mutually independent shut-off devices. The design of the equipment shall be to the satisfaction of the competent authority or its authorized body and include:

- (a) A self-closing internal stop-valve, that is a stop-valve within the shell or within a welded flange or its companion flange, such that:
 - (i) The control devices for the operation of the valve are designed so as to prevent any unintended opening through impact or other inadvertent act;
 - (ii) The valve may be operable from above or below;
 - (iii) If possible, the setting of the valve (open or closed) shall be capable of being verified from the ground;
 - (iv) Except for portable tanks having a capacity of not more than 1 000 litres, it shall be possible to close the valve from an accessible position of the portable tank that is remote from the valve itself; and
 - (v) The valve shall continue to be effective in the event of damage to the external device for controlling the operation of the valve;
- (b) An external stop-valve fitted as close to the shell as reasonably practicable; and
- (c) A liquid tight closure at the end of the discharge pipe, which may be a bolted blank flange or a screw cap.

6.7.2.6.4 For a lined shell, the internal stop-valve required by 6.7.2.6.3 (a) may be replaced by an additional external stop-valve. The manufacturer shall satisfy the requirements of the competent authority or its authorized body.

6.7.2.7 *Safety-relief devices*

6.7.2.7.1 All portable tanks shall be fitted with at least one pressure-relief device. All relief devices shall be designed, constructed and marked to the satisfaction of the competent authority or its authorized body.

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6.7.2.8 *Pressure-relief devices*

- 6.7.2.8.1 Every portable tank with a capacity not less than 1 900 litres and every independent compartment of a portable tank with a similar capacity, shall be provided with one or more pressure-relief devices of the spring-loaded type and may in addition have a frangible disc or fusible element in parallel with the spring-loaded devices except when prohibited by reference to 6.7.2.8.3 in the applicable portable tank instruction in 4.2.5.2.6. The pressure-relief devices shall have sufficient capacity to prevent rupture of the shell due to over pressurization or vacuum resulting from filling, discharging, or from heating of the contents.
- 6.7.2.8.2 Pressure-relief devices shall be designed to prevent the entry of foreign matter, the leakage of liquid and the development of any dangerous excess pressure.
- 6.7.2.8.3 When required for certain substances by the applicable portable tank instruction indicated in Column (10) of Table A of Chapter 3.2 and described in 4.2.5.2.6, portable tanks shall have a pressure-relief device approved by the competent authority. Unless a portable tank in dedicated service is fitted with an approved relief device constructed of materials compatible with the substance carried, the relief device shall comprise a frangible disc preceding a spring-loaded pressure-relief device. When a frangible disc is inserted in series with the required pressure-relief device, the space between the frangible disc and the pressure-relief device shall be provided with a pressure gauge or suitable tell-tale indicator for the detection of disc rupture, pinholing, or leakage which could cause a malfunction of the pressure-relief system. The frangible disc shall rupture at a nominal pressure 10% above the start to discharge pressure of the relief device.
- 6.7.2.8.4 Every portable tank with a capacity less than 1 900 litres shall be fitted with a pressure-relief device which may be a frangible disc when this disc complies with the requirements of 6.7.2.11.1. When no spring-loaded pressure-relief device is used, the frangible disc shall be set to rupture at a nominal pressure equal to the test pressure. In addition, fusible elements conforming to 6.7.2.10.1 may also be used.
- 6.7.2.8.5 When the shell is fitted for pressure discharge, the inlet line shall be provided with a suitable pressure-relief device set to operate at a pressure not higher than the MAWP of the shell, and a stop-valve shall be fitted as close to the shell as reasonably practicable.

6.7.2.9 *Setting of pressure-relief devices*

- 6.7.2.9.1 It shall be noted that the pressure-relief devices shall operate only in conditions of excessive rise in temperature, since the shell shall not be subject to undue fluctuations of pressure during normal conditions of carriage (see 6.7.2.12.2).
- 6.7.2.9.2 The required pressure-relief device shall be set to start-to-discharge at a nominal pressure of five-sixths of the test pressure for shells having a test pressure of not more than 4.5 bar and 110% of two-thirds of the test pressure for shells having a test pressure of more than 4.5 bar. After discharge the device shall close at a pressure not more than 10% below the pressure at which the discharge starts. The device shall remain closed at all lower pressures. This requirement does not prevent the use of vacuum-relief or combination pressure-relief and vacuum-relief devices.

6.7.2.10 *Fusible elements*

- 6.7.2.10.1 Fusible elements shall operate at a temperature between 100 °C and 149 °C on condition that the pressure in the shell at the fusing temperature will be not more than the test pressure. They shall be placed at the top of the shell with their inlets in the vapour space and when used for transport safety purposes, they shall not be shielded from external heat. Fusible elements shall not be used on portable tanks with a test pressure which exceeds 2.65 bar

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unless specified by special provision TP36 in Column (11) of Table A of Chapter 3.2. Fusible elements used on portable tanks intended for the carriage of elevated temperature substances shall be designed to operate at a temperature higher than the maximum temperature that will be experienced during carriage and shall be to the satisfaction of the competent authority or its authorized body.

6.7.2.11 *Frangible discs*

6.7.2.11.1 Except as specified in 6.7.2.8.3, frangible discs shall be set to rupture at a nominal pressure equal to the test pressure throughout the design temperature range. Particular attention shall be given to the requirements of 6.7.2.5.1 and 6.7.2.8.3 if frangible discs are used.

6.7.2.11.2 Frangible discs shall be appropriate for the vacuum pressures which may be produced in the portable tank.

6.7.2.12 *Capacity of pressure-relief devices*

6.7.2.12.1 The spring-loaded pressure-relief device required by 6.7.2.8.1 shall have a minimum cross sectional flow area equivalent to an orifice of 31.75 mm diameter. Vacuum-relief devices, when used, shall have a cross sectional flow area not less than 284 mm².

6.7.2.12.2 The combined delivery capacity of the pressure relief system (taking into account the reduction of the flow when the portable tank is fitted with frangible-discs preceding spring-loaded pressure-relief devices or when the spring-loaded pressure-relief devices are provided with a device to prevent the passage of the flame), in condition of complete fire engulfment of the portable tank shall be sufficient to limit the pressure in the shell to 20% above the start-to-discharge pressure of the pressure limiting device. Emergency pressure-relief devices may be used to achieve the full relief capacity prescribed. These devices may be fusible, spring loaded or frangible disc components, or a combination of spring-loaded and frangible disc devices. The total required capacity of the relief devices may be determined using the formula in 6.7.2.12.2.1 or the table in 6.7.2.12.2.3.

6.7.2.12.2.1 To determine the total required capacity of the relief devices, which shall be regarded as being the sum of the individual capacities of all the contributing devices, the following formula shall be used:

$$Q = 12.4 \frac{FA^{0.82}}{LC} \sqrt{\frac{ZT}{M}}$$

where:

Q = minimum required rate of discharge in cubic metres of air per second (m³/s) at standard conditions: 1 bar and 0 °C (273 K);

F = is a coefficient with the following value:

for uninsulated shells: F = 1;

for insulated shells: F = U(649 - t)/13.6 but in no case is less than 0.25

where:

U = thermal conductance of the insulation, in kW.m⁻².K⁻¹, at 38 °C;

t = actual temperature of the substance during filling (in °C); when this temperature is unknown, let t = 15 °C;

The value of F given above for insulated shells may be taken provided that the insulation is in accordance with 6.7.2.12.2.4;

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- A = total external surface area of shell in m²;
- Z = the gas compressibility factor in the accumulating condition (when this factor is unknown, let Z = 1.0);
- T = absolute temperature in Kelvin (°C + 273) above the pressure-relief devices in the accumulating condition;
- L = the latent heat of vaporization of the liquid, in kJ/kg, in the accumulating condition;
- M = molecular mass of the discharged gas;
- C = a constant which is derived from one of the following formulae as a function of the ratio k of specific heats:

$$k = \frac{c_p}{c_v}$$

where:

c_p is the specific heat at constant pressure; and
 c_v is the specific heat at constant volume.

When k > 1:

$$C = \sqrt{k \left(\frac{2}{k+1} \right)^{\frac{k+1}{k-1}}}$$

When k = 1 or k is unknown:

$$C = \frac{1}{\sqrt{e}} = 0.607$$

where e is the mathematical constant 2.7183

C may also be taken from the following table:

k	C	k	C	k	C
1.00	0.607	1.26	0.660	1.52	0.704
1.02	0.611	1.28	0.664	1.54	0.707
1.04	0.615	1.30	0.667	1.56	0.710
1.06	0.620	1.32	0.671	1.58	0.713
1.08	0.624	1.34	0.674	1.60	0.716
1.10	0.628	1.36	0.678	1.62	0.719
1.12	0.633	1.38	0.681	1.64	0.722
1.14	0.637	1.40	0.685	1.66	0.725
1.16	0.641	1.42	0.688	1.68	0.728
1.18	0.645	1.44	0.691	1.70	0.731
1.20	0.649	1.46	0.695	2.00	0.770
1.22	0.652	1.48	0.698	2.20	0.793
1.24	0.656	1.50	0.701		

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6.7.2.12.2.2 As an alternative to the formula above, shells designed for the carriage of liquids may have their relief devices sized in accordance with the table in 6.7.2.12.2.3. This table assumes an insulation value of $F = 1$ and shall be adjusted accordingly when the shell is insulated. Other values used in determining this table are:

$$\begin{array}{lcl} M & = & 86.7 \\ L & = & 334.94 \text{ kJ/kg} \\ Z & = & 1 \end{array} \qquad \begin{array}{lcl} T & = & 394 \text{ K} \\ C & = & 0.607 \end{array}$$

6.7.2.12.2.3 Minimum required rate of discharge, Q , in cubic metres per air per second at 1 bar and 0 °C (273 K)

A Exposed area (square metres)	Q (cubic metres of air per second)	A Exposed area (square metres)	Q (cubic metres of air per second)
2	0.230	37.5	2.539
3	0.320	40	2.677
4	0.405	42.5	2.814
5	0.487	45	2.949
6	0.565	47.5	3.082
7	0.641	50	3.215
8	0.715	52.5	3.346
9	0.788	55	3.476
10	0.859	57.5	3.605
12	0.998	60	3.733
14	1.132	62.5	3.860
16	1.263	65	3.987
18	1.391	67.5	4.112
20	1.517	70	4.236
22.5	1.670	75	4.483
25	1.821	80	4.726
27.5	1.969	85	4.967
30	2.115	90	5.206
32.5	2.258	95	5.442
35	2.400	100	5.676

6.7.2.12.2.4 Insulation systems, used for the purpose of reducing venting capacity, shall be approved by the competent authority or its authorized body. In all cases, insulation systems approved for this purpose shall:

- (a) Remain effective at all temperatures up to 649 °C; and
- (b) Be jacketed with a material having a melting point of 700 °C or greater.

6.7.2.13 *Marking of pressure-relief devices*

6.7.2.13.1 Every pressure-relief device shall be clearly and permanently marked with the following particulars:

- (a) The pressure (in bar or kPa) or temperature (in °C) at which it is set to discharge;
- (b) The allowable tolerance at the discharge pressure for spring-loaded devices;
- (c) The reference temperature corresponding to the rated pressure for frangible discs;

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- (d) The allowable temperature tolerance for fusible elements; and
- (e) The rated flow capacity of the spring-loaded pressure relief devices, frangible discs or fusible elements in standard cubic metres of air per second (m³/s);
- (f) The cross sectional flow areas of the spring loaded pressure-relief devices, frangible discs and fusible elements in mm².

When practicable, the following information shall also be shown:

- (g) The manufacturer's name and relevant catalogue number of the device.

6.7.2.13.2 The rated flow capacity marked on the spring-loaded pressure-relief devices shall be determined according to ISO 4126-1:2004 and ISO 4126-7:2004.

6.7.2.14 *Connections to pressure-relief devices*

6.7.2.14.1 Connections to pressure-relief devices shall be of sufficient size to enable the required discharge to pass unrestricted to the safety device. No stop-valve shall be installed between the shell and the pressure-relief devices except where duplicate devices are provided for maintenance or other reasons and the stop-valves serving the devices actually in use are locked open or the stop-valves are interlocked so that at least one of the duplicate devices is always in use. There shall be no obstruction in an opening leading to a vent or pressure-relief device which might restrict or cut-off the flow from the shell to that device. Vents or pipes from the pressure-relief device outlets, when used, shall deliver the relieved vapour or liquid to the atmosphere in conditions of minimum back-pressure on the relieving devices.

6.7.2.15 *Siting of pressure-relief devices*

6.7.2.15.1 Each pressure-relief device inlet shall be situated on top of the shell in a position as near the longitudinal and transverse centre of the shell as reasonably practicable. All pressure-relief device inlets shall under maximum filling conditions be situated in the vapour space of the shell and the devices shall be so arranged as to ensure the escaping vapour is discharged unrestrictedly. For flammable substances, the escaping vapour shall be directed away from the shell in such a manner that it cannot impinge upon the shell. Protective devices which deflect the flow of vapour are permissible provided the required relief-device capacity is not reduced.

6.7.2.15.2 Arrangements shall be made to prevent access to the pressure-relief devices by unauthorized persons and to protect the devices from damage caused by the portable tank overturning.

6.7.2.16 *Gauging devices*

6.7.2.16.1 Glass level-gauges and gauges made of other fragile material, which are in direct communication with the contents of the tank shall not be used.

6.7.2.17 *Portable tank supports, frameworks, lifting and tie-down attachments*

6.7.2.17.1 Portable tanks shall be designed and constructed with a support structure to provide a secure base during carriage. The forces specified in 6.7.2.2.12 and the safety factor specified in 6.7.2.2.13 shall be considered in this aspect of the design. Skids, frameworks, cradles or other similar structures are acceptable.

6.7.2.17.2 The combined stresses caused by portable tank mountings (e.g. cradles, framework, etc.) and portable tank lifting and tie-down attachments shall not cause excessive stress in any portion of the shell. Permanent lifting and tie-down attachments shall be fitted to all portable tanks.

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Preferably they shall be fitted to the portable tank supports but may be secured to reinforcing plates located on the shell at the points of support.

6.7.2.17.3 In the design of supports and frameworks the effects of environmental corrosion shall be taken into account.

6.7.2.17.4 Forklift pockets shall be capable of being closed off. The means of closing forklift pockets shall be a permanent part of the framework or permanently attached to the framework. Single compartment portable tanks with a length less than 3.65 m need not have closed off forklift pockets provided that:

- (a) The shell including all the fittings are well protected from being hit by the forklift blades; and
- (b) The distance between the centres of the forklift pockets is at least half of the maximum length of the portable tank.

6.7.2.17.5 When portable tanks are not protected during carriage, according to 4.2.1.2, the shells and service equipment shall be protected against damage to the shell and service equipment resulting from lateral or longitudinal impact or overturning. External fittings shall be protected so as to preclude the release of the shell contents upon impact or overturning of the portable tank on its fittings. Examples of protection include:

- (a) Protection against lateral impact which may consist of longitudinal bars protecting the shell on both sides at the level of the median line;
- (b) Protection of the portable tank against overturning which may consist of reinforcement rings or bars fixed across the frame;
- (c) Protection against rear impact which may consist of a bumper or frame;
- (d) Protection of the shell against damage from impact or overturning by use of an ISO frame in accordance with ISO 1496-3:1995.

6.7.2.18 *Design approval*

6.7.2.18.1 The competent authority or its authorized body shall issue a design approval certificate for any new design of a portable tank. This certificate shall attest that a portable tank has been surveyed by that authority, is suitable for its intended purpose and meets the requirements of this Chapter and where appropriate, the provisions for substances provided in Chapter 4.2 and in Table A of Chapter 3.2. When a series of portable tanks are manufactured without change in the design, the certificate shall be valid for the entire series. The certificate shall refer to the prototype test report, the substances or group of substances allowed to be carried, the materials of construction of the shell and lining (when applicable) and an approval number. The approval number shall consist of the distinguishing sign or mark of the State in whose territory the approval was granted, i.e. the distinguishing sign for use in international traffic as prescribed by the Convention on Road Traffic, Vienna 1968, and a registration number. Any alternative arrangements according to 6.7.1.2 shall be indicated on the certificate. A design approval may serve for the approval of smaller portable tanks made of materials of the same kind and thickness, by the same fabrication techniques and with identical supports, equivalent closures and other appurtenances.

6.7.2.18.2 The prototype test report for the design approval shall include at least the following:

- (a) The results of the applicable framework test specified in ISO 1496-3:1995;
- (b) The results of the initial inspection and test according to 6.7.2.19.3; and
- (c) The results of the impact test in 6.7.2.19.1, when applicable.

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6.7.2.19 *Inspection and testing*

- 6.7.2.19.1 Portable tanks meeting the definition of container in the International Convention for Safe Containers (CSC), 1972, as amended, shall not be used unless they are successfully qualified by subjecting a representative prototype of each design to the Dynamic, Longitudinal Impact Test prescribed in the Manual of Tests and Criteria, Part IV, Section 41.
- 6.7.2.19.2 The shell and items of equipment of each portable tank shall be inspected and tested before being put into service for the first time (initial inspection and test) and thereafter at not more than five-year intervals (5 year periodic inspection and test) with an intermediate periodic inspection and test (2.5 year periodic inspection and test) midway between the 5 year periodic inspections and tests. The 2.5 year inspection and test may be performed within 3 months of the specified date. An exceptional inspection and test shall be performed regardless of the date of the last periodic inspection and test when necessary according to 6.7.2.19.7.
- 6.7.2.19.3 The initial inspection and test of a portable tank shall include a check of the design characteristics, an internal and external examination of the portable tank and its fittings with due regard to the substances to be carried, and a pressure test. Before the portable tank is placed into service, a leakproofness test and a check of the satisfactory operation of all service equipment shall also be performed. When the shell and its fittings have been pressure-tested separately, they shall be subjected together after assembly to a leakproofness test.
- 6.7.2.19.4 The 5-year periodic inspection and test shall include an internal and external examination and, as a general rule, a hydraulic pressure test. Sheathing, thermal insulation and the like shall be removed only to the extent required for reliable appraisal of the condition of the portable tank. When the shell and equipment have been pressure-tested separately, they shall be subjected together after assembly to a leakproofness test.
- 6.7.2.19.5 The intermediate 2.5 year periodic inspection and test shall at least include an internal and external examination of the portable tank and its fittings with due regard to the substances intended to be carried, a leakproofness test and a check of the satisfactory operation of all service equipment. Sheathing, thermal insulation and the like shall be removed only to the extent required for reliable appraisal of the condition of the portable tank. For portable tanks intended for the carriage of a single substance, the 2.5 year internal examination may be waived or substituted by other test methods or inspection procedures specified by the competent authority or its authorized body.
- 6.7.2.19.6 A portable tank may not be filled and offered for carriage after the date of expiry of the last 5 year or 2.5 year periodic inspection and test as required by 6.7.2.19.2. However, a portable tank filled prior to the date of expiry of the last periodic inspection and test may be carried for a period not to exceed three months beyond the date of expiry of the last periodic test or inspection. In addition, a portable tank may be carried after the date of expiry of the last periodic test and inspection:
- (a) After emptying but before cleaning, for purposes of performing the next required test or inspection prior to refilling; and
 - (b) Unless otherwise approved by the competent authority, for a period not to exceed six months beyond the date of expiry of the last periodic test or inspection, in order to allow the return of dangerous goods for proper disposal or recycling. Reference to this exemption shall be mentioned in the transport document.

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- 6.7.2.19.7 The exceptional inspection and test is necessary when the portable tank shows evidence of damaged or corroded areas, or leakage, or other conditions that indicate a deficiency that could affect the integrity of the portable tank. The extent of the exceptional inspection and test shall depend on the amount of damage or deterioration of the portable tank. It shall include at least the 2.5 year inspection and test according to 6.7.2.19.5.
- 6.7.2.19.8 The internal and external examinations shall ensure that:
- (a) The shell is inspected for pitting, corrosion, or abrasions, dents, distortions, defects in welds or any other conditions, including leakage, that might render the portable tank unsafe for carriage;
 - (b) The piping, valves, heating/cooling system, and gaskets are inspected for corroded areas, defects, or any other conditions, including leakage, that might render the portable tank unsafe for filling, discharge or carriage;
 - (c) Devices for tightening manhole covers are operative and there is no leakage at manhole covers or gaskets;
 - (d) Missing or loose bolts or nuts on any flanged connection or blank flange are replaced or tightened;
 - (e) All emergency devices and valves are free from corrosion, distortion and any damage or defect that could prevent their normal operation. Remote closure devices and self-closing stop-valves shall be operated to demonstrate proper operation;
 - (f) Linings, if any, are inspected in accordance with criteria outlined by the lining manufacturer;
 - (g) Required markings on the portable tank are legible and in accordance with the applicable requirements; and
 - (h) The framework, supports and arrangements for lifting the portable tank are in a satisfactory condition.
- 6.7.2.19.9 The inspections and tests in 6.7.2.19.1, 6.7.2.19.3, 6.7.2.19.4, 6.7.2.19.5 and 6.7.2.19.7 shall be performed or witnessed by an expert approved by the competent authority or its authorized body. When the pressure test is a part of the inspection and test, the test pressure shall be the one indicated on the data plate of the portable tank. While under pressure, the portable tank shall be inspected for any leaks in the shell, piping or equipment.
- 6.7.2.19.10 In all cases when cutting, burning or welding operations on the shell have been effected, that work shall be to the approval of the competent authority or its authorized body taking into account the pressure vessel code used for the construction of the shell. A pressure test to the original test pressure shall be performed after the work is completed.
- 6.7.2.19.11 When evidence of any unsafe condition is discovered, the portable tank shall not be returned to service until it has been corrected and the test is repeated and passed. .

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6.7.2.20 Marking

6.7.2.20.1 Every portable tank shall be fitted with a corrosion resistant metal plate permanently attached to the portable tank in a conspicuous place readily accessible for inspection. When for reasons of portable tank arrangements the plate cannot be permanently attached to the shell, the shell shall be marked with at least the information required by the pressure vessel code. As a minimum, at least the following information shall be marked on the plate by stamping or by any other similar method:

- (a) Owner information
 - (i) Owner's registration number;
- (b) Manufacturing information
 - (i) Country of manufacture;
 - (ii) Year of manufacture;
 - (iii) Manufacturer's name or mark;
 - (iv) Manufacturer's serial number;
- (c) Approval information

- (i) The United Nations packaging symbol



;

This symbol shall not be used for any purpose other than certifying that a packaging, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6 or 6.7²;

- (ii) Approval country;
- (iii) Authorized body for the design approval;
- (iv) Design approval number;
- (v) Letters 'AA', if the design was approved under alternative arrangements (see 6.7.1.2);
- (vi) Pressure vessel code to which the shell is designed;
- (d) Pressures
 - (i) MAWP (in bar gauge or kPa gauge)³;
 - (ii) Test pressure (in bar gauge or kPa gauge)³;
 - (iii) Initial pressure test date (month and year);
 - (iv) Identification mark of the initial pressure test witness;
 - (v) External design pressure⁴ (in bar gauge or kPa gauge)³;
 - (vi) MAWP for heating/cooling system (in bar gauge or kPa gauge)³ (when applicable);

² This symbol is also used to certify that flexible bulk containers authorized for others modes of transport complies with the requirements in Chapter 6.8 of the UN Model Regulations.

³ The unit used shall be indicated.

⁴ See 6.7.2.2.10.


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- (e) Temperatures
 - (i) Design temperature range (in °C)³;
- (f) Materials
 - (i) Shell material(s) and material standard reference(s);
 - (ii) Equivalent thickness in reference steel (in mm)³;
 - (iii) Lining material (when applicable);
- (g) Capacity
 - (i) Tank water capacity at 20 °C (in litres)³;
This indication is to be followed by the symbol "S" when the shell is divided by surge plates into sections of not more than 7 500 litres capacity;
 - (ii) Water capacity of each compartment at 20 °C (in litres)³ (when applicable, for multi-compartment tanks).
This indication is to be followed by the symbol "S" when the compartment is divided by surge plates into sections of not more than 7 500 litres capacity;
- (h) Periodic inspections and tests
 - (i) Type of the most recent periodic test (2.5-year, 5-year or exceptional);
 - (ii) Date of the most recent periodic test (month and year);
 - (iii) Test pressure (in bar gauge or kPa gauge)³ of the most recent periodic test (if applicable);
 - (iv) Identification mark of the authorized body who performed or witnessed the most recent test.

³ *The unit used shall be indicated.*

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Figure 6.7.2.20.1: Example of identification plate marking

Owner's registration number							
MANUFACTURING INFORMATION							
Country of manufacture							
Year of manufacture							
Manufacturer							
Manufacturer's serial number							
APPROVAL INFORMATION							
	Approval country						
	Authorized body for design approval						
	Design approval number						
					'AA' (if applicable)		
Shell design code (pressure vessel code)							
PRESSURES							
MAWP bar or kPa							
Test pressure bar or kPa							
Initial pressure test date:		(mm/yyyy)		Witness stamp:			
External design pressure bar or kPa							
MAWP for heating/cooling system bar or kPa (when applicable)							
TEMPERATURES							
Design temperature range °C to °C							
MATERIALS							
Shell material(s) and material standard reference(s)							
Equivalent thickness in reference steel mm							
Lining material (when applicable)							
CAPACITY							
Tank water capacity at 20 °C				litres 'S' (if applicable)			
Water capacity of compartment ___ at 20 °C (when applicable, for multi-compartment tanks)				litres 'S' (if applicable)			
PERIODIC INSPECTIONS / TESTS							
Test type	Test date	Witness stamp and test pressure ^a		Test type	Test date	Witness stamp and test pressure ^a	
	(mm/yyyy)	bar or kPa			(mm/yyyy)	bar or kPa	

^a Test pressure if applicable.

6.7.2.20.2 The following particulars shall be marked either on the portable tank itself or on a metal plate firmly secured to the portable tank:

Name of the operator

Maximum permissible gross mass (MPGM) _____ kg

Unladen (tare) mass _____ kg

Portable tank instruction in accordance with 4.2.5.2.6

NOTE: For the identification of the substances being carried, see also Part 5.

6.7.2.20.3 If a portable tank is designed and approved for handling in open seas, the words "OFFSHORE PORTABLE TANK" shall be marked on the identification plate.

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6.7.3 Requirements for the design, construction, inspection and testing of portable tanks intended for the carriage of non-refrigerated liquefied gases

NOTE: These requirements also apply to portable tanks intended for the carriage of chemicals under pressure (UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505).

6.7.3.1 Definitions

For the purposes of this section:

Alternative arrangement means an approval granted by the competent authority for a portable tank or MEGC that has been designed, constructed or tested to technical requirements or testing methods other than those specified in this Chapter;

Portable tank means a multimodal tank having a capacity of more than 450 litres used for the carriage of non-refrigerated liquefied gases of Class 2. The portable tank includes a shell fitted with service equipment and structural equipment necessary for the carriage of gases. The portable tank shall be capable of being filled and discharged without the removal of its structural equipment. It shall possess stabilizing members external to the shell, and shall be capable of being lifted when full. It shall be designed primarily to be loaded onto a vehicle, wagon or sea-going or inland navigation vessel and shall be equipped with skids, mountings or accessories to facilitate mechanical handling. Tank-vehicles, tank-wagons, non-metallic tanks, intermediate bulk containers (IBCs), gas cylinders and large receptacles are not considered to fall within the definition for portable tanks;

Shell means the part of the portable tank which retains the non-refrigerated liquefied gas intended for carriage (tank proper), including openings and their closures, but does not include service equipment or external structural equipment;

Service equipment means measuring instruments and filling, discharge, venting, safety and insulating devices;

Structural equipment means the reinforcing, fastening, protective and stabilizing members external to the shell;

Maximum allowable working pressure (MAWP) means a pressure that shall be not less than the highest of the following pressures measured at the top of the shell while in operating position, but in no case less than 7 bar:

- (a) The maximum effective gauge pressure allowed in the shell during filling or discharge; or
- (b) The maximum effective gauge pressure to which the shell is designed, which shall be:
 - (i) for a non-refrigerated liquefied gas listed in the portable tank instruction T50 in 4.2.5.2.6, the MAWP (in bar) given in T50 portable tank instruction for that gas;
 - (ii) for other non-refrigerated liquefied gases, not less than the sum of:
 - the absolute vapour pressure (in bar) of the non-refrigerated liquefied gas at the design reference temperature minus 1 bar; and
 - the partial pressure (in bar) of air or other gases in the ullage space being determined by the design reference temperature and the liquid phase expansion due to an increase of the mean bulk temperature of $t_r - t_f$ (t_f = filling temperature, usually 15 °C, t_r = maximum mean bulk temperature, 50 °C);

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- (iii) for chemicals under pressure, the MAWP (in bar) given in T50 portable tank instruction for the liquefied gas portion of the propellants listed in T50 in 4.2.5.2.6;

Design pressure means the pressure to be used in calculations required by a recognized pressure vessel code. The design pressure shall be not less than the highest of the following pressures:

- (a) The maximum effective gauge pressure allowed in the shell during filling or discharge; or
- (b) The sum of:
 - (i) the maximum effective gauge pressure to which the shell is designed as defined in (b) of the MAWP definition (see above); and
 - (ii) a head pressure determined on the basis of the static forces specified in 6.7.3.2.9, but not less than 0.35 bar;

Test pressure means the maximum gauge pressure at the top of the shell during the pressure test;

Leakproofness test means a test using gas subjecting the shell and its service equipment to an effective internal pressure of not less than 25% of the MAWP;

Maximum permissible gross mass (MPGM) means the sum of the tare mass of the portable tank and the heaviest load authorized for carriage;

Reference steel means a steel with a tensile strength of 370 N/mm² and an elongation at fracture of 27%;

Mild steel means a steel with a guaranteed minimum tensile strength of 360 N/mm² to 440 N/mm² and a guaranteed minimum elongation at fracture conforming to 6.7.3.3.3.3;

Design temperature range for the shell shall be -40 °C to 50 °C for non-refrigerated liquefied gases carried under ambient conditions. More severe design temperatures shall be considered for portable tanks subjected to severe climatic conditions;

Design reference temperature means the temperature at which the vapour pressure of the contents is determined for the purpose of calculating the MAWP. The design reference temperature shall be less than the critical temperature of the non-refrigerated liquefied gas or liquefied gas propellants of chemicals under pressure intended to be carried to ensure that the gas at all times is liquefied. This value for each portable tank type is as follows:

- (a) Shell with a diameter of 1.5 metres or less: 65 °C;
- (b) Shell with a diameter of more than 1.5 metres:
 - (i) without insulation or sun shield: 60 °C;
 - (ii) with sun shield (see 6.7.3.2.12): 55 °C; and
 - (iii) with insulation (see 6.7.3.2.12) : 50 °C;

Filling density means the average mass of non-refrigerated liquefied gas per litre of shell capacity (kg/l). The filling density is given in portable tank instruction T50 in 4.2.5.2.6.

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6.7.3.2 General design and construction requirements

- 6.7.3.2.1 Shells shall be designed and constructed in accordance with the requirements of a pressure vessel code recognized by the competent authority. Shells shall be made of steel suitable for forming. The materials shall in principle conform to national or international material standards. For welded shells, only a material whose weldability has been fully demonstrated shall be used. Welds shall be skilfully made and afford complete safety. When the manufacturing process or the materials make it necessary, the shells shall be suitability heat-treated to guarantee adequate toughness in the weld and in the heat affected zones. In choosing the material the design temperature range shall be taken into account with respect to risk of brittle fracture, to stress corrosion cracking and to resistance to impact. When fine grain steel is used, the guaranteed value of the yield strength shall be not more than 460 N/mm² and the guaranteed value of the upper limit of the tensile strength shall be not more than 725 N/mm² according to the material specification. Portable tank materials shall be suitable for the external environment in which they may be carried.
- 6.7.3.2.2 Portable tank shells, fittings and pipework shall be constructed of materials which are:
- (a) Substantially immune to attack by the non-refrigerated liquefied gas(es) intended to be carried; or
 - (b) Properly passivated or neutralized by chemical reaction.
- 6.7.3.2.3 Gaskets shall be made of materials compatible with the non-refrigerated liquefied gas(es) intended to be carried.
- 6.7.3.2.4 Contact between dissimilar metals which could result in damage by galvanic action shall be avoided.
- 6.7.3.2.5 The materials of the portable tank, including any devices, gaskets, and accessories, shall not adversely affect the non-refrigerated liquefied gas(es) intended for carriage in the portable tank.
- 6.7.3.2.6 Portable tanks shall be designed and constructed with supports to provide a secure base during carriage and with suitable lifting and tie-down attachments.
- 6.7.3.2.7 Portable tanks shall be designed to withstand, without loss of contents, at least the internal pressure due to the contents, and the static, dynamic and thermal loads during normal conditions of handling and carriage. The design shall demonstrate that the effects of fatigue, caused by repeated application of these loads through the expected life of the portable tank, have been taken into account.
- 6.7.3.2.8 Shells shall be designed to withstand an external pressure of at least 0.4 bar (gauge pressure) above the internal pressure without permanent deformation. When the shell is to be subjected to a significant vacuum before filling or during discharge it shall be designed to withstand an external pressure of at least 0.9 bar (gauge pressure) above the internal pressure and shall be proven at that pressure.
- 6.7.3.2.9 Portable tanks and their fastenings shall, under the maximum permissible load, be capable of absorbing the following separately applied static forces:
- (a) In the direction of travel: twice the MPGM multiplied by the acceleration due to gravity (g)¹;

¹ For calculation purposes $g = 9.81 \text{ m/s}^2$.

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- (b) Horizontally at right angles to the direction of travel: the MPGM (when the direction of travel is not clearly determined, the forces shall be equal to twice the MPGM) multiplied by the acceleration due to gravity (g)¹;
- (c) Vertically upwards: the MPGM multiplied by the acceleration due to gravity (g)¹; and
- (d) Vertically downwards: twice the MPGM (total loading including the effect of gravity) multiplied by the acceleration due to gravity (g)¹.

6.7.3.2.10 Under each of the forces in 6.7.3.2.9, the safety factor to be observed shall be as follows:

- (a) For steels having a clearly defined yield point, a safety factor of 1.5 in relation to the guaranteed yield strength; or
- (b) For steels with no clearly defined yield point, a safety factor of 1.5 in relation to the guaranteed 0.2% proof strength and, for austenitic steels, the 1% proof strength.

6.7.3.2.11 The values of yield strength or proof strength shall be the values according to national or international material standards. When austenitic steels are used, the specified minimum values of yield strength and proof strength according to the material standards may be increased by up to 15% when these greater values are attested in the material inspection certificate. When no material standard exists for the steel in question, the value of yield strength or proof strength used shall be approved by the competent authority.

6.7.3.2.12 When the shells intended for the carriage of non-refrigerated liquefied gases are equipped with thermal insulation, the thermal insulation systems shall satisfy the following requirements:

- (a) It shall consist of a shield covering not less than the upper third but not more than the upper half of the surface of the shell and separated from the shell by an air space about 40 mm across;
- (b) It shall consist of a complete cladding of adequate thickness of insulating materials protected so as to prevent the ingress of moisture and damage under normal conditions of carriage and so as to provide a thermal conductance of not more than $0.67 \text{ (W.m}^{-2}.\text{K}^{-1}\text{)}$;
- (c) When the protective covering is so closed as to be gas-tight, a device shall be provided to prevent any dangerous pressure from developing in the insulating layer in the event of inadequate gas tightness of the shell or of its items of equipment; and
- (d) The thermal insulation shall not inhibit access to the fittings and discharge devices.

6.7.3.2.13 Portable tanks intended for the carriage of flammable non-refrigerated liquefied gases shall be capable of being electrically earthed.

6.7.3.3 *Design criteria*

6.7.3.3.1 Shells shall be of a circular cross-section.

6.7.3.3.2 Shells shall be designed and constructed to withstand a test pressure not less than 1.3 times the design pressure. The shell design shall take into account the minimum MAWP values provided in portable tank instruction T50 in 4.2.5.2.6 for each non-refrigerated liquefied gas intended for carriage. Attention is drawn to the minimum shell thickness requirements for these shells specified in 6.7.3.4.

6.7.3.3.3 For steels exhibiting a clearly defined yield point or characterized by a guaranteed proof strength (0.2% proof strength, generally, or 1% proof strength for austenitic steels) the

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primary membrane stress σ (sigma) in the shell shall not exceed 0.75 Re or 0.50 Rm, whichever is lower, at the test pressure, where:

Re = yield strength in N/mm², or 0.2% proof strength or, for austenitic steels, 1% proof stress;

Rm = minimum tensile strength in N/mm².

- 6.7.3.3.3.1 The values of Re and Rm to be used shall be the specified minimum values according to national or international material standards. When austenitic steels are used, the specified minimum values for Re and Rm according to the material standards may be increased by up to 15% when these greater values are attested in the material inspection certificate. When no material standard exists for the steel in question, the values of Re and Rm used shall be approved by the competent authority or its authorized body.
- 6.7.3.3.3.2 Steels which have a Re/Rm ratio of more than 0.85 are not allowed for the construction of welded shells. The values of Re and Rm to be used in determining this ratio shall be the values specified in the material inspection certificate.
- 6.7.3.3.3.3 Steels used in the construction of shells shall have an elongation at fracture, in %, of not less than 10 000/Rm with an absolute minimum of 16% for fine grain steels and 20% for other steels.
- 6.7.3.3.3.4 For the purpose of determining actual values for materials, it shall be noted that for sheet metal, the axis of the tensile test specimen shall be at right angles (transversely) to the direction of rolling. The permanent elongation at fracture shall be measured on test specimens of rectangular cross sections in accordance with ISO 6892:1998 using a 50 mm gauge length.

6.7.3.4 *Minimum shell thickness*

- 6.7.3.4.1 The minimum shell thickness shall be the greater thickness based on:
- (a) The minimum thickness determined in accordance with the requirements in 6.7.3.4; and
 - (b) The minimum thickness determined in accordance with the recognized pressure vessel code including the requirements in 6.7.3.3.
- 6.7.3.4.2 The cylindrical portions, ends (heads) and manhole covers of shells of not more than 1.80 m in diameter shall be not less than 5 mm thick in the reference steel or of equivalent thickness in the steel to be used. Shells of more than 1.80 m in diameter shall be not less than 6 mm thick in the reference steel or of equivalent thickness in the steel to be used.
- 6.7.3.4.3 The cylindrical portions, ends (heads) and manhole covers of all shells shall be not less than 4 mm thick regardless of the material of construction.
- 6.7.3.4.4 The equivalent thickness of a steel other than the thickness prescribed for the reference steel in 6.7.3.4.2 shall be determined using the following formula:

$$e_1 = \frac{21,4e_0}{\sqrt[3]{Rm_1 \times A_1}}$$

where:

e_1 = required equivalent thickness (in mm) of the steel to be used;

e_0 = minimum thickness (in mm) for the reference steel specified in 6.7.3.4.2;

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R_{m1} = guaranteed minimum tensile strength (in N/mm^2) of the steel to be used (see 6.7.3.3.3);

A_1 = guaranteed minimum elongation at fracture (in %) of the steel to be used according to national or international standards.

6.7.3.4.5 In no case shall the wall thickness be less than that prescribed in 6.7.3.4.1 to 6.7.3.4.3. All parts of the shell shall have a minimum thickness as determined by 6.7.3.4.1 to 6.7.3.4.3. This thickness shall be exclusive of any corrosion allowance.

6.7.3.4.6 When mild steel is used (see 6.7.3.1), calculation using the formula in 6.7.3.4.4 is not required.

6.7.3.4.7 There shall be no sudden change of plate thickness at the attachment of the ends (heads) to the cylindrical portion of the shell.

6.7.3.5 *Service equipment*

6.7.3.5.1 Service equipment shall be so arranged as to be protected against the risk of being wrenched off or damaged during handling and carriage. When the connection between the frame and the shell allows relative movement between the sub-assemblies, the equipment shall be so fastened as to permit such movement without risk of damage to working parts. The external discharge fittings (pipe sockets, shut-off devices), the internal stop-valve and its seating shall be protected against the danger of being wrenched off by external forces (for example using shear sections). The filling and discharge devices (including flanges or threaded plugs) and any protective caps shall be capable of being secured against unintended opening.

6.7.3.5.2 All openings with a diameter of more than 1.5 mm in shells of portable tanks, except openings for pressure-relief devices, inspection openings and closed bleed holes, shall be fitted with at least three mutually independent shut-off devices in series, the first being an internal stop-valve, excess flow valve or equivalent device, the second being an external stop-valve and the third being a blank flange or equivalent device.

6.7.3.5.2.1 When a portable tank is fitted with an excess flow valve, the excess flow valve shall be so fitted that its seating is inside the shell or inside a welded flange or, when fitted externally, its mountings shall be designed so that in the event of impact its effectiveness shall be maintained. The excess flow valves shall be selected and fitted so as to close automatically when the rated flow specified by the manufacturer is reached. Connections and accessories leading to or from such a valve shall have a capacity for a flow more than the rated flow of the excess flow valve.

6.7.3.5.3 For filling and discharge openings, the first shut-off device shall be an internal stop-valve and the second shall be a stop-valve placed in an accessible position on each discharge and filling pipe.

6.7.3.5.4 For filling and discharge bottom openings of portable tanks intended for the carriage of flammable and/or toxic non-refrigerated liquefied gases or chemicals under pressure the internal stop-valve shall be a quick closing safety device which closes automatically in the event of unintended movement of the portable tank during filling or discharge or fire engulfment. Except for portable tanks having a capacity of not more than 1 000 litres, it shall be possible to operate this device by remote control.

6.7.3.5.5 In addition to filling, discharge and gas pressure equalizing orifices, shells may have openings in which gauges, thermometers and manometers can be fitted. Connections for such instruments shall be made by suitable welded nozzles or pockets and not be screwed connections through the shell.

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- 6.7.3.5.6 All portable tanks shall be fitted with manholes or other inspection openings of suitable size to allow for internal inspection and adequate access for maintenance and repair of the interior.
- 6.7.3.5.7 External fittings shall be grouped together so far as reasonably practicable.
- 6.7.3.5.8 Each connection on a portable tank shall be clearly marked to indicate its function.
- 6.7.3.5.9 Each stop-valve or other means of closure shall be designed and constructed to a rated pressure not less than the MAWP of the shell taking into account the temperatures expected during carriage. All stop-valves with a screwed spindle shall close by a clockwise motion of the handwheel. For other stop-valves the position (open and closed) and direction of closure shall be clearly indicated. All stop-valves shall be designed to prevent unintentional opening.
- 6.7.3.5.10 Piping shall be designed, constructed and installed so as to avoid the risk of damage due to thermal expansion and contraction, mechanical shock and vibration. All piping shall be of suitable metallic material. Welded pipe joints shall be used wherever possible.
- 6.7.3.5.11 Joints in copper tubing shall be brazed or have an equally strong metal union. The melting point of brazing materials shall be no lower than 525 °C. The joints shall not decrease the strength of tubing as may happen when cutting threads.
- 6.7.3.5.12 The burst pressure of all piping and pipe fittings shall be not less than the highest of four times the MAWP of the shell or four times the pressure to which it may be subjected in service by the action of a pump or other device (except pressure-relief devices).
- 6.7.3.5.13 Ductile metals shall be used in the construction of valves and accessories.

6.7.3.6 *Bottom openings*

- 6.7.3.6.1 Certain non-refrigerated liquefied gases shall not be carried in portable tanks with bottom openings when portable tank instruction T50 in 4.2.5.2.6 indicates that bottom openings are not allowed. There shall be no openings below the liquid level of the shell when it is filled to its maximum permissible filling limit.

6.7.3.7 *Pressure-relief devices*

- 6.7.3.7.1 Portable tanks shall be provided with one or more spring-loaded pressure-relief devices. The pressure-relief devices shall open automatically at a pressure not less than the MAWP and be fully open at a pressure equal to 110% of the MAWP. These devices shall, after discharge, close at a pressure not lower than 10% below the pressure at which discharge starts and shall remain closed at all lower pressures. The pressure-relief devices shall be of a type that will resist dynamic forces including liquid surge. Frangible discs not in series with a spring-loaded pressure-relief device are not permitted.
- 6.7.3.7.2 Pressure-relief devices shall be designed to prevent the entry of foreign matter, the leakage of gas and the development of any dangerous excess pressure.
- 6.7.3.7.3 Portable tanks intended for the carriage of certain non-refrigerated liquefied gases identified in portable tank instruction T50 in 4.2.5.2.6 shall have a pressure-relief device approved by the competent authority. Unless a portable tank in dedicated service is fitted with an approved relief device constructed of materials compatible with the load, such device shall comprise a frangible disc preceding a spring-loaded device. The space between the frangible disc and the device shall be provided with a pressure gauge or a suitable tell-tale indicator. This arrangement permits the detection of disc rupture, pinholing or leakage which could cause a malfunction of the pressure-relief device. The frangible discs shall rupture at a nominal pressure 10% above the start-to-discharge pressure of the relief device.

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6.7.3.7.4 In the case of multi-purpose portable tanks, the pressure-relief devices shall open at a pressure indicated in 6.7.3.7.1 for the gas having the highest maximum allowable pressure of the gases allowed to be carried in the portable tank.

6.7.3.8 *Capacity of relief devices*

6.7.3.8.1 The combined delivery capacity of the relief devices shall be sufficient that, in the event of total fire engulfment, the pressure (including accumulation) inside the shell does not exceed 120% of the MAWP. Spring-loaded relief devices shall be used to achieve the full relief capacity prescribed. In the case of multi-purpose tanks, the combined delivery capacity of the pressure-relief devices shall be taken for the gas which requires the highest delivery capacity of the gases allowed to be carried in portable tanks.

6.7.3.8.1.1 To determine the total required capacity of the relief devices, which shall be regarded as being the sum of the individual capacities of the several devices, the following formula⁵ shall be used:

$$Q = 12.4 \frac{FA^{0.82}}{LC} \sqrt{\frac{ZT}{M}}$$

where:

Q = minimum required rate of discharge in cubic metres of air per second (m³/s) at standard conditions: 1 bar and 0 °C (273 K);

F = is a coefficient with the following value:

for uninsulated shells: F = 1;

for insulated shells: F = U(649-t)/13.6 but in no case is less than 0.25

where:

U = thermal conductance of the insulation, in Kw.m².K⁻¹, at 38 °C;

t = actual temperature of the non-refrigerated liquefied gas during filling (°C); when this temperature is unknown, let t=15 °C;

The value of F given above for insulated shells may be taken provided that the insulation is in accordance with 6.7.3.8.1.2;

where:

A = total external surface area of shell in square metres;

Z = the gas compressibility factor in the accumulating condition (when this factor is unknown, let Z=1.0);

T = absolute temperature in Kelvin (°C + 273) above the pressure relief devices in the accumulating condition;

⁵ This formula applies only to non-refrigerated liquefied gases which have critical temperatures well above the temperature at the accumulating condition. For gases which have critical temperatures near or below the temperature at the accumulating condition, the calculation of the pressure-relief device delivery capacity shall consider further thermodynamic properties of the gas (see for example CGA S-1.2-2003 "Pressure Relief Device Standards - Part 2 - Cargo and Portable Tanks for Compressed Gases").

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L = the latent heat of vaporization of the liquid, in kJ/kg, in the accumulating condition;

M = molecular mass of the discharged gas;

C = a constant which is derived from one of the following formulae as a function of the ratio k of specific heats

$$k = \frac{c_p}{c_v}$$

where

c_p is the specific heat at constant pressure; and

c_v is the specific heat at constant volume.

when $k > 1$:

$$C = \sqrt{k \left(\frac{2}{k+1} \right)^{\frac{k+1}{k-1}}}$$

when $k = 1$ or k is unknown:

$$C = \frac{1}{\sqrt{e}} = 0.607$$

where e is the mathematical constant 2.7183

C may also be taken from the following table:

k	C	k	C	k	C
1.00	0.607	1.26	0.660	1.52	0.704
1.02	0.611	1.28	0.664	1.54	0.707
1.04	0.615	1.30	0.667	1.56	0.710
1.06	0.620	1.32	0.671	1.58	0.713
1.08	0.624	1.34	0.674	1.60	0.716
1.10	0.628	1.36	0.678	1.62	0.719
1.12	0.633	1.38	0.681	1.64	0.722
1.14	0.637	1.40	0.685	1.66	0.725
1.16	0.641	1.42	0.688	1.68	0.728
1.18	0.645	1.44	0.691	1.70	0.731
1.20	0.649	1.46	0.695	2.00	0.770
1.22	0.652	1.48	0.698	2.20	0.793
1.24	0.656	1.50	0.701		

6.7.3.8.1.2 Insulation systems, used for the purpose of reducing the venting capacity, shall be approved by the competent authority or its authorized body. In all cases, insulation systems approved for this purpose shall:

- (a) Remain effective at all temperatures up to 649 °C; and
- (b) Be jacketed with a material having a melting point of 700 °C or greater.

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6.7.3.9 *Marking of pressure-relief devices*

6.7.3.9.1 Every pressure-relief device shall be plainly and permanently marked with the following particulars:

- (a) The pressure (in bar or kPa) at which it is set to discharge;
- (b) The allowable tolerance at the discharge pressure for spring-loaded devices;
- (c) The reference temperature corresponding to the rated pressure for frangible discs; and
- (d) The rated flow capacity of the device in standard cubic metres of air per second (m³/s).
- (e) The cross sectional flow areas of the spring loaded pressure-relief devices and frangible discs in mm².

When practicable, the following information shall also be shown:

- (f) The manufacturer's name and relevant catalogue number of the device.

6.7.3.9.2 The rated flow capacity marked on the pressure-relief devices shall be determined according to ISO 4126-1:2004 and ISO 4126-7:2004.

6.7.3.10 *Connections to pressure-relief devices*

6.7.3.10.1 Connections to pressure-relief devices shall be of sufficient size to enable the required discharge to pass unrestricted to the safety device. No stop-valve shall be installed between the shell and the pressure-relief devices except when duplicate devices are provided for maintenance or other reasons and the stop-valves serving the devices actually in use are locked open or the stop-valves are interlocked so that at least one of the duplicate devices is always operable and capable of meeting the requirements of 6.7.3.8. There shall be no obstruction in an opening leading to a vent or pressure-relief device which might restrict or cut-off the flow from the shell to that device. Vents from the pressure-relief devices, when used, shall deliver the relieved vapour or liquid to the atmosphere in conditions of minimum back-pressure on the relieving device.

6.7.3.11 *Siting of pressure-relief devices*

6.7.3.11.1 Each pressure-relief device inlet shall be situated on top of the shell in a position as near the longitudinal and transverse centre of the shell as reasonably practicable. All pressure relief device inlets shall under maximum filling conditions be situated in the vapour space of the shell and the devices shall be so arranged as to ensure that the escaping vapour is discharged unrestrictedly. For flammable non-refrigerated liquefied gases, the escaping vapour shall be directed away from the shell in such a manner that it cannot impinge upon the shell. Protective devices which deflect the flow of vapour are permissible provided the required relief-device capacity is not reduced.

6.7.3.11.2 Arrangements shall be made to prevent access to the pressure-relief devices by unauthorized persons and to protect the devices from damage caused by the portable tank overturning.

6.7.3.12 *Gauging devices*

6.7.3.12.1 Unless a portable tank is intended to be filled by weight it shall be equipped with one or more gauging devices. Glass level-gauges and gauges made of other fragile material, which are in direct communication with the contents of the shell shall not be used.

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6.7.3.13 *Portable tank supports, frameworks, lifting and tie-down attachments*

- 6.7.3.13.1 Portable tanks shall be designed and constructed with a support structure to provide a secure base during carriage. The forces specified in 6.7.3.2.9 and the safety factor specified in 6.7.3.2.10 shall be considered in this aspect of the design. Skids, frameworks, cradles or other similar structures are acceptable.
- 6.7.3.13.2 The combined stresses caused by portable tank mountings (e.g. cradles, frameworks, etc.) and portable tank lifting and tie-down attachments shall not cause excessive stress in any portion of the shell. Permanent lifting and tie-down attachments shall be fitted to all portable tanks. Preferably they shall be fitted to the portable tank supports but may be secured to reinforcing plates located on the shell at the points of support.
- 6.7.3.13.3 In the design of supports and frameworks the effects of environmental corrosion shall be taken into account.
- 6.7.3.13.4 Forklift pockets shall be capable of being closed off. The means of closing forklift pockets shall be a permanent part of the framework or permanently attached to the framework. Single compartment portable tanks with a length less than 3.65 m need not have closed off forklift pockets provided that:
- (a) The shell and all the fittings are well protected from being hit by the forklift blades; and
 - (b) The distance between the centres of the forklift pockets is at least half of the maximum length of the portable tank.
- 6.7.3.13.5 When portable tanks are not protected during carriage, according to 4.2.2.3, the shells and service equipment shall be protected against damage to the shell and service equipment resulting from lateral or longitudinal impact or overturning. External fittings shall be protected so as to preclude the release of the shell contents upon impact or overturning of the portable tank on its fittings. Examples of protection include:
- (a) Protection against lateral impact which may consist of longitudinal bars protecting the shell on both sides at the level of the median line;
 - (b) Protection of the portable tank against overturning which may consist of reinforcement rings or bars fixed across the frame;
 - (c) Protection against rear impact which may consist of a bumper or frame;
 - (d) Protection of the shell against damage from impact or overturning by use of an ISO frame in accordance with ISO 1496-3:1995.

6.7.3.14 *Design approval*

- 6.7.3.14.1 The competent authority or its authorized body shall issue a design approval certificate for any new design of a portable tank. This certificate shall attest that a portable tank has been surveyed by that authority, is suitable for its intended purpose and meets the requirements of this Chapter and where appropriate the provisions for gases provided in portable tank instruction T50 in 4.2.5.2.6. When a series of portable tanks are manufactured without change in the design, the certificate shall be valid for the entire series. The certificate shall refer to the prototype test report, the gases allowed to be carried, the materials of construction of the shell and an approval number. The approval number shall consist of the distinguishing sign or mark of the State in whose territory the approval was granted, i.e. the distinguishing sign for use in international traffic, as prescribed by the Convention on Road Traffic, Vienna 1968, and a registration number. Any alternative arrangements according to 6.7.1.2 shall be indicated on the certificate. A design approval may serve for the approval

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of smaller portable tanks made of materials of the same kind and thickness, by the same fabrication techniques and with identical supports, equivalent closures and other appurtenances.

6.7.3.14.2 The prototype test report for the design approval shall include at least the following:

- (a) The results of the applicable framework test specified in ISO 1496-3:1995;
- (b) The results of the initial inspection and test in 6.7.3.15.3; and
- (c) The results of the impact test in 6.7.3.15.1, when applicable.

6.7.3.15 *Inspection and testing*

6.7.3.15.1 Portable tanks meeting the definition of container in the International Convention for Safe Containers (CSC), 1972, as amended, shall not be used unless they are successfully qualified by subjecting a representative prototype of each design to the Dynamic, Longitudinal Impact Test prescribed in the Manual of Tests and Criteria, Part IV, Section 41.

6.7.3.15.2 The shell and items of equipment of each portable tank shall be inspected and tested before being put into service for the first time (initial inspection and test) and thereafter at not more than five-year intervals (5 year periodic inspection and test) with an intermediate periodic inspection and test (2.5 year periodic inspection and test) midway between the 5 year periodic inspections and tests. The 2.5 year inspection and test may be performed within 3 months of the specified date. An exceptional inspection and test shall be performed regardless of the last periodic inspection and test when necessary according to 6.7.3.15.7.

6.7.3.15.3 The initial inspection and test of a portable tank shall include a check of the design characteristics, an internal and external examination of the portable tank and its fittings with due regard to the non-refrigerated liquefied gases to be carried, and a pressure test referring to the test pressures according to 6.7.3.3.2. The pressure test may be performed as a hydraulic test or by using another liquid or gas with the agreement of the competent authority or its authorized body. Before the portable tank is placed into service, a leakproofness test and a test of the satisfactory operation of all service equipment shall also be performed. When the shell and its fittings have been pressure-tested separately, they shall be subjected together after assembly to a leakproofness test. All welds subject to full stress level in the shell shall be inspected during the initial test by radiographic, ultrasonic, or another suitable non-destructive test method. This does not apply to the jacket.

6.7.3.15.4 The 5 year periodic inspection and test shall include an internal and external examination and, as a general rule, a hydraulic pressure test. Sheathing, thermal insulation and the like shall be removed only to the extent required for reliable appraisal of the condition of the portable tank. When the shell and equipment have been pressure-tested separately, they shall be subjected together after assembly to a leakproofness test.

6.7.3.15.5 The intermediate 2.5 year periodic inspection and test shall at least include an internal and external examination of the portable tank and its fittings with due regard to the non-refrigerated liquefied gases intended to be carried, a leakproofness test and a check of the satisfactory operation of all service equipment. Sheathing thermal insulation and the like shall be removed only to the extent required for reliable appraisal of the condition of the portable tank. For portable tanks intended for the carriage of a single non-refrigerated liquefied gas, the 2.5 year internal examination may be waived or substituted by other test methods or inspection procedures specified by the competent authority or its authorized body.

6.7.3.15.6 A portable tank may not be filled and offered for carriage after the date of expiry of the last 5 year or 2.5 year periodic inspection and test as required by 6.7.3.15.2. However a portable tank filled prior to the date of expiry of the last periodic inspection and test may be

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carried for a period not to exceed three months beyond the date of expiry of the last periodic test or inspection. In addition, a portable tank may be carried after the date of expiry of the last periodic test and inspection:

- (a) After emptying but before cleaning, for purposes of performing the next required test or inspection prior to refilling; and
- (b) Unless otherwise approved by the competent authority, for a period not to exceed six months beyond the date of expiry of the last periodic test or inspection, in order to allow the return of dangerous goods for proper disposal or recycling. Reference to this exemption shall be mentioned in the transport document.

6.7.3.15.7 The exceptional inspection and test is necessary when the portable tank shows evidence of damaged or corroded areas, or leakage, or other conditions that indicate a deficiency that could affect the integrity of the portable tank. The extent of the exceptional inspection and test shall depend on the amount of damage or deterioration of the portable tank. It shall include at least the 2.5 year inspection and test according to 6.7.3.15.5.

6.7.3.15.8 The internal and external examinations shall ensure that:

- (a) The shell is inspected for pitting, corrosion, or abrasions, dents, distortions, defects in welds or any other conditions, including leakage, that might render the portable tank unsafe for carriage;
- (b) The piping, valves, and gaskets are inspected for corroded areas, defects, or any other conditions, including leakage, that might render the portable tank unsafe for filling, discharge or carriage;
- (c) Devices for tightening manhole covers are operative and there is no leakage at manhole covers or gaskets;
- (d) Missing or loose bolts or nuts on any flanged connection or blank flange are replaced or tightened;
- (e) All emergency devices and valves are free from corrosion, distortion and any damage or defect that could prevent their normal operation. Remote closure devices and self-closing stop-valves shall be operated to demonstrate proper operation;
- (f) Required markings on the portable tank are legible and in accordance with the applicable requirements; and
- (g) The framework, the supports and the arrangements for lifting the portable tank are in satisfactory condition.

6.7.3.15.9 The inspections and tests in 6.7.3.15.1, 6.7.3.15.3, 6.7.3.15.4, 6.7.3.15.5 and 6.7.3.15.7 shall be performed or witnessed by an expert approved by the competent authority or its authorized body. When the pressure test is a part of the inspection and test, the test pressure shall be the one indicated on the data plate of the portable tank. While under pressure, the portable tank shall be inspected for any leaks in the shell, piping or equipment.


6.7.3.15.10 In all cases when cutting, burning or welding operations on the shell have been effected, that work shall be to the approval of the competent authority or its authorized body taking into account the pressure vessel code used for the construction of the shell. A pressure test to the original test pressure shall be performed after the work is completed.

6.7.3.15.11 When evidence of any unsafe condition is discovered, the portable tank shall not be returned to service until it has been corrected and the pressure test is repeated and passed.

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6.7.3.16 Marking

6.7.3.16.1 Every portable tank shall be fitted with a corrosion resistant metal plate permanently attached to the portable tank in a conspicuous place readily accessible for inspection. When for reasons of portable tank arrangements the plate cannot be permanently attached to the shell, the shell shall be marked with at least the information required by the pressure vessel code. As a minimum, at least the following information shall be marked on the plate by stamping or by any other similar method:

- (a) Owner information
 - (i) Owner's registration number;
- (b) Manufacturing information
 - (i) Country of manufacture;
 - (ii) Year of manufacture;
 - (iii) Manufacturer's name or mark;
 - (iv) Manufacturer's serial number;
- (c) Approval information
 - (i) The United Nations packaging symbol  ;

This symbol shall not be used for any purpose other than certifying that a packaging, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6 or 6.7²;

- (ii) Approval country;
- (iii) Authorized body for the design approval;
- (iv) Design approval number;
- (v) Letters 'AA', if the design was approved under alternative arrangements (see 6.7.1.2);
- (vi) Pressure vessel code to which the shell is designed;
- (d) Pressures
 - (i) MAWP (in bar gauge or kPa gauge)³;
 - (ii) Test pressure (in bar gauge or kPa gauge)³;
 - (iii) Initial pressure test date (month and year);
 - (iv) Identification mark of the initial pressure test witness;
 - (v) External design pressure⁶ (in bar gauge or kPa gauge)³;
- (e) Temperatures
 - (i) Design temperature range (in °C)³;
 - (ii) Design reference temperature (in °C)³;
- (f) Materials

² This symbol is also used to certify that flexible bulk containers authorized for others modes of transport complies with the requirements in Chapter 6.8 of the UN Model Regulations.


³ The unit used shall be indicated.

⁶ See 6.7.3.2.8.

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- (i) Shell material(s) and material standard reference(s);
- (ii) Equivalent thickness in reference steel (in mm)³;
- (g) Capacity
 - (i) Tank water capacity at 20 °C (in litres)³;
- (h) Periodic inspections and tests
 - (i) Type of the most recent periodic test (2.5-year, 5-year or exceptional);
 - (ii) Date of the most recent periodic test (month and year);
 - (iii) Test pressure (in bar gauge or kPa gauge)³ of the most recent periodic test (if applicable);
 - (iv) Identification mark of the authorized body who performed or witnessed the most recent test.

Figure 6.7.3.16.1: Example of identification plate marking

Owner's registration number							
MANUFACTURING INFORMATION							
Country of manufacture							
Year of manufacture							
Manufacturer							
Manufacturer's serial number							
APPROVAL INFORMATION							
	Approval country						
	Authorized body for design approval						
	Design approval number				'AA' (if applicable)		
Shell design code (pressure vessel code)							
PRESSURES							
MAWP					bar or kPa		
Test pressure					bar or kPa		
Initial pressure test date:		(mm/yyyy)	Witness stamp:				
External design pressure					bar or kPa		
TEMPERATURES							
Design temperature range					°C to °C		
Design reference temperature					°C		
MATERIALS							
Shell material(s) and material standard reference(s)							
Equivalent thickness in reference steel					mm		
CAPACITY							
Tank water capacity at 20 °C					litres		
PERIODIC INSPECTIONS / TESTS							
Test type	Test date	Witness stamp and test pressure ^a		Test type	Test date	Witness stamp and test pressure ^a	
	(mm/yyyy)	bar or kPa			(mm/yyyy)	bar or kPa	

^a Test pressure if applicable.³ The unit used shall be indicated.

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- 6.7.3.16.2 The following information shall be marked either on the portable tank itself or on a metal plate firmly secured to the portable tank:

Name of the operator

Name of non-refrigerated liquefied gas(es) permitted for carriage

Maximum permissible load mass for each non-refrigerated liquefied gas permitted _____ kg

Maximum permissible gross mass (MPGM) _____ kg

Unladen (tare) mass _____ kg

Portable tank instruction in accordance with 4.2.5.2.6

NOTE: For the identification of the non-refrigerated liquefied gases being carried, see also Part 5.

- 6.7.3.16.3 If a portable tank is designed and approved for handling in open seas, the words "OFFSHORE PORTABLE TANK" shall be marked on the identification plate.

6.7.4 Requirements for the design, construction, inspection and testing of portable tanks intended for the carriage of refrigerated liquefied gases

6.7.4.1 Definitions

For the purposes of this section:

Alternative arrangement means an approval granted by the competent authority for a portable tank or MEGC that has been designed, constructed or tested to technical requirements or testing methods other than those specified in this Chapter;

Portable tank means a thermally insulated multimodal tank having a capacity of more than 450 litres fitted with service equipment and structural equipment necessary for the carriage of refrigerated liquefied gases. The portable tank shall be capable of being filled and discharged without the removal of its structural equipment. It shall possess stabilizing members external to the tank, and shall be capable of being lifted when full. It shall be designed primarily to be loaded onto a vehicle, wagon or sea-going or inland navigation vessel and shall be equipped with skids, mountings or accessories to facilitate mechanical handling. Tank-vehicles, tank-wagons, non-metallic tanks, intermediate bulk containers (IBCs), gas cylinders and large receptacles are not considered to fall within the definition for portable tanks;

Tank means a construction which normally consists of either :

- (a) A jacket and one or more inner shells where the space between the shell(s) and the jacket is exhausted of air (vacuum insulation) and may incorporate a thermal insulation system; or
- (b) A jacket and an inner shell with an intermediate layer of solid thermally insulating material (e.g. solid foam);

Shell means the part of the portable tank which retains the refrigerated liquefied gas intended for carriage, including openings and their closures, but does not include service equipment or external structural equipment;

Jacket means the outer insulation cover or cladding which may be part of the insulation system;

Service equipment means measuring instruments and filling, discharge, venting, safety, pressurizing, cooling and thermal insulation devices;

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Structural equipment means the reinforcing, fastening, protective and stabilizing members external to the shell;

Maximum allowable working pressure (MAWP) means the maximum effective gauge pressure permissible at the top of the shell of a loaded portable tank in its operating position including the highest effective pressure during filling and discharge;

Test pressure means the maximum gauge pressure at the top of the shell during the pressure test;

Leakproofness test means a test using gas subjecting the shell and its service equipment, to an effective internal pressure not less than 90% of the MAWP;

Maximum permissible gross mass (MPGM) means the sum of the tare mass of the portable tank and the heaviest load authorized for carriage;

Holding time means the time that will elapse from the establishment of the initial filling condition until the pressure has risen due to heat influx to the lowest set pressure of the pressure limiting device(s);

Reference steel means a steel with a tensile strength of 370 N/mm² and an elongation at fracture of 27%;

Minimum design temperature means the temperature which is used for the design and construction of the shell not higher than the lowest (coldest) temperature (service temperature) of the contents during normal conditions of filling, discharge and carriage.

6.7.4.2 General design and construction requirements

- 6.7.4.2.1 Shells shall be designed and constructed in accordance with the requirements of a pressure vessel code recognized by the competent authority. Shells and jackets shall be made of metallic materials suitable for forming. Jackets shall be made of steel. Non-metallic materials may be used for the attachments and supports between the shell and jacket, provided their material properties at the minimum design temperature are proven to be sufficient. The materials shall in principle conform to national or international material standards. For welded shells and jackets only materials whose weldability has been fully demonstrated shall be used. Welds shall be skilfully made and afford complete safety. When the manufacturing process or the materials make it necessary, the shell shall be suitably heat treated to guarantee adequate toughness in the weld and in the heat affected zones. In choosing the material, the minimum design temperature shall be taken into account with respect to risk of brittle fracture, to hydrogen embrittlement, to stress corrosion cracking and to resistance to impact. When fine grain steel is used, the guaranteed value of the yield strength shall be not more than 460 N/mm² and the guaranteed value of the upper limit of the tensile strength shall be not more than 725 N/mm² in accordance with the material specifications. Portable tank materials shall be suitable for the external environment in which they may be carried.
- 6.7.4.2.2 Any part of a portable tank, including fittings, gaskets and pipe-work, which can be expected normally to come into contact with the refrigerated liquefied gas carried shall be compatible with that refrigerated liquefied gas.
- 6.7.4.2.3 Contact between dissimilar metals which could result in damage by galvanic action shall be avoided.
- 6.7.4.2.4 The thermal insulation system shall include a complete covering of the shell(s) with effective insulating materials. External insulation shall be protected by a jacket so as to prevent the ingress of moisture and other damage under normal carriage conditions.

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- 6.7.4.2.5 When a jacket is so closed as to be gas-tight, a device shall be provided to prevent any dangerous pressure from developing in the insulation space.
- 6.7.4.2.6 Portable tanks intended for the carriage of refrigerated liquefied gases having a boiling point below minus (-) 182 °C at atmospheric pressure shall not include materials which may react with oxygen or oxygen enriched atmospheres in a dangerous manner, when located in parts of the thermal insulation when there is a risk of contact with oxygen or with oxygen enriched fluid.
- 6.7.4.2.7 Insulating materials shall not deteriorate unduly in service.
- 6.7.4.2.8 A reference holding time shall be determined for each refrigerated liquefied gas intended for carriage in a portable tank.
- 6.7.4.2.8.1 The reference holding time shall be determined by a method recognized by the competent authority on the basis of the following:
- (a) The effectiveness of the insulation system, determined in accordance with 6.7.4.2.8.2;
 - (b) The lowest set pressure of the pressure limiting device(s);
 - (c) The initial filling conditions;
 - (d) An assumed ambient temperature of 30 °C;
 - (e) The physical properties of the individual refrigerated liquefied gas intended to be carried.
- 6.7.4.2.8.2 The effectiveness of the insulation system (heat influx in watts) shall be determined by type testing the portable tank in accordance with a procedure recognized by the competent authority. This test shall consist of either:
- (a) A constant pressure test (for example at atmospheric pressure) when the loss of refrigerated liquefied gas is measured over a period of time; or
 - (b) A closed system test when the rise in pressure in the shell is measured over a period of time.
- When performing the constant pressure test, variations in atmospheric pressure shall be taken into account. When performing either tests corrections shall be made for any variation of the ambient temperature from the assumed ambient temperature reference value of 30 °C.
- NOTE:** For the determination of the actual holding time before each journey, refer to 4.2.3.7.
- 6.7.4.2.9 The jacket of a vacuum-insulated double-wall tank shall have either an external design pressure not less than 100 kPa (1 bar) (gauge pressure) calculated in accordance with a recognized technical code or a calculated critical collapsing pressure of not less than 200 kPa (2 bar) (gauge pressure). Internal and external reinforcements may be included in calculating the ability of the jacket to resist the external pressure.
- 6.7.4.2.10 Portable tanks shall be designed and constructed with supports to provide a secure base during carriage and with suitable lifting and tie-down attachments.
- 6.7.4.2.11 Portable tanks shall be designed to withstand, without loss of contents, at least the internal pressure due to the contents, and the static, dynamic and thermal loads during normal conditions of handling and carriage. The design shall demonstrate that the effects of fatigue,

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caused by repeated application of these loads through the expected life of the portable tank, have been taken into account.

6.7.4.2.12 Portable tanks and their fastenings under the maximum permissible load shall be capable of absorbing the following separately applied static forces:

- (a) In the direction of travel: twice the MPGM multiplied by the acceleration due to gravity (g)¹;
- (b) Horizontally at right angles to the direction of travel: the MPGM (when the direction of travel is not clearly determined, the forces shall be equal to twice the MPGM) multiplied by the acceleration due to gravity (g)¹;
- (c) Vertically upwards: the MPGM multiplied by the acceleration due to gravity (g)¹; and
- (d) Vertically downwards: twice the MPGM (total loading including the effect of gravity) multiplied by the acceleration due to gravity (g)¹.

6.7.4.2.13 Under each of the forces in 6.7.4.2.12, the safety factor to be observed shall be as follows:

- (a) For materials having a clearly defined yield point, a safety factor of 1.5 in relation to the guaranteed yield strength; and
- (b) For materials with no clearly defined yield point, a safety factor of 1.5 in relation to the guaranteed 0.2% proof strength or, in case of austenitic steels, the 1% proof strength.

6.7.4.2.14 The values of yield strength or proof strength shall be the values according to national or international material standards. When austenitic steels are used, the specified minimum values according to the material standards may be increased by up to 15% when greater values are attested in the material inspection certificate. When no material standard exists for the metal in question, or when non-metallic materials are used the values of yield strength or proof strength shall be approved by the competent authority.

6.7.4.2.15 Portable tanks intended for the carriage of flammable refrigerated liquefied gases shall be capable of being electrically earthed.

6.7.4.3 *Design criteria*

6.7.4.3.1 Shells shall be of a circular cross section.

6.7.4.3.2 Shells shall be designed and constructed to withstand a test pressure not less than 1.3 times the MAWP. For shells with vacuum insulation the test pressure shall not be less than 1.3 times the sum of the MAWP and 100 kPa (1 bar). In no case shall the test pressure be less than 300 kPa (3 bar) (gauge pressure). Attention is drawn to the minimum shell thickness requirements, specified in 6.7.4.4.2 to 6.7.4.4.7.

6.7.4.3.3 For metals exhibiting a clearly defined yield point or characterized by a guaranteed proof strength (0.2% proof strength, generally, or 1% proof strength for austenitic steels) the primary membrane stress σ (sigma) in the shell shall not exceed 0.75 Re or 0.50 Rm, whichever is lower, at the test pressure, where:

Re = yield strength in N/mm², or 0.2% proof strength or, for austenitic steels, 1% proof strength;

¹ For calculation purposes $g = 9.81 \text{ m/s}^2$.

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R_m = minimum tensile strength in N/mm^2 .

- 6.7.4.3.3.1 The values of R_e and R_m to be used shall be the specified minimum values according to national or international material standards. When austenitic steels are used, the specified minimum values for R_e and R_m according to the material standards may be increased by up to 15% when greater values are attested in the material inspection certificate. When no material standard exists for the metal in question, the values of R_e and R_m used shall be approved by the competent authority or its authorized body.
- 6.7.4.3.3.2 Steels which have a R_e/R_m ratio of more than 0.85 are not allowed for the construction of welded shells. The values of R_e and R_m to be used in determining this ratio shall be the values specified in the material inspection certificate.
- 6.7.4.3.3.3 Steels used in the construction of shells shall have an elongation at fracture, in %, of not less than $10\,000/R_m$ with an absolute minimum of 16% for fine grain steels and 20% for other steels. Aluminium and aluminium alloys used in the construction of shells shall have an elongation at fracture, in %, of not less than $10\,000/6R_m$ with an absolute minimum of 12%.
- 6.7.4.3.3.4 For the purpose of determining actual values for materials, it shall be noted that for sheet metal, the axis of the tensile test specimen shall be at right angles (transversely) to the direction of rolling. The permanent elongation at fracture shall be measured on test specimens of rectangular cross sections in accordance with ISO 6892:1988 using a 50 mm gauge length.

6.7.4.4 *Minimum shell thickness*

- 6.7.4.4.1 The minimum shell thickness shall be the greater thickness based on:
- (a) The minimum thickness determined in accordance with the requirements in 6.7.4.4.2 to 6.7.4.4.7; or
 - (b) The minimum thickness determined in accordance with the recognized pressure vessel code including the requirements in 6.7.4.3.
- 6.7.4.4.2 Shells of not more than 1.80 m in diameter shall be not less than 5 mm thick in the reference steel or of equivalent thickness in the metal to be used. Shells of more than 1.80 m in diameter shall be not less than 6 mm thick in the reference steel or of equivalent thickness in the metal to be used.
- 6.7.4.4.3 Shells of vacuum-insulated tanks of not more than 1.80 m in diameter shall be not less than 3 mm thick in the reference steel or of equivalent thickness in the metal to be used. Such shells of more than 1.80 m in diameter shall be not less than 4 mm thick in the reference steel or of equivalent thickness in the metal to be used.
- 6.7.4.4.4 For vacuum-insulated tanks, the aggregate thickness of the jacket and the shell shall correspond to the minimum thickness prescribed in 6.7.4.4.2, the thickness of the shell itself being not less than the minimum thickness prescribed in 6.7.4.4.3.
- 6.7.4.4.5 Shells shall be not less than 3 mm thick regardless of the material of construction.
- 6.7.4.4.6 The equivalent thickness of a metal other than the thickness prescribed for the reference steel in 6.7.4.4.2 and 6.7.4.4.3 shall be determined using the following formula:

$$e_1 = \frac{21.4e_o}{\sqrt[3]{R_{m1} \times A_1}}$$

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where:

- e_1 = required equivalent thickness (in mm) of the metal to be used;
- e_0 = minimum thickness (in mm) of the reference steel specified in 6.7.4.4.2 and 6.7.4.4.3;
- Rm_1 = guaranteed minimum tensile strength (in N/mm²) of the metal to be used (see 6.7.4.3.3);
- A_1 = guaranteed minimum elongation at fracture (in %) of the metal to be used according to national or international standards.

6.7.4.4.7 In no case shall the wall thickness be less than that prescribed in 6.7.4.4.1 to 6.7.4.4.5. All parts of the shell shall have a minimum thickness as determined by 6.7.4.4.1 to 6.7.4.4.6. This thickness shall be exclusive of any corrosion allowance.

6.7.4.4.8 There shall be no sudden change of plate thickness at the attachment of the ends (heads) to the cylindrical portion of the shell.

6.7.4.5 *Service equipment*

6.7.4.5.1 Service equipment shall be so arranged as to be protected against the risk of being wrenched off or damaged during handling and carriage. When the connection between the frame and the tank or the jacket and the shell allows relative movement, the equipment shall be so fastened as to permit such movement without risk of damage to working parts. The external discharge fittings (pipe sockets, shut-off devices), the stop-valve and its seating shall be protected against the danger of being wrenched off by external forces (for example using shear sections). The filling and discharge devices (including flanges or threaded plugs) and any protective caps shall be capable of being secured against unintended opening.

6.7.4.5.2 Each filling and discharge opening in portable tanks used for the carriage of flammable refrigerated liquefied gases shall be fitted with at least three mutually independent shut-off devices in series, the first being a stop-valve situated as close as reasonably practicable to the jacket, the second being a stop-valve and the third being a blank flange or equivalent device. The shut-off device closest to the jacket shall be a quick closing device, which closes automatically in the event of unintended movement of the portable tank during filling or discharge or fire engulfment. This device shall also be possible to operate by remote control.

6.7.4.5.3 Each filling and discharge opening in portable tanks used for the carriage of non-flammable refrigerated liquefied gases shall be fitted with at least two mutually independent shut-off devices in series, the first being a stop-valve situated as close as reasonably practicable to the jacket, the second a blank flange or equivalent device.

6.7.4.5.4 For sections of piping which can be closed at both ends and where liquid product can be trapped, a method of automatic pressure relief shall be provided to prevent excess pressure build-up within the piping.

6.7.4.5.5 Vacuum insulated tanks need not have an opening for inspection.

6.7.4.5.6 External fittings shall be grouped together so far as reasonably practicable.

6.7.4.5.7 Each connection on a portable tank shall be clearly marked to indicate its function.

6.7.4.5.8 Each stop-valve or other means of closure shall be designed and constructed to a rated pressure not less than the MAWP of the shell taking into account the temperature expected during carriage. All stop-valves with a screwed spindle shall be closed by a clockwise

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motion of the handwheel. In the case of other stop-valves the position (open and closed) and direction of closure shall be clearly indicated. All stop-valves shall be designed to prevent unintentional opening.

- 6.7.4.5.9 When pressure-building units are used, the liquid and vapour connections to that unit shall be provided with a valve as close to the jacket as reasonably practicable to prevent the loss of contents in case of damage to the pressure-building unit.
- 6.7.4.5.10 Piping shall be designed, constructed and installed so as to avoid the risk of damage due to thermal expansion and contraction, mechanical shock and vibration. All piping shall be of a suitable material. To prevent leakage due to fire, only steel piping and welded joints shall be used between the jacket and the connection to the first closure of any outlet. The method of attaching the closure to this connection shall be to the satisfaction of the competent authority or its authorized body. Elsewhere pipe joints shall be welded when necessary.
- 6.7.4.5.11 Joints in copper tubing shall be brazed or have an equally strong metal union. The melting point of brazing materials shall be no lower than 525 °C. The joints shall not decrease the strength of the tubing as may happen when cutting threads.
- 6.7.4.5.12 The materials of construction of valves and accessories shall have satisfactory properties at the lowest operating temperature of the portable tank.
- 6.7.4.5.13 The burst pressure of all piping and pipe fittings shall be not less than the highest of four times the MAWP of the shell or four times the pressure to which it may be subjected in service by the action of a pump or other device (except pressure-relief devices).

6.7.4.6 *Pressure-relief devices*

- 6.7.4.6.1 Every shell shall be provided with not less than two independent spring-loaded pressure-relief devices. The pressure-relief devices shall open automatically at a pressure not less than the MAWP and be fully open a pressure equal to 110% of the MAWP. These devices shall, after discharge, close at a pressure not lower than 10% below the pressure at which discharge starts and shall remain closed at all lower pressures. The pressure-relief devices shall be of the type that will resist dynamic forces including surge.
- 6.7.4.6.2 Shells for non-flammable refrigerated liquefied gases and hydrogen may in addition have frangible discs in parallel with the spring-loaded devices as specified in 6.7.4.7.2 and 6.7.4.7.3.
- 6.7.4.6.3 Pressure-relief devices shall be designed to prevent the entry of foreign matter, the leakage of gas and the development of any dangerous excess pressure.
- 6.7.4.6.4 Pressure-relief devices shall be approved by the competent authority or its authorized body.

6.7.4.7 *Capacity and setting of pressure-relief devices*

- 6.7.4.7.1 In the case of the loss of vacuum in a vacuum-insulated tank or of loss of 20% of the insulation of a tank insulated with solid materials, the combined capacity of all pressure-relief devices installed shall be sufficient so that the pressure (including accumulation) inside the shell does not exceed 120% of the MAWP.
- 6.7.4.7.2 For non-flammable refrigerated liquefied gases (except oxygen) and hydrogen, this capacity may be achieved by the use of frangible discs in parallel with the required safety-relief devices. Frangible discs shall rupture at nominal pressure equal to the test pressure of the shell.

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6.7.4.7.3 Under the circumstances described in 6.7.4.7.1 and 6.7.4.7.2 together with complete fire engulfment the combined capacity of all pressure-relief devices installed shall be sufficient to limit the pressure in the shell to the test pressure.

6.7.4.7.4 The required capacity of the relief devices shall be calculated in accordance with a well-established technical code recognized by the competent authority⁷.

6.7.4.8 *Marking of pressure-relief devices*

6.7.4.8.1 Every pressure-relief device shall be plainly and permanently marked with the following particulars:

- (a) The pressure (in bar or kPa) at which it is set to discharge;
- (b) The allowable tolerance at the discharge pressure for spring-loaded devices;
- (c) The reference temperature corresponding to the rated pressure for frangible discs; and
- (d) The rated flow capacity of the device in standard cubic meters of air per second (m³/s).
- (e) The cross sectional flow areas of the spring loaded pressure-relief devices and frangible discs in mm².

When practicable, the following information shall also be shown:

- (f) The manufacturer's name and relevant catalogue number of the device.

6.7.4.8.2 The rated flow capacity marked on the pressure-relief devices shall be determined according to ISO 4126-1:2004 and ISO 4126-7:2004.

6.7.4.9 *Connections to pressure-relief devices*

6.7.4.9.1 Connections to pressure-relief devices shall be of sufficient size to enable the required discharge to pass unrestricted to the safety device. No stop-valve shall be installed between the shell and the pressure-relief devices except when duplicate devices are provided for maintenance or other reasons and the stop-valves serving the devices actually in use are locked open or the stop-valves are interlocked so that the requirements of 6.7.4.7 are always fulfilled. There shall be no obstruction in an opening leading to a vent or pressure-relief device which might restrict or cut-off the flow from the shell to that device. Pipework to vent the vapour or liquid from the outlet of the pressure-relief devices, when used, shall deliver the relieved vapour or liquid to the atmosphere in conditions of minimum back-pressure on the relieving device.

6.7.4.10 *Siting of pressure-relief devices*

6.7.4.10.1 Each pressure-relief device inlet shall be situated on top of the shell in a position as near the longitudinal and transverse centre of the shell as reasonably practicable. All pressure-relief device inlets shall under maximum filling conditions be situated in the vapour space of the shell and the devices shall be so arranged as to ensure that the escaping vapour is discharged unrestrictedly. For refrigerated liquefied gases, the escaping vapour shall be directed away from the tank and in such a manner that it cannot impinge upon the tank. Protective devices which deflect the flow of vapour are permissible provided the required relief-device capacity is not reduced.

⁷ See for example CGA S-1.2-2003 "Pressure Relief Device Standards - Part 2 - Cargo and Portable Tanks for Compressed Gases".

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6.7.4.10.2 Arrangements shall be made to prevent access to the devices by unauthorized persons and to protect the devices from damage caused by the portable tank overturning.

6.7.4.11 *Gauging devices*

6.7.4.11.1 Unless a portable tank is intended to be filled by weight, it shall be equipped with one or more gauging devices. Glass level-gauges and gauges made of other fragile material, which are in direct communication with the contents of the shell shall not be used.

6.7.4.11.2 A connection for a vacuum gauge shall be provided in the jacket of a vacuum-insulated portable tank.

6.7.4.12 *Portable tank supports, frameworks, lifting and tie-down attachments*

6.7.4.12.1 Portable tanks shall be designed and constructed with a support structure to provide a secure base during carriage. The forces specified in 6.7.4.2.12 and the safety factor specified in 6.7.4.2.13 shall be considered in this aspect of the design. Skids, frameworks, cradles or other similar structures are acceptable.

6.7.4.12.2 The combined stresses caused by portable tank mountings (e.g. cradles, frameworks, etc.) and portable tank lifting and tie-down attachments shall not cause excessive stress in any portion of the tank. Permanent lifting and tie-down attachments shall be fitted to all portable tanks. Preferably they shall be fitted to the portable tank supports but may be secured to reinforcing plates located on the tank at the points of support.

6.7.4.12.3 In the design of supports and frameworks the effects of environmental corrosion shall be taken into account.

6.7.4.12.4 Forklift pockets shall be capable of being closed off. The means of closing forklift pockets shall be a permanent part of the framework or permanently attached to the framework. Single compartment portable tanks with a length less than 3.65 m need not have closed off forklift pockets provided that:

- (a) The tank and all the fittings are well protected from being hit by the forklift blades; and
- (b) The distance between the centres of the forklift pockets is at least half of the maximum length of the portable tank.

6.7.4.12.5 When portable tanks are not protected during carriage, according to 4.2.3.3, the shells and service equipment shall be protected against damage to the shell and service equipment resulting from lateral or longitudinal impact or overturning. External fittings shall be protected so as to preclude the release of the shell contents upon impact or overturning of the portable tank on its fittings. Examples of protection include:

- (a) Protection against lateral impact which may consist of longitudinal bars protecting the shell on both sides at the level of the median line;
- (b) Protection of the portable tank against overturning which may consist of reinforcement rings or bars fixed across the frame;
- (c) Protection against rear impact which may consist of a bumper or frame;
- (d) Protection of the shell against damage from impact or overturning by use of an ISO frame in accordance with ISO 1496-3:1995;
- (e) Protection of the portable tank from impact or overturning by a vacuum insulation jacket.

6.7.4.13 *Design approval*

6.7.4.13.1 The competent authority or its authorized body shall issue a design approval certificate for any new design of a portable tank. This certificate shall attest that a portable tank has been surveyed by that authority, is suitable for its intended purpose and meets the requirements of this Chapter. When a series of portable tanks are manufactured without change in the design, the certificate shall be valid for the entire series. The certificate shall refer to the prototype test report, the refrigerated liquefied gases allowed to be carried, the materials of construction of the shell and jacket and an approval number. The approval number shall consist of the distinguishing sign or mark of the State in whose territory the approval was granted, i.e. the distinguishing sign for use in international traffic, as prescribed by the Convention on Road Traffic, Vienna 1968, and a registration number. Any alternative arrangements according to 6.7.1.2 shall be indicated on the certificate. A design approval may serve for the approval of smaller portable tanks made of materials of the same kind and thickness, by the same fabrication techniques and with identical supports, equivalent closures and other appurtenances.

6.7.4.13.2 The prototype test report for the design approval shall include at least the following:

- (a) The results of the applicable frame-work test specified in ISO 1496-3:1995;
- (b) The results of the initial inspection and test in 6.7.4.14.3; and
- (c) The results of the impact test in 6.7.4.14.1, when applicable.

6.7.4.14 *Inspection and testing*

6.7.4.14.1 Portable tanks meeting the definition of container in the International Convention for Safe Containers (CSC), 1972, as amended, shall not be used unless they are successfully qualified by subjecting a representative prototype of each design to the Dynamic, Longitudinal Impact Test prescribed in the Manual of Tests and Criteria, Part IV, Section 41.

6.7.4.14.2 The tank and items of equipment of each portable tank shall be inspected and tested before being put into service for the first time (initial inspection and test) and thereafter at not more than five-year intervals (5 year periodic inspection and test) with an intermediate periodic inspection and test (2.5 year periodic inspection and test) midway between the 5 year periodic inspections and tests. The 2.5 year inspection and test may be performed within 3 months of the specified date. An exceptional inspection and test shall be performed regardless of the last periodic inspection and test when necessary according to 6.7.4.14.7.

6.7.4.14.3 The initial inspection and test of a portable tank shall include a check of the design characteristics, an internal and external examination of the portable tank shell and its fittings with due regard to the refrigerated liquefied gases to be carried, and a pressure test referring to the test pressures according to 6.7.4.3.2. The pressure test may be performed as a hydraulic test or by using another liquid or gas with the agreement of the competent authority or its authorized body. Before the portable tank is placed into service, a leakproofness test and a check of the satisfactory operation of all service equipment shall also be performed. When the shell and its fittings have been pressure-tested separately, they shall be subjected together after assembly to a leakproofness test. All welds subject to full stress level shall be inspected during the initial test by radiographic, ultrasonic, or another suitable non-destructive test method. This does not apply to the jacket.

6.7.4.14.4 The 5 and 2.5 year periodic inspections and tests shall include an external examination of the portable tank and its fittings with due regard to the refrigerated liquefied gases carried, a leakproofness test, a check of the satisfactory operation of all service equipment and a vacuum reading, when applicable. In the case of non-vacuum insulated tanks, the jacket and

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insulation shall be removed during the 2.5 year and the 5 year periodic inspections and tests but only to the extent necessary for a reliable appraisal.

6.7.4.14.5 *(Deleted)*

6.7.4.14.6 A portable tank may not be filled and offered for carriage after the date of expiry of the last 5 year or 2.5 year periodic inspection and test as required by 6.7.4.14.2. However a portable tank filled prior to the date of expiry of the last periodic inspection and test may be carried for a period not to exceed three months beyond the date of expiry of the last periodic test or inspection. In addition, a portable tank may be carried after the date of expiry of the last periodic test and inspection:

- (a) After emptying but before cleaning, for purposes of performing the next required test or inspection prior to refilling; and
- (b) Unless otherwise approved by the competent authority, for a period not to exceed six months beyond the date of expiry of the last periodic test or inspection, in order to allow the return of dangerous goods for proper disposal or recycling. Reference to this exemption shall be mentioned in the transport document.

6.7.4.14.7 The exceptional inspection and test is necessary when the portable tank shows evidence of damaged or corroded areas, leakage, or any other conditions that indicate a deficiency that could affect the integrity of the portable tank. The extent of the exceptional inspection and test shall depend on the amount of damage or deterioration of the portable tank. It shall include at least the 2.5 year inspection and test according to 6.7.4.14.4.

6.7.4.14.8 The internal examination during the initial inspection and test shall ensure that the shell is inspected for pitting, corrosion, or abrasions, dents, distortions, defects in welds or any other conditions, that might render the portable tank unsafe for carriage.

6.7.4.14.9 The external examination shall ensure that:

- (a) The external piping, valves, pressurizing/cooling systems when applicable and gaskets are inspected for corroded areas, defects, or any other conditions, including leakage, that might render the portable tank unsafe for filling, discharge or carriage;
- (b) There is no leakage at any manhole covers or gaskets;
- (c) Missing or loose bolts or nuts on any flanged connection or blank flange are replaced or tightened;
- (d) All emergency devices and valves are free from corrosion, distortion and any damage or defect that could prevent their normal operation. Remote closure devices and self-closing stop-valves shall be operated to demonstrate proper operation;
- (e) Required markings on the portable tank are legible and in accordance with the applicable requirements; and
- (f) The framework, the supports and the arrangements for lifting the portable tank are in satisfactory condition.

6.7.4.14.10 The inspections and tests in 6.7.4.14.1, 6.7.4.14.3, 6.7.4.14.4, 6.7.4.14.5 and 6.7.4.14.7 shall be performed or witnessed by an expert approved by the competent authority or its authorized body. When the pressure test is a part of the inspection and test, the test pressure shall be the one indicated on the data plate of the portable tank. While under pressure, the portable tank shall be inspected for any leaks in the shell, piping or equipment.


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6.7.4.14.11 In all cases when cutting, burning or welding operations on the shell of a portable tank have been effected, that work shall be to the approval of the competent authority or its authorized body taking into account the pressure vessel code used for the construction of the shell. A pressure test to the original test pressure shall be performed after the work is completed.

6.7.4.14.12 When evidence of any unsafe condition is discovered, the portable tank shall not be returned to service until it has been corrected and the test is repeated and passed.

6.7.4.15 *Marking*

6.7.4.15.1 Every portable tank shall be fitted with a corrosion resistant metal plate permanently attached to the portable tank in a conspicuous place readily accessible for inspection. When for reasons of portable tank arrangements the plate cannot be permanently attached to the shell, the shell shall be marked with at least the information required by the pressure vessel code. As a minimum, at least the following information shall be marked on the plate by stamping or by any other similar method:

- (a) Owner information
 - (i) Owner's registration number;
- (b) Manufacturing information
 - (i) Country of manufacture;
 - (ii) Year of manufacture;
 - (iii) Manufacturer's name or mark;
 - (iv) Manufacturer's serial number;
- (c) Approval information
 - (i) The United Nations packaging symbol  ;

This symbol shall not be used for any purpose other than certifying that a packaging, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6 or 6.7²;

- (ii) Approval country;
- (iii) Authorized body for the design approval;
- (iv) Design approval number;
- (v) Letters 'AA', if the design was approved under alternative arrangements (see 6.7.1.2);
- (vi) Pressure vessel code to which the shell is designed;
- (d) Pressures
 - (i) MAWP (in bar gauge or kPa gauge)³;
 - (ii) Test pressure (in bar gauge or kPa gauge)³;
 - (iii) Initial pressure test date (month and year);
 - (iv) Identification mark of the initial pressure test witness;

² This symbol is also used to certify that flexible bulk containers authorized for others modes of transport complies with the requirements in Chapter 6.8 of the UN Model Regulations.

³ The unit used shall be indicated.

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- (e) Temperatures
 - (i) Minimum design temperature (in °C)³;
- (f) Materials
 - (i) Shell material(s) and material standard reference(s);
 - (ii) Equivalent thickness in reference steel (in mm)³;
- (g) Capacity
 - (i) Tank water capacity at 20 °C (in litres)³;
- (h) Insulation
 - (i) Either "Thermally insulated" or "Vacuum insulated" (as applicable);
 - (ii) Effectiveness of the insulation system (heat influx) (in Watts)³;
- (i) Holding times – for each refrigerated liquefied gas permitted to be carried in the portable tank
 - (i) Name, in full, of the refrigerated liquefied gas;
 - (ii) Reference holding time (in days or hours)³;
 - (iii) Initial pressure (in bar gauge or kPa gauge)³;
 - (iv) Degree of filling (in kg)³;
- (j) Periodic inspections and tests
 - (i) Type of the most recent periodic test (2.5-year, 5-year or exceptional);
 - (ii) Date of the most recent periodic test (month and year);
 - (iii) Identification mark of the authorized body who performed or witnessed the most recent test.

³

The unit used shall be indicated.

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Figure 6.7.4.15.1: Example of identification plate marking

Owner's registration number							
MANUFACTURING INFORMATION							
Country of manufacture							
Year of manufacture							
Manufacturer							
Manufacturer's serial number							
APPROVAL INFORMATION							
	Approval country						
	Authorized body for design approval						
	Design approval number			'AA' (if applicable)			
Shell design code (pressure vessel code)							
PRESSURES							
MAWP				bar or kPa			
Test pressure				bar or kPa			
Initial pressure test date:		(mm/yyyy)		Witness stamp:			
TEMPERATURES							
Minimum design temperature				°C			
MATERIALS							
Shell material(s) and material standard reference(s)							
Equivalent thickness in reference steel				mm			
CAPACITY							
Tank water capacity at 20 °C				litres			
INSULATION							
'Thermally insulated' or 'Vacuum insulated' (as applicable)							
Heat influx				Watts			
HOLDING TIMES							
Refrigerated liquefied gas(es) permitted		Reference holding time		Initial pressure		Degree of filling	
		days or hours		bar or kPa		kg	
PERIODIC INSPECTIONS / TESTS							
Test type		Test date		Witness stamp		Test type	
		(mm/yyyy)					

6.7.4.15.2 The following particulars shall be durably marked either on the portable tank itself or on a metal plate firmly secured to the portable tank.

Name of the owner and the operator
Name of the refrigerated liquefied gas being carried (and minimum mean bulk temperature)
Maximum permissible gross mass (MPGM) _____ kg
Unladen (tare) mass _____ kg
Actual holding time for gas being carried _____ days (or hours)
Portable tank instruction in accordance with 4.2.5.2.6

NOTE: For the identification of the refrigerated liquefied gas(es) being carried, see also Part 5.

6.7.4.15.3 If a portable tank is designed and approved for handling in open seas, the words "OFFSHORE PORTABLE TANK" shall be marked on the identification plate.

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6.7.5 Requirements for the design, construction, inspection and testing of UN multiple-element gas containers (MEGCs) intended for the carriage of non-refrigerated gases

6.7.5.1 Definitions

For the purposes of this section:

Alternative arrangement means an approval granted by the competent authority for a portable tank or MEGC that has been designed, constructed or tested to technical requirements or testing methods other than those specified in this Chapter;

Elements are cylinders, tubes or bundles of cylinders;

Leakproofness test means a test using gas subjecting the elements and the service equipment of the MEGC to an effective internal pressure of not less than 20% of the test pressure;

Manifold means an assembly of piping and valves connecting the filling and/or discharge openings of the elements;

Maximum permissible gross mass (MPGM) means the sum of the tare mass of the MEGC and the heaviest load authorized for carriage;

UN Multiple-element gas containers (MEGCs) are multimodal assemblies of cylinders, tubes and bundles of cylinders which are interconnected by a manifold and which are assembled within a framework. The MEGC includes service equipment and structural equipment necessary for the carriage of gases;

Service equipment means measuring instruments and filling, discharge, venting and safety devices;

Structural equipment means the reinforcing, fastening, protective and stabilizing members external to the elements.

6.7.5.2 General design and construction requirements

6.7.5.2.1 The MEGC shall be capable of being filled and discharged without the removal of its structural equipment. It shall possess stabilizing members external to the elements to provide structural integrity for handling and carriage. MEGCs shall be designed and constructed with supports to provide a secure base during carriage and with lifting and tie-down attachments which are adequate for lifting the MEGC including when filled to its maximum permissible gross mass. The MEGC shall be designed to be loaded onto a vehicle, wagon or sea-going or inland navigation vessel and shall be equipped with skids, mountings or accessories to facilitate mechanical handling.

6.7.5.2.2 MEGCs shall be designed, manufactured and equipped in such a way as to withstand all conditions to which they will be subjected during normal conditions of handling and carriage. The design shall take into account the effects of dynamic loading and fatigue.

6.7.5.2.3 Elements of an MEGC shall be made of seamless steel and be constructed and tested according to 6.2.1 and 6.2.2. All of the elements in an MEGC shall be of the same design type.

6.7.5.2.4 Elements of MEGCs, fittings and pipework shall be:

- (a) Compatible with the substances intended to be carried (see ISO 11114-1:1997 and ISO 11114-2:2000); or

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- (b) Properly passivated or neutralized by chemical reaction.
- 6.7.5.2.5 Contact between dissimilar metals which could result in damage by galvanic action shall be avoided.
- 6.7.5.2.6 The materials of the MEGC, including any devices, gaskets, and accessories, shall not adversely affect the gas(es) intended for carriage in the MEGC.
- 6.7.5.2.7 MEGCs shall be designed to withstand, without loss of contents, at least the internal pressure due to the contents, and the static, dynamic and thermal loads during normal conditions of handling and carriage. The design shall demonstrate that the effects of fatigue, caused by repeated application of these loads through the expected life of the multiple-element gas container, have been taken into account.
- 6.7.5.2.8 MEGCs and their fastenings shall, under the maximum permissible load, be capable of withstanding the following separately applied static forces:
- (a) In the direction of travel: twice the MPGM multiplied by the acceleration due to gravity (g)¹;
 - (b) Horizontally at right angles to the direction of travel: the MPGM (when the direction of travel is not clearly determined, the forces shall be equal to twice the MPGM) multiplied by the acceleration due to gravity (g)¹;
 - (c) Vertically upwards: the MPGM multiplied by the acceleration due to gravity (g)¹; and
 - (d) Vertically downwards: twice the MPGM (total loading including the effect of gravity) multiplied by the acceleration due to gravity (g)¹.
- 6.7.5.2.9 Under the forces defined in 6.7.5.2.8, the stress at the most severely stressed point of the elements shall not exceed the values given in either the relevant standards of 6.2.2.1 or, if the elements are not designed, constructed and tested according to those standards, in the technical code or standard recognised or approved by the competent authority of the country of use (see 6.2.5).
- 6.7.5.2.10 Under each of the forces in 6.7.5.2.8, the safety factor for the framework and fastenings to be observed shall be as follows:
- (a) for steels having a clearly defined yield point, a safety factor of 1.5 in relation to the guaranteed yield strength; or
 - (b) for steels with no clearly defined yield point, a safety factor of 1.5 in relation to the guaranteed 0.2% proof strength and, for austenitic steels, the 1% proof strength.
- 6.7.5.2.11 MEGCs intended for the carriage of flammable gases shall be capable of being electrically earthed.
- 6.7.5.2.12 The elements shall be secured in a manner that prevents undesired movement in relation to the structure and the concentration of harmful localized stresses.

¹ For calculation purposes $g = 9.81 \text{ m/s}^2$.

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6.7.5.3 *Service equipment*

- 6.7.5.3.1 Service equipment shall be configured or designed to prevent damage that could result in the release of the pressure receptacle contents during normal conditions of handling and carriage. When the connection between the frame and the elements allows relative movement between the sub-assemblies, the equipment shall be so fastened as to permit such movement without damage to working parts. The manifolds, the discharge fittings (pipe sockets, shut-off devices), and the stop-valves shall be protected from being wrenched off by external forces. Manifold piping leading to shut-off valves shall be sufficiently flexible to protect the valves and the piping from shearing, or releasing the pressure receptacle contents. The filling and discharge devices (including flanges or threaded plugs) and any protective caps shall be capable of being secured against unintended opening.
- 6.7.5.3.2 Each element intended for the carriage of toxic gases (gases of groups T, TF, TC, TO, TFC and TOC) shall be fitted with a valve. The manifold for liquefied toxic gases (gases of classification codes 2T, 2TF, 2TC, 2TO, 2TFC and 2TOC) shall be so designed that the elements can be filled separately and be kept isolated by a valve capable of being sealed. For the carriage of flammable gases (gases of group F), the elements shall be divided into groups of not more than 3 000 litres each isolated by a valve.
- 6.7.5.3.3 For filling and discharge openings of the MEGC, two valves in series shall be placed in an accessible position on each discharge and filling pipe. One of the valves may be a non-return valve. The filling and discharge devices may be fitted to a manifold. For sections of piping which can be closed at both ends and where a liquid product can be trapped, a pressure-relief valve shall be provided to prevent excessive pressure build-up. The main isolation valves on an MEGC shall be clearly marked to indicate their directions of closure. Each stop-valve or other means of closure shall be designed and constructed to withstand a pressure equal to or greater than 1.5 times the test pressure of the MEGC. All stop-valves with screwed spindles shall close by a clockwise motion of the handwheel. For other stop-valves, the position (open and closed) and direction of closure shall be clearly indicated. All stop-valves shall be designed and positioned to prevent unintentional opening. Ductile metals shall be used in the construction of valves or accessories.
- 6.7.5.3.4 Piping shall be designed, constructed and installed so as to avoid damage due to expansion and contraction, mechanical shock and vibration. Joints in tubing shall be brazed or have an equally strong metal union. The melting point of brazing materials shall be no lower than 525 °C. The rated pressure of the service equipment and of the manifold shall be not less than two thirds of the test pressure of the elements.

6.7.5.4 *Pressure-relief devices*

- 6.7.5.4.1 The elements of MEGCs used for the carriage of UN No. 1013 carbon dioxide and UN No. 1070 nitrous oxide shall be divided into groups of not more than 3 000 litres each isolated by a valve. Each group shall be fitted with one or more pressure relief devices. If so required by the competent authority of the country of use, MEGCs for other gases shall be fitted with pressure relief devices as specified by that competent authority.
- 6.7.5.4.2 When pressure relief devices are fitted, every element or group of elements of an MEGC that can be isolated shall then be fitted with one or more pressure relief devices. Pressure relief devices shall be of a type that will resist dynamic forces including liquid surge and shall be designed to prevent the entry of foreign matter, the leakage of gas and the development of any dangerous excess pressure.

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6.7.5.4.3 MEGCs used for the carriage of certain non-refrigerated gases identified in portable tank instruction T50 in 4.2.5.2.6 may have a pressure-relief device as required by the competent authority of the country of use. Unless an MEGC in dedicated service is fitted with an approved pressure relief device constructed of materials compatible with the gas carried, such a device shall comprise a frangible disc preceding a spring-loaded device. The space between the frangible disc and the spring-loaded device may be equipped with a pressure gauge or a suitable telltale indicator. This arrangement permits the detection of disc rupture, pinholing or leakage which could cause a malfunction of the pressure relief device. The frangible disc shall rupture at a nominal pressure 10% above the start-to-discharge pressure of the spring-loaded device.

6.7.5.4.4 In the case of multi-purpose MEGCs used for the carriage of low-pressure liquefied gases, the pressure-relief devices shall open at a pressure as specified in 6.7.3.7.1 for the gas having the highest maximum allowable working pressure of the gases allowed to be carried in the MEGC.

6.7.5.5 *Capacity of pressure relief devices*

6.7.5.5.1 The combined delivery capacity of the pressure relief devices when fitted shall be sufficient that, in the event of total fire engulfment of the MEGC, the pressure (including accumulation) inside the elements does not exceed 120% of the set pressure of the pressure relief device. The formula provided in CGA S-1.2-2003 "Pressure Relief Device Standards - Part 2 - Cargo and Portable Tanks for Compressed Gases" shall be used to determine the minimum total flow capacity for the system of pressure relief devices. CGA S-1.1-2003 "Pressure Relief Device Standards - Part 1 - Cylinders for Compressed Gases" may be used to determine the relief capacity of individual elements. Spring-loaded pressure relief devices may be used to achieve the full relief capacity prescribed in the case of low pressure liquefied gases. In the case of multi-purpose MEGCs, the combined delivery capacity of the pressure-relief devices shall be taken for the gas which requires the highest delivery capacity of the gases allowed to be carried in the MEGC.

6.7.5.5.2 To determine the total required capacity of the pressure relief devices installed on the elements for the carriage of liquefied gases, the thermodynamic properties of the gas shall be considered (see, for example, CGA S-1.2-2003 "Pressure Relief Device Standards - Part 2 - Cargo and Portable Tanks for Compressed Gases" for low pressure liquefied gases and CGA S-1.1-2003 "Pressure Relief Device Standards - Part 1 - Cylinders for Compressed Gases" for high pressure liquefied gases).

6.7.5.6 *Marking of pressure-relief devices*

6.7.5.6.1 Pressure relief devices shall be clearly and permanently marked with the following:

- (a) The manufacturer's name and relevant catalogue number;
- (b) The set pressure and/or the set temperature;
- (c) The date of the last test.
- (d) The cross sectional flow areas of the spring loaded pressure-relief devices and frangible discs in mm².

6.7.5.6.2 The rated flow capacity marked on spring loaded pressure relief devices for low pressure liquefied gases shall be determined according to ISO 4126-1:2004 and ISO 4126-7:2004.

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6.7.5.7 *Connections to pressure-relief devices*

6.7.5.7.1 Connections to pressure-relief devices shall be of sufficient size to enable the required discharge to pass unrestricted to the pressure relief device. No stop-valve shall be installed between the element and the pressure-relief devices, except when duplicate devices are provided for maintenance or other reasons, and the stop-valves serving the devices actually in use are locked open, or the stop-valves are interlocked so that at least one of the duplicate devices is always operable and capable of meeting the requirements of 6.7.5.5. There shall be no obstruction in an opening leading to or leaving from a vent or pressure-relief device which might restrict or cut-off the flow from the element to that device. The opening through all piping and fittings shall have at least the same flow area as the inlet of the pressure relief device to which it is connected. The nominal size of the discharge piping shall be at least as large as that of the pressure relief device outlet. Vents from the pressure-relief devices, when used, shall deliver the relieved vapour or liquid to the atmosphere in conditions of minimum back-pressure on the relieving device.

6.7.5.8 *Siting of pressure-relief devices*

6.7.5.8.1 Each pressure relief device shall, under maximum filling conditions, be in communication with the vapour space of the elements for the carriage of liquefied gases. The devices, when fitted, shall be so arranged as to ensure that the escaping vapour is discharged upwards and unrestrictedly as to prevent any impingement of escaping gas or liquid upon the MEGC, its elements or personnel. For flammable, pyrophoric and oxidizing gases, the escaping gas shall be directed away from the element in such a manner that it cannot impinge upon the other elements. Heat resistant protective devices which deflect the flow of gas are permissible provided the required pressure relief device capacity is not reduced.

6.7.5.8.2 Arrangements shall be made to prevent access to the pressure-relief devices by unauthorized persons and to protect the devices from damage caused by the MEGC overturning.

6.7.5.9 *Gauging devices*

6.7.5.9.1 When an MEGC is intended to be filled by mass, it shall be equipped with one or more gauging devices. Level-gauges made of glass or other fragile material shall not be used.

6.7.5.10 *MEGC supports, frameworks, lifting and tie-down attachments*

6.7.5.10.1 MEGCs shall be designed and constructed with a support structure to provide a secure base during carriage. The forces specified in 6.7.5.2.8 and the safety factor specified in 6.7.5.2.10 shall be considered in this aspect of the design. Skids, frameworks, cradles or other similar structures are acceptable.

6.7.5.10.2 The combined stresses caused by element mountings (e.g. cradles, frameworks, etc.) and MEGC lifting and tie-down attachments shall not cause excessive stress in any element. Permanent lifting and tie-down attachments shall be fitted to all MEGCs. In no case shall mountings or attachments be welded onto the elements.

6.7.5.10.3 In the design of supports and frameworks, the effects of environmental corrosion shall be taken into account.

6.7.5.10.4 When MEGCs are not protected during carriage, according to 4.2.4.3, the elements and service equipment shall be protected against damage resulting from lateral or longitudinal impact or overturning. External fittings shall be protected so as to preclude the release of the elements' contents upon impact or overturning of the MEGC on its fittings. Particular attention shall be paid to the protection of the manifold. Examples of protection include:

- (a) Protection against lateral impact which may consist of longitudinal bars;

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- (b) Protection against overturning which may consist of reinforcement rings or bars fixed across the frame;
- (c) Protection against rear impact which may consist of a bumper or frame;
- (d) Protection of the elements and service equipment against damage from impact or overturning by use of an ISO frame in accordance with the relevant provisions of ISO 1496-3:1995.

6.7.5.11 ***Design approval***

6.7.5.11.1 The competent authority or its authorized body shall issue a design approval certificate for any new design of an MEGC. This certificate shall attest that the MEGC has been surveyed by that authority, is suitable for its intended purpose and meets the requirements of this Chapter, the applicable provisions for gases of Chapter 4.1 and of packing instruction P200. When a series of MEGCs are manufactured without change in the design, the certificate shall be valid for the entire series. The certificate shall refer to the prototype test report, the materials of construction of the manifold, the standards to which the elements are made and an approval number. The approval number shall consist of the distinguishing sign or mark of the country granting the approval, i.e. the distinguishing sign for use in international traffic, as prescribed by the Convention on Road Traffic, Vienna 1968, and a registration number. Any alternative arrangements according to 6.7.1.2 shall be indicated on the certificate. A design approval may serve for the approval of smaller MEGCs made of materials of the same type and thickness, by the same fabrication techniques and with identical supports, equivalent closures and other appurtenances.

6.7.5.11.2 The prototype test report for the design approval shall include at least the following:

- (a) The results of the applicable framework test specified in ISO1496-3:1995;
- (b) The results of the initial inspection and test specified in 6.7.5.12.3;
- (c) The results of the impact test specified in 6.7.5.12.1; and
- (d) Certification documents verifying that the cylinders and tubes comply with the applicable standards.

6.7.5.12 ***Inspection and testing***

6.7.5.12.1 MEGCs meeting the definition of container in the International Convention for Safe Containers (CSC), 1972, as amended, shall not be used unless they are successfully qualified by subjecting a representative prototype of each design to the Dynamic, Longitudinal Impact Test prescribed in the Manual of Tests and Criteria, Part IV, Section 41.

6.7.5.12.2 The elements and items of equipment of each MEGC shall be inspected and tested before being put into service for the first time (initial inspection and test). Thereafter, MEGCs shall be inspected at no more than five-year intervals (5 year periodic inspection). An exceptional inspection and test shall be performed, regardless of the last periodic inspection and test, when necessary according to 6.7.5.12.5.

6.7.5.12.3 The initial inspection and test of an MEGC shall include a check of the design characteristics, an external examination of the MEGC and its fittings with due regard to the gases to be carried, and a pressure test performed at the test pressures according to packing instruction P200 of 4.1.4.1. The pressure test of the manifold may be performed as a hydraulic test or by using another liquid or gas with the agreement of the competent authority or its authorized body. Before the MEGC is placed into service, a leakproofness test and a test of the satisfactory operation of all service equipment shall also be performed.

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When the elements and their fittings have been pressure-tested separately, they shall be subjected together after assembly to a leakproofness test.

6.7.5.12.4 The 5-year periodic inspection and test shall include an external examination of the structure, the elements and the service equipment in accordance with 6.7.5.12.6. The elements and the piping shall be tested at the periodicity specified in packing instruction P200 and in accordance with the provisions described in 6.2.1.6. When the elements and equipment have been pressure-tested separately, they shall be subjected together after assembly to a leakproofness test.

6.7.5.12.5 An exceptional inspection and test is necessary when the MEGC shows evidence of damaged or corroded areas, leakage, or other conditions that indicate a deficiency that could affect the integrity of the MEGC. The extent of the exceptional inspection and test shall depend on the amount of damage or deterioration of the MEGC. It shall include at least the examinations required under 6.7.5.12.6.

6.7.5.12.6 The examinations shall ensure that:

- (a) The elements are inspected externally for pitting, corrosion, abrasions, dents, distortions, defects in welds or any other conditions, including leakage, that might render the MEGC unsafe for carriage;
- (b) The piping, valves, and gaskets are inspected for corroded areas, defects, and other conditions, including leakage, that might render the MEGC unsafe for filling, discharge or carriage;
- (c) Missing or loose bolts or nuts on any flanged connection or blank flange are replaced or tightened;
- (d) All emergency devices and valves are free from corrosion, distortion and any damage or defect that could prevent their normal operation. Remote closure devices and self-closing stop-valves shall be operated to demonstrate proper operation;
- (e) Required markings on the MEGC are legible and in accordance with the applicable requirements; and
- (f) The framework, the supports and the arrangements for lifting the MEGC are in satisfactory condition.

6.7.5.12.7 The inspections and tests in 6.7.5.12.1, 6.7.5.12.3, 6.7.5.12.4 and 6.7.5.12.5 shall be performed or witnessed by a body authorized by the competent authority. When the pressure test is a part of the inspection and test, the test pressure shall be the one indicated on the data plate of the MEGC. While under pressure, the MEGC shall be inspected for any leaks in the elements, piping or equipment.

6.7.5.12.8 When evidence of any unsafe condition is discovered, the MEGC shall not be returned to service until it has been corrected and the applicable tests and verifications are passed.

6.7.5.13 *Marking*

6.7.5.13.1 Every MEGC shall be fitted with a corrosion resistant metal plate permanently attached to the MEGC in a conspicuous place readily accessible for inspection. The metal plate shall not be affixed to the elements. The elements shall be marked in accordance with Chapter 6.2. As a minimum, at least the following information shall be marked on the plate by stamping or by any other similar method:

- (a) Owner information
 - (i) Owner's registration number;

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- (b) Manufacturing information
 - (i) Country of manufacture;
 - (ii) Year of manufacture;
 - (iii) Manufacturer's name or mark;
 - (iv) Manufacturer's serial number;
- (c) Approval information

- (i) The United Nations packaging symbol



;

This symbol shall not be used for any purpose other than certifying that a packaging, a portable tank or a MEGC complies with the relevant requirements in Chapter 6.1, 6.2, 6.3, 6.5, 6.6 or 6.7²;


- (ii) Approval country;
- (iii) Authorized body for the design approval;
- (iv) Design approval number;
- (v) Letters 'AA', if the design was approved under alternative arrangements (see 6.7.1.2);
- (d) Pressures
 - (i) Test pressure (in bar gauge)³;
 - (ii) Initial pressure test date (month and year);
 - (iii) Identification mark of the initial pressure test witness;
- (e) Temperatures
 - (i) Design temperature range (in °C)³;
- (f) Elements / Capacity
 - (i) Number of elements;
 - (ii) Total water capacity (in litres)³;
- (g) Periodic inspections and tests
 - (i) Type of the most recent periodic test (5-year or exceptional);
 - (ii) Date of the most recent periodic test (month and year);
 - (iii) Identification mark of the authorized body who performed or witnessed the most recent test.

² This symbol is also used to certify that flexible bulk containers authorized for others modes of transport complies with the requirements in Chapter 6.8 of the UN Model Regulations.

³ The unit used shall be indicated.

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Figure 6.7.5.13.1: Example of identification plate marking

Owner's registration number						
MANUFACTURING INFORMATION						
Country of manufacture						
Year of manufacture						
Manufacturer						
Manufacturer's serial number						
APPROVAL INFORMATION						
	Approval country					
	Authorized body for design approval					
	Design approval number					
					'AA' (if applicable)	
PRESSURES						
Test pressure					bar	
Initial pressure test date:		(mm/yyyy)		Witness stamp:		
TEMPERATURES						
Design temperature range					°C to °C	
ELEMENTS / CAPACITY						
Number of elements						
Total water capacity					litres	
PERIODIC INSPECTIONS / TESTS						
Test type	Test date	Witness stamp		Test type	Test date	Witness stamp
	(mm/yyyy)				(mm/yyyy)	

6.7.5.13.2 The following information shall be marked on a metal plate firmly secured to the MEGC:

Name of the operator
 Maximum permissible load mass _____ kg
 Working pressure at 15°C: _____ bar gauge
 Maximum permissible gross mass (MPGM) _____ kg
 Unladen (tare) mass _____ kg

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CHAPTER 6.8

REQUIREMENTS FOR THE CONSTRUCTION, EQUIPMENT, TYPE APPROVAL, INSPECTIONS AND TESTS, AND MARKING OF FIXED TANKS (TANK-VEHICLES), DEMOUNTABLE TANKS AND TANK-CONTAINERS AND TANK SWAP BODIES, WITH SHELLS MADE OF METALLIC MATERIALS, AND BATTERY-VEHICLES AND MULTIPLE ELEMENT GAS CONTAINERS (MEGCs)

NOTE: For portable tanks and UN multiple-element gas containers (MEGCs) see Chapter 6.7, for fibre-reinforced plastics tanks see Chapter 6.9, for vacuum operated waste tanks see Chapter 6.10.

6.8.1 Scope

6.8.1.1 The requirements across the whole width of the page apply both to fixed tanks (tank-vehicles), to demountable tanks and battery-vehicles, and to tank-containers, tank swap bodies and MEGCs. Those contained in a single column apply only:

- to fixed tanks (tank-vehicles), to demountable tanks and battery-vehicles (left hand column);
- to tank-containers, tank swap bodies and MEGCs (right hand column).

6.8.1.2 These requirements shall apply to

fixed tanks (tank-vehicles), demountable tanks and battery-vehicles	tank-containers, tank swap bodies and MEGCs
---	---

used for the carriage of gaseous, liquid, powdery or granular substances.

6.8.1.3 Section 6.8.2 sets out the requirements applicable to fixed tanks (tank-vehicles), to demountable tanks, tank-containers, tank swap bodies intended for the carriage of substances of all classes and battery-vehicles and MEGCs for gases of Class 2. Sections 6.8.3 to 6.8.5 contain special requirements supplementing or modifying the requirements of section 6.8.2.

6.8.1.4 For provisions concerning use of these tanks, see Chapter 4.3.

6.8.2 Requirements applicable to all classes

6.8.2.1 Construction

Basic principles

6.8.2.1.1 Shells, their attachments and their service and structural equipment shall be designed to withstand without loss of contents (other than quantities of gas escaping through any degassing vents):

- static and dynamic stresses in normal conditions of carriage as defined in 6.8.2.1.2 and 6.8.2.1.13;
- prescribed minimum stresses as defined in 6.8.2.1.15.

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- | | | |
|-----------|--|--|
| 6.8.2.1.2 | The tanks and their fastenings shall be capable of absorbing, under the maximum permissible load, the forces exerted by: | Tank-containers and their fastenings shall, under the maximum permissible load be capable of absorbing the forces equal to those exerted by: |
| | <ul style="list-style-type: none"> - in the direction of travel: twice the total mass; - at right angles to the direction of travel: the total mass; - vertically upwards: the total mass; - vertically downwards: twice the total mass. | <ul style="list-style-type: none"> - in the direction of travel: twice the total mass; - horizontally at right angles to the direction of travel: the total mass; (where the direction of travel is not clearly determined, twice the total mass in each direction); - vertically upwards: the total mass; - vertically downwards: twice the total mass. |
| 6.8.2.1.3 | The walls of the shells shall have at least the thickness specified in

6.8.2.1.17 to 6.8.2.1.21 | 6.8.2.1.17 to 6.8.2.1.20. |
| 6.8.2.1.4 | Shells shall be designed and constructed in accordance with the requirements of standards listed in 6.8.2.6 or of a technical code recognized by the competent authority, in accordance with 6.8.2.7, in which the material is chosen and the shell thickness determined taking into account maximum and minimum filling and working temperatures, but the following minimum requirements of 6.8.2.1.6 to 6.8.2.1.26 shall be met. | |
| 6.8.2.1.5 | Tanks intended to contain certain dangerous substances shall be provided with additional protection. This may take the form of additional thickness of the shell (increased calculation pressure) determined in the light of the dangers inherent in the substances concerned or of a protective device (see the special provisions of 6.8.4). | |
| 6.8.2.1.6 | Welds shall be skilfully made and shall afford the fullest safety. The execution and checking of welds shall comply with the requirements of 6.8.2.1.23. | |
| 6.8.2.1.7 | Measures shall be taken to protect shells against the risk of deformation as a result of a negative internal pressure. Shells, other than shells according to 6.8.2.2.6, designed to be equipped with vacuum valves shall be able to withstand, without permanent deformation, an external pressure of not less than 21 kPa (0.21 bar) above the internal pressure. Shells used for the carriage of solid substances (powdery or granular) of packing groups II or III only, which do not liquefy during carriage, may be designed for a lower external pressure but not less than 5 kPa (0.05 bar). The vacuum valves shall be set to relieve at a vacuum setting not greater than the tank's design vacuum pressure. Shells, which are not designed to be equipped with a vacuum valve shall be able to withstand, without permanent deformation an external pressure of not less than 40 kPa (0.4 bar) above the internal pressure. | |
| | <i>Materials for shells</i> | |
| 6.8.2.1.8 | Shells shall be made of suitable metallic materials which, unless other temperature ranges are prescribed in the various classes, shall be resistant to brittle fracture and to stress corrosion cracking between -20 °C and +50 °C. | |
| 6.8.2.1.9 | The materials of shells or of their protective linings which are in contact with the contents shall not contain substances liable to react dangerously (see "Dangerous reaction" in 1.2.1) with the contents, to form dangerous compounds, or substantially to weaken the material. | |

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If contact between the substance carried and the material used for the construction of the shell entails a progressive decrease in the shell thickness, this thickness shall be increased at manufacture by an appropriate amount. This additional thickness to allow for corrosion shall not be taken into consideration in calculating the shell thickness.

- 6.8.2.1.10 For welded shells only materials of faultless weldability whose adequate impact strength at an ambient temperature of -20 °C can be guaranteed, particularly in the weld seams and the zones adjacent thereto, shall be used.

If fine-grained steel is used, the guaranteed value of the yield strength R_e shall not exceed 460 N/mm^2 and the guaranteed value of the upper limit of tensile strength R_m shall not exceed 725 N/mm^2 , in accordance with the specifications of the material.

- 6.8.2.1.11 Ratios of R_e/R_m exceeding 0.85 are not allowed for steels used in the construction of welded tanks.

R_e = apparent yield strength for steels having a clearly-defined yield point or
guaranteed 0.2% proof strength for steels with no clearly-defined yield point
(1% for austenitic steels)

R_m = tensile strength.

The values specified in the inspection certificate for the material shall be taken as a basis in determining this ratio in each case.

- 6.8.2.1.12 For steel, the elongation at fracture, in % shall be not less than

$$\frac{10\,000}{\text{determined tensile strength in N/mm}^2}$$

but in any case for fine-grained steels it shall be not less than 16% and not less than 20% for other steels.

For aluminium alloys the elongation at fracture shall be not less than 12%¹.

Calculation of the shell thickness

- 6.8.2.1.13 The pressure on which the shell thickness is based shall not be less than the calculation pressure, but the stresses referred to in 6.8.2.1.1 shall also be taken into account, and, if necessary, the following stresses:

In the case of vehicles in which the tank constitutes a stressed self-supporting member, the shell shall be designed to withstand the stresses thus imposed in addition to stresses from other sources.

¹ In the case of sheet metal the axis of the tensile test-piece shall be at right angles to the direction of rolling. The permanent elongation at fracture shall be measured on test-pieces of circular cross-section in which the gauge length l is equal to five times the diameter d ($l = 5d$); if test-pieces of rectangular section are used, the gauge length shall be calculated by the formula

$$l = 5,65 \sqrt{F_0}$$

where F_0 indicates the initial cross-section area of the test-piece.

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Under these stresses, the stress at the most severely stressed point of the shell and its fastenings shall not exceed the value σ defined in 6.8.2.1.16.

Under each of these stresses the safety factors to be observed shall be the following:

- for metals having a clearly-defined yield point: a safety factor of 1.5 in relation to the apparent yield strength; or
- for metals with no clearly-defined yield point: a safety factor of 1.5 in relation to the guaranteed 0.2% proof strength (1% maximum elongation for austenitic steels).

6.8.2.1.14 The calculation pressure is in the second part of the code (see 4.3.4.1) according to Column (12) of Table A of Chapter 3.2.

When "G" appears, the following requirements shall apply:

- (a) Gravity-discharge shells intended for the carriage of substances having a vapour pressure not exceeding 110 kPa (1.1 bar) (absolute pressure) at 50 °C shall be designed for a calculation pressure of twice the static pressure of the substance to be carried but not less than twice the static pressure of water;
- (b) Pressure-filled or pressure-discharge shells intended for the carriage of substances having a vapour pressure not exceeding 110 kPa (1.1 bar) (absolute pressure) at 50 °C shall be designed for a calculation pressure equal to 1.3 times the filling or discharge pressure;

When the numerical value of the minimum calculation pressure is given (gauge pressure) the shell shall be designed for this pressure which shall not be less than 1.3 times the filling or discharge pressure. The following minimum requirements shall apply in these cases:

- (c) Shells intended for the carriage of substances having a vapour pressure of more than 110 kPa (1.1 bar) at 50 °C and a boiling point of more than 35 °C shall, whatever their filling or discharge system, be designed for a calculation pressure of not less than 150 kPa (1.5 bar) gauge pressure or 1.3 times the filling or discharge pressure, whichever is the higher;
- (d) Shells intended for the carriage of substances having a boiling point of not more than 35 °C shall, whatever their filling or discharge system, be designed for a calculation pressure equal to 1.3 times the filling or discharge pressure but not less than 0.4 MPa (4 bar) (gauge pressure).

6.8.2.1.15 At the test pressure, the stress σ at the most severely stressed point of the shell shall not exceed the material-dependent limits prescribed below. Allowance shall be made for any weakening due to the welds.

6.8.2.1.16 For all metals and alloys, the stress σ at the test pressure shall be lower than the smaller of the values given by the following formulae:

$$\sigma \leq 0.75 Re \text{ or } \sigma \leq 0.5 Rm$$

where

- Re = apparent yield strength for steels having a clearly-defined yield point; or
 guaranteed 0.2% proof strength for steels with no clearly-defined yield point
 (1% for austenitic steels)
- Rm = tensile strength.

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The values of Re and Rm to be used shall be specified minimum values according to material standards. If no material standard exists for the metal or alloy in question, the values of Re and Rm used shall be approved by the competent authority or by a body designated by that authority.

When austenitic steels are used, the specified minimum values according to the material standards may be exceeded by up to 15% if these higher values are attested in the inspection certificate. The minimum values shall, however, not be exceeded when the formula given in 6.8.2.1.18 is applied.

Minimum shell thickness

6.8.2.1.17 The shell thickness shall not be less than the greater of the values determined by the following formulae:

$$e = \frac{P_T D}{2 \sigma \lambda} \qquad e = \frac{P_C D}{2 \sigma}$$

where:

- e = minimum shell thickness in mm
 P_T = test pressure in MPa
 P_C = calculation pressure in MPa as specified in 6.8.2.1.14
 D = internal diameter of shell in mm
 σ = permissible stress, as defined in 6.8.2.1.16, in N/mm²
 λ = a coefficient not exceeding 1, allowing for any weakening due to welds, and linked to the inspection methods defined in 6.8.2.1.23.

The thickness shall in no case be less than that defined in

6.8.2.1.18 to 6.8.2.1.21.

6.8.2.1.18 to 6.8.2.1.20.

6.8.2.1.18 Shells of circular cross-section² not more than 1.80 m in diameter other than those referred to in 6.8.2.1.21, shall not be less than 5 mm thick if of mild steel³, or of equivalent thickness if of another metal.

Where the diameter is more than 1.80 m, this thickness shall be increased to 6 mm except in the case of shells intended for the carriage of powdery or granular substances, if the shell is of mild steel³, or to an equivalent thickness if of another metal.

Shells shall be not less than 5 mm thick if of mild steel³ (in conformity with the requirements of 6.8.2.1.11 and 6.8.2.1.12) or of equivalent thickness if of another metal.

Where the diameter is more than 1.80 m, this thickness shall be increased to 6 mm except in the case of tanks intended for the carriage of powdery or granular substances, if the shell is of mild steel³ or to an equivalent thickness if of another metal.

Whatever the metal used, the shell thickness shall in no case be less than 3 mm.

² For shells not of a circular cross-section, for example box-shaped or elliptical shells, the indicated diameters shall correspond to those calculated on the basis of a circular cross-section of the same area. For such shapes of cross-section the radius of convexity of the shell wall shall not exceed 2 000 mm at the sides or 3 000 mm at the top and bottom.

³ For the definitions of "mild steel" and "reference steel" see 1.2.1. "Mild steel" in this case also covers a steel referred to in EN material standards as "mild steel", with a minimum tensile strength between 360 N/mm² and 490 N/mm² and a minimum elongation at fracture conforming to 6.8.2.1.12.

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"Equivalent thickness" means the thickness obtained by the following formula⁴:

$$e_1 = \frac{464e_0}{\sqrt[3]{(R_{m1}A_1)^2}}$$

6.8.2.1.19

Where protection of the tank against damage through lateral impact or overturning is provided according to 6.8.2.1.20, the competent authority may allow the aforesaid minimum thicknesses to be reduced in proportion to the protection provided; however, the said thicknesses shall not be less than 3 mm in the case of mild steel³, or than an equivalent thickness in the case of other materials, for shells not more than 1.80 m in diameter. For shells with a diameter exceeding 1.80 m the aforesaid minimum thickness shall be increased to 4 mm in the case of mild steel³ and to an equivalent thickness in the case of other metals.

Equivalent thickness means the thickness given by the formula in 6.8.2.1.18.

Except in cases for which 6.8.2.1.21 provide, the thickness of shells with protection against damage in accordance with 6.8.2.1.20 (a) or (b) shall not be less than the values given in the table below.

Where protection of the tank against damage is provided according to 6.8.2.1.20, the competent authority may allow the aforesaid minimum thicknesses to be reduced in proportion to the protection provided; however, the said thicknesses shall be not less than 3 mm in the case of mild steel³, or than an equivalent thickness in the case of other materials, for shells not more than 1.80 m in diameter. For shells of a diameter exceeding 1.80 m this minimum thickness shall be increased to 4 mm in the case of mild steel³, and to an equivalent thickness in the case of other metals.

Equivalent thickness means the thickness given by the formula in 6.8.2.1.18.

The thickness of shells with protection against damage in accordance with 6.8.2.1.20 shall not be less than the values given in the table below.

		Diameter of shell	≤ 1.80 m	> 1.80 m
Minimum thickness of shells	Austenitic stainless steels		2.5 mm	3 mm
	Austenitic-ferritic stainless steels		3 mm	3.5 mm
	Other steels		3 mm	4 mm
	Aluminium alloys		4 mm	5 mm
	Pure aluminium of 99.80%		6 mm	8 mm

³ For the definitions of "mild steel" and "reference steel" see 1.2.1. "Mild steel" in this case also covers a steel referred to in EN material standards as "mild steel", with a minimum tensile strength between 360 N/mm² and 490 N/mm² and a minimum elongation at fracture conforming to 6.8.2.1.12.

⁴ This formula is derived from the general formula:

$$e_1 = e_0 \sqrt[3]{\left(\frac{R_{m0}A_0}{R_{m1}A_1}\right)^2}$$

where

- e_1 = minimum shell thickness for the metal chosen, in mm;
 e_0 = minimum shell thickness for mild steel, in mm, according to 6.8.2.1.18 and 6.8.2.1.19;
 R_{m0} = 370 (tensile strength for reference steel, see definition 1.2.1, in N/mm²);
 A_0 = 27 (elongation at fracture for reference steel, in %);
 R_{m1} = minimum tensile strength of the metal chosen, in N/mm²; and
 A_1 = minimum elongation at fracture of the metal chosen under tensile stress, in %.

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<p>6.8.2.1.20 For tanks built after 1 January 1990, there is protection against damage as referred to in 6.8.2.1.19 when the following measures or equivalent⁵ measures are adopted:</p> <p>(a) For tanks intended for the carriage of powdery or granular substances, the protection against damage shall satisfy the competent authority.</p> <p>(b) For tanks intended for the carriage of other substances, there is protection against damage when:</p> <p>1. For shells with a circular or elliptical cross-section having a maximum radius of curvature of 2 m, the shell is equipped with strengthening members comprising partitions, surge-plates or external or internal rings, so placed that at least one of the following conditions is met:</p> <ul style="list-style-type: none"> - Distance between two adjacent strengthening elements of not more than 1.75 m. - Volume contained between two partitions or surge-plates of not more than 7 500 l. <p>The vertical cross-section of a ring, with the associated coupling, shall have a section modulus of at least 10 cm³.</p> <p>External rings shall not have projecting edges with a radius of less than 2.5 mm.</p> <p>Partitions and surge-plates shall conform to the requirements of 6.8.2.1.22.</p> <p>The thickness of the partitions and surge-plates shall in no case be less than that of the shell.</p> <p>2. For tanks made with double walls, the space between being evacuated of air, the aggregate thickness of the outer metal wall and the shell wall corresponds to the wall thickness prescribed in 6.8.2.1.18, and the thickness of the wall of the shell itself is not less than the minimum thickness prescribed in 6.8.2.1.19.</p>	<p>The protection referred to in 6.8.2.1.19 may consist of:</p> <ul style="list-style-type: none"> - overall external structural protection as in "sandwich" construction where the sheathing is secured to the shell; or - a structure in which the shell is supported by a complete skeleton including longitudinal and transverse structural members; or - double-wall construction. <p>Where the tanks are made with double walls, the space between being evacuated of air, the aggregate thickness of the outer metal wall and the shell wall shall correspond to the minimum wall thickness prescribed in 6.8.2.1.18, the thickness of the wall of the shell itself being not less than the minimum thickness prescribed in 6.8.2.1.19.</p> <p>Where tanks are made with double walls with an intermediate layer of solid materials at least 50 mm thick, the outer wall shall have a thickness of not less than 0.5 mm if it is made of mild steel³ or at least 2 mm if it is made of a plastics material reinforced with glass fibre. Solid foam with an impact absorption capacity such as that, for example, of polyurethane foam, may be used as the intermediate layer of solid material.</p>
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³ For the definitions of "mild steel" and "reference steel" see 1.2.1. "Mild steel" in this case also covers a steel referred to in EN material standards as "mild steel", with a minimum tensile strength between 360 N/mm² and 490 N/mm² and a minimum elongation at fracture conforming to 6.8.2.1.12.

⁵ Equivalent measures means measures given in standards referenced in 6.8.2.6.

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3. For tanks made with double walls having an intermediate layer of solid materials at least 50 mm thick, the outer wall has a thickness of at least 0.5 mm of mild steel³ or at least 2 mm of a plastics material reinforced with glass fibre. Solid foam (with an impact absorption capacity like that, for example, of polyurethane foam) may be used as the intermediate layer of solid material.
4. Shells of forms other than in 1, especially box-shaped shells, are provided, all round the mid-point of their vertical height and over at least 30% of their height with a protection designed in such a way as to offer specific resilience at least equal to that of a shell constructed in mild steel³ of a thickness of 5 mm (for a shell diameter not exceeding 1.80 m) or 6 mm (for a shell diameter exceeding 1.80 m). The protection shall be applied in a durable manner to the shell.

This requirement shall be considered to have been met without further proof of the specific resilience when the protection involves the welding of a plate of the same material as the shell to the area to be strengthened, so that the minimum wall thickness is in accordance with 6.8.2.1.18.

This protection is dependent upon the possible stresses exerted on mild steel³ shells in the event of an accident, where the ends and walls have a thickness of at least 5 mm for a diameter not exceeding 1.80 m or at least 6 mm for a diameter exceeding 1.80 m. If another metal is used, the equivalent thickness shall be obtained in accordance with the formula in 6.8.2.1.18.

³ For the definitions of "mild steel" and "reference steel" see 1.2.1. "Mild steel" in this case also covers a steel referred to in EN material standards as "mild steel", with a minimum tensile strength between 360 N/mm² and 490 N/mm² and a minimum elongation at fracture conforming to 6.8.2.1.12.

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For demountable tanks this protection is not required when they are protected on all sides by the drop sides of the carrying vehicle.

- 6.8.2.1.21 The thickness of shells designed in accordance with 6.8.2.1.14 (a) which either are of not more than 5 000 litres capacity or are divided into leakproof compartments of not more than 5 000 litres unit capacity may be adjusted to a level which, unless prescribed otherwise in 6.8.3 or 6.8.4, shall however not be less than the appropriate value shown in the following table:

Maximum radius of curvature of shell (m)	Capacity of shell or shell compartment (m ³)	Minimum thickness (mm)
		Mild steel
≤ 2	≤ 5.0	3
2 - 3	≤ 3.5	3
	> 3.5 but ≤ 5.0	4

Where a metal other than mild steel³ is used, the thickness shall be determined by the equivalence formula given in 6.8.2.1.18 and shall not be less than the values given in the following table:

	Maximum radius of curvature of shell (m)	≤ 2	2-3	2-3
	Capacity of shell or shell compartment (m ³)	≤ 5.0	≤ 3.5	> 3.5 but ≤ 5.0
Minimum thickness of shell	Austenitic stainless steels	2.5 mm	2.5 mm	3 mm
	Other steels	3 mm	3 mm	4 mm
	Aluminium alloys	4 mm	4 mm	5 mm
	Pure aluminium at 99.80%	6 mm	6 mm	8 mm

The thickness of the partitions and surge-plates shall in no case be less than that of the shell.

³ For the definitions of "mild steel" and "reference steel" see 1.2.1. "Mild steel" in this case also covers a steel referred to in EN material standards as "mild steel", with a minimum tensile strength between 360 N/mm² and 490 N/mm² and a minimum elongation at fracture conforming to 6.8.2.1.12.

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- 6.8.2.1.22 Surge-plates and partitions shall be dished, with a depth of dish of not less than 10 cm, or shall be corrugated, profiled or otherwise reinforced to give equivalent strength. The area of the surge plate shall be at least 70% of the cross-sectional area of the tank in which the surge-plate is fitted.

Welding and inspection of welds

- 6.8.2.1.23 The manufacturer's qualification for performing welding operations shall be one recognized by the competent authority. Welding shall be performed by skilled welders using a welding process whose effectiveness (including any heat treatments required) has been demonstrated by test. Non-destructive tests shall be carried out by radiography or by ultrasound and must confirm that the quality of the welding is appropriate to the stresses.

The following checks shall be carried out in accordance with the value of the coefficient λ used in determining the thickness of the shell in 6.8.2.1.17:


- $\lambda = 0.8$: the weld beads shall so far as possible be inspected visually on both faces and shall be subjected to a non-destructive spot check. All weld "Tee" junctions with the total length of weld examined to be not less than 10% of the sum of the length of all longitudinal, circumferential and radial (in the tank ends) welds shall be tested;
- $\lambda = 0.9$: all longitudinal beads throughout their length, all connections, 25% of circular beads, and welds for the assembly of large-diameter items of equipment shall be subjected to non-destructive checks. Beads shall be checked visually on both sides as far as possible;
- $\lambda = 1$: all beads shall be subjected to non-destructive checks and shall so far as possible be inspected visually on both sides. A weld test-piece shall be taken.

Where the competent authority has doubts regarding the quality of weld beads, it may require additional checks.

Other construction requirements

- 6.8.2.1.24 The protective lining shall be so designed that its leakproofness remains intact, whatever the deformation liable to occur in normal conditions of carriage (see 6.8.2.1.2).
- 6.8.2.1.25 The thermal insulation shall be so designed as not to hinder access to, or the operation of, filling and discharge devices and safety valves.
- 6.8.2.1.26 If shells intended for the carriage of flammable liquids having a flash-point of not more than 60 °C are fitted with non-metallic protective linings (inner layers), the shells and the protective linings shall be so designed that no danger of ignition from electrostatic charges can occur.

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6.8.2.1.27	<p>Shells intended for the carriage of liquids having a flash-point of not more than 60 °C or for the carriage of flammable gases, or of UN No.1361 carbon or UN No.1361 carbon black, packing group II, shall be linked to the chassis by means of at least one good electrical connection. Any metal contact capable of causing electrochemical corrosion shall be avoided. Shells shall be provided with at least one earth fitting clearly marked with the symbol "  ", capable of being electrically connected.</p>	<p>All parts of a tank-container intended for the carriage of liquids having a flash-point of not more than 60 °C, flammable gases, or UN No.1361 carbon or UN No.1361 carbon black, packing group II, shall be capable of being electrically earthed. Any metal contact capable of causing electrochemical corrosion shall be avoided.</p>
6.8.2.1.28	<p><i>Protection of fittings mounted on the upper part of the tank</i></p> <p>The fittings and accessories mounted on the upper part of the tank shall be protected against damage caused by overturning. This protection may take the form of strengthening rings, protective canopies or transverse or longitudinal members so shaped that effective protection is given.</p>	
6.8.2.2	<i>Items of equipment</i>	
6.8.2.2.1	<p>Suitable non-metallic materials may be used to manufacture service and structural equipment.</p>	
	<p>The items of equipment shall be so arranged as to be protected against the risk of being wrenched off or damaged during carriage or handling. They shall exhibit a suitable degree of safety comparable to that of the shells themselves, and shall in particular:</p>	
	<ul style="list-style-type: none"> - be compatible with the substances carried; and - meet the requirements of 6.8.2.1.1. 	
	<p>Piping shall be designed, constructed and installed so as to avoid the risk of damage due to thermal expansion and contraction, mechanical shock and vibration.</p>	
	<p>As many operating parts as possible shall be served by the smallest possible number of openings in the shell. The leakproofness of the service equipment including the closure (cover) of the inspection openings shall be ensured even in the event of overturning of the tank, taking into account the forces generated by an impact (such as acceleration and dynamic pressure). Limited release of the tank contents due to a pressure peak during the impact is however allowed.</p>	<p>The leakproofness of the service equipment shall be ensured even in the event of the overturning of the tank-container.</p>
	<p>The gaskets shall be made of a material compatible with the substance carried and shall be replaced as soon as their effectiveness is impaired, for example as a result of ageing.</p>	
	<p>Gaskets ensuring the leakproofness of fittings requiring manipulation during normal use of tanks shall be so designed and arranged that manipulation of the fittings incorporating them does not damage them.</p>	

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6.8.2.2.2 Each bottom-filling or bottom-discharge opening in tanks which are referred to, in Column (12) of Table A of Chapter 3.2, with a tank code including the letter "A" in its third part (see 4.3.4.1.1) shall be equipped with at least two mutually independent closures, mounted in series, comprising

- an external stop-valve with piping made of a malleable metal material and
- a closing device at the end of each pipe which may be a screw-threaded plug, a blank flange or an equivalent device. This closing device shall be sufficiently tight so that the substance is contained without loss. Measures shall be taken to enable the safe release of pressure in the discharge pipe before the closing device is completely removed.

Each bottom-filling or bottom-discharge opening in tanks which are referred to, in Column (12) of Table A of Chapter 3.2, with a tank code including the letter "B" in its third part (see 4.3.3.1.1 or 4.3.4.1.1) shall be equipped with at least three mutually independent closures, mounted in series, comprising

- an internal stop-valve, i.e. a stop-valve mounted inside the shell or in a welded flange or companion flange;
- an external stop-valve or an equivalent device⁶
 - one at the end of each pipe
 - | as near as possible to the shell
- and
- a closing device at the end of each pipe which may be a screw-threaded plug, a blank flange or an equivalent device. This closing device shall be sufficiently tight so that the substance is contained without loss. Measures shall be taken to enable the safe release of pressure in the discharge pipe before the closing device is completely removed.

However, in the case of tanks intended for the carriage of certain crystallizable or highly viscous substances and shells fitted with an ebonite or thermoplastic coating, the internal stop-valve may be replaced by an external stop-valve provided with additional protection.

The internal stop-valve shall be operable either from above or from below. Its setting - open or closed - shall so far as possible in each case be capable of being verified from the ground. Internal stop-valve control devices shall be so designed as to prevent any unintended opening through impact or an inadvertent act.

The internal shut-off device shall continue to be effective in the event of damage to the external control device.

In order to avoid any loss of contents in the event of damage to the external fittings (pipes, lateral shut-off devices), the internal stop-valve and its seating shall be protected against the danger of being wrenched off by external stresses or shall be so designed as to resist them. The filling and discharge devices (including flanges or threaded plugs) and protective caps (if any) shall be capable of being secured against any unintended opening.

The position and/or direction of closure of shut-off devices shall be clearly apparent.

All openings of tanks which are referred to in Column (12) of Table A of Chapter 3.2, by a tank code including letter "C" or "D" in its third part (see 4.3.3.1.1 and 4.3.4.1.1) shall be

⁶ In the case of tank-containers of less than 1 m³ capacity, the external stop-valve or other equivalent device may be replaced by a blank flange.

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situated above the surface level of the liquid. These tanks shall have no pipes or pipe connections below the surface level of the liquid. The cleaning openings (fist-holes) are, however, permitted in the lower part of the shell for tanks referred to by a tank code including letter "C" in its third part. This opening shall be capable of being sealed by a flange so closed as to be leakproof and whose design shall be approved by the competent authority or by a body designated by that authority.

- 6.8.2.2.3 Tanks that are not hermetically closed may be fitted with vacuum valves to avoid an unacceptable negative internal pressure; these vacuum-relief valves shall be set to relieve at a vacuum setting not greater than the vacuum pressure for which the tank has been designed (see 6.8.2.1.7). Hermetically closed tanks shall not be fitted with vacuum valves. However, tanks of the tank code SGAH, S4AH or L4BH, fitted with vacuum valves which open at a negative pressure of not less than 21 kPa (0.21 bar) shall be considered as being hermetically closed. For tanks intended for the carriage of solid substances (powdery or granular) of packing groups II or III only, which do not liquefy during transport, the negative pressure may be reduced to not less than 5 kPa (0.05 bar).

Vacuum valves and breather devices (see 6.8.2.2.6) used on tanks intended for the carriage of substances meeting the flash-point criteria of Class 3, shall prevent the immediate passage of flame into the shell by means of a suitable protective device, or the shell of the tank shall be capable of withstanding, without leakage, an explosion resulting from the passage of the flame.

If the protective device consists of a suitable flame trap or flame arrester, it shall be positioned as close as possible to the shell or the shell compartment. For multi-compartment tanks, each compartment shall be protected separately.

- 6.8.2.2.4 The shell or each of its compartments shall be provided with an opening large enough to permit inspection.
- 6.8.2.2.5 *(Reserved)*
- 6.8.2.2.6 Tanks intended for the carriage of liquids having a vapour pressure of not more than 110 kPa (1.1 bar) (absolute) at 50 °C shall have a breather device and a safety device to prevent the contents from spilling out if the tank overturns; otherwise they shall conform to 6.8.2.2.7 or 6.8.2.2.8.
- 6.8.2.2.7 Tanks intended for the carriage of liquids having a vapour pressure of more than 110 kPa (1.1 bar) at 50 °C and a boiling point of more than 35 °C shall have a safety valve set at not less than 150 kPa (1.5 bar) (gauge pressure) and which shall be fully open at a pressure not exceeding the test pressure; otherwise they shall conform to 6.8.2.2.8.
- 6.8.2.2.8 Tanks intended for the carriage of liquids having a boiling point of not more than 35 °C shall have a safety valve set at not less than 300 kPa (3 bar) gauge pressure and which shall be fully open at a pressure not exceeding the test pressure; otherwise they shall be hermetically closed⁷.
- 6.8.2.2.9 Movable parts such as covers, closures, etc., which are liable to come into frictional or percussive contact with aluminium shells intended for the carriage of flammable liquids having a flash-point of not more than 60 °C or for the carriage of flammable gases shall not be made of unprotected corrodible steel.

⁷ For the definition of "hermetically closed tank" see 1.2.1.

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- 6.8.2.2.10 If tanks required to be hermetically closed are equipped with safety valves, these shall be preceded by a bursting disc and the following conditions shall be observed:

The arrangement of the bursting disc and safety valve shall be such as to satisfy the competent authority. A pressure gauge or another suitable indicator shall be provided in the space between the bursting disc and the safety valve, to enable detection of any rupture, perforation or leakage of the disc which may disrupt the action of the safety valve.

6.8.2.3 *Type approval*

- 6.8.2.3.1 The competent authority or a body designated by that authority shall issue in respect of each new type of tank-vehicle, demountable tank, tank-container, tank swap body, battery-vehicle or MEGC a certificate attesting that the type, including fastenings, which it has inspected is suitable for the purpose for which it is intended and meets the construction requirements of 6.8.2.1, the equipment requirements of 6.8.2.2 and the special conditions for the classes of substances carried.

The certificate shall show:

- the results of the test;
- an approval number for the type;

The approval number shall consist of the distinguishing sign⁸ of the State in whose territory the approval was granted and a registration number.

- the tank code in accordance with 4.3.3.1.1 or 4.3.4.1.1;
- the alphanumerical codes of special provisions of construction (TC), equipment (TE) and type approval (TA) of 6.8.4 which are shown in column (13) of Table A of Chapter 3.2 for those substances for the carriage of which the tank has been approved;
- if required, the substances and/or group of substances for the carriage of which the tank has been approved. These shall be shown with their chemical name or the corresponding collective entry (see 2.1.1.2), together with their classification (class, classification code and packing group). With the exception of substances of Class 2 and those listed in 4.3.4.1.3, the listing of approved substances may be dispensed with. In such cases, groups of substances permitted on the basis of the tank code shown in the rationalised approach in 4.3.4.1.2 shall be accepted for carriage taking into account any relevant special provision.

The substances referred to in the certificate or the groups of substances approved according to the rationalised approach shall, in general, be compatible with the characteristics of the tank. A reservation shall be included in the certificate if it was not possible to investigate this compatibility exhaustively when the type approval was issued.

A copy of the certificate shall be attached to the tank record of each tank, battery-vehicle or MEGC constructed (see 4.3.2.1.7).

The competent authority or a body designated by that authority shall at the request of the applicant carry out a separate type approval of valves and other service equipment for

⁸ *Distinguishing sign for use in international traffic prescribed by the Convention on Road Traffic (Vienna, 1968).*

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which a standard is listed in the table in 6.8.2.6.1, in accordance with that standard. This separate type approval shall be taken into account when issuing the certificate for the tank, if the test results are presented and the valves and other service equipment are fit for the intended use.

- 6.8.2.3.2 If the tanks, battery-vehicles or MECGs are manufactured in series without modification this approval shall be valid for the tanks, battery-vehicles or MECGs manufactured in series or according to the prototype.

A type approval may however serve for the approval of tanks with limited variations of the design that either reduce the loads and stresses on the tanks (e.g. reduced pressure, reduced mass, reduced volume) or increase the safety of the structure (e.g. increased shell thickness, more surge-plates, decreased diameter of openings). The limited variations shall be clearly described in the type approval certificate.

- 6.8.2.3.3 The following requirements apply to tanks for which special provision TA4 of 6.8.4 (and therefore 1.8.7.2.4) does not apply.

The type approval shall be valid for a maximum of ten years. If within that period the relevant technical requirements of ADR (including referenced standards) have changed so that the approved type is no longer in conformity with them, the competent authority or the body designated by that authority which issued the type approval shall withdraw it and inform the holder of the type approval.

NOTE: For the ultimate dates for withdrawal of existing type approvals, see column (5) of the tables in 6.8.2.6 or 6.8.3.6 as appropriate.

If a type approval has expired or has been withdrawn, the manufacture of the tanks, battery-vehicles or MEGCs according to that type approval is no longer authorised.

In such a case, the relevant provisions concerning the use, periodic inspection and intermediate inspection of tanks, battery-vehicles or MEGCs contained in the type approval which has expired or has been withdrawn shall continue to apply to these tanks, battery-vehicles or MEGCs constructed before the expiry or the withdrawal if they may continue to be used.

They may continue to be used as long as they remain in conformity with the requirements of ADR. If they are no longer in conformity with the requirements of ADR they may continue to be used only if such use is permitted by relevant transitional measures in Chapter 1.6.

Type approvals may be renewed by a complete review and assessment for conformity with the provisions of ADR applicable at the date of renewal. Renewal is not permitted after a type approval has been withdrawn. Interim amendments of an existing type approval not affecting conformity (see 6.8.2.3.2) do not extend or modify the original validity of the certificate.

NOTE: The review and assessment of conformity can be done by a body other than the one which issued the original type approval.

The issuing body shall keep all documents for the type approval for the whole period of validity including its renewals if granted.

If the designation of the issuing body is revoked or restricted, or when the body has ceased activity, the competent authority shall take appropriate steps to ensure that the files are either processed by another body or kept available.

- 6.8.2.3.4 In the case of a modification of a tank with a valid, expired or withdrawn type approval, the testing, inspection and approval are limited to the parts of the tank that have been modified.

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The modification shall meet the provisions of ADR applicable at the time of the modification. For all parts of the tank not affected by the modification, the documentation of the initial type approval remains valid.

A modification may apply to one or more tanks covered by a type approval.

A certificate approving the modification shall be issued by the competent authority of any Contracting Party to ADR or by a body designated by this authority and shall be kept as part of the tank record.

Each application for an approval certificate for a modification shall be lodged with a single competent authority or body designated by this authority.

6.8.2.4 *Inspections and tests*

6.8.2.4.1 Shells and their equipment shall either together or separately undergo an initial inspection before being put into service. This inspection shall include:

- a check of conformity to the approved type;
- a check of the design characteristics⁹
- an examination of the internal and external conditions;
- a hydraulic pressure test¹⁰ at the test pressure indicated on the plate prescribed in 6.8.2.5.1; and
- a leakproofness test and a check of satisfactory operation of the equipment.

Except in the case of Class 2, the test pressure for the hydraulic pressure test depends on the calculation pressure and shall be at least equal to the pressure indicated below:

Calculation pressure (bar)	Test pressure (bar)
G^{11}	G^{11}
1.5	1.5
2.65	2.65
4	4
10	4
15	4
21	10 (4 ¹²)

The minimum test pressures for Class 2 are given in the table of gases and gas mixtures in 4.3.3.2.5.

The hydraulic pressure test shall be carried out on the shell as a whole and separately on each compartment of compartmented shells.

⁹ The check of the design characteristics shall also include, for shells requiring a test pressure of 1 MPa (10 bar) or higher, the taking of weld test-pieces (work samples) in accordance with 6.8.2.1.23 and the tests prescribed in 6.8.5.

¹⁰ In special cases and with the agreement of the expert approved by the competent authority, the hydraulic pressure test may be replaced by a pressure test using another liquid or gas, where such an operation does not present any danger.

¹¹ G = minimum calculation pressure according to the general requirements of 6.8.2.1.14 (see 4.3.4.1).

¹² Minimum test pressure for UN No. 1744 bromine or UN No. 1744 bromine solution.

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The test shall be carried out on each compartment at a pressure at least equal to 1.3 times the maximum working pressure.

The hydraulic pressure test shall be carried out before the installation of a thermal insulation as may be necessary.

If the shells and their equipment are tested separately, they shall be jointly subjected to a leakproofness test after assembly in accordance with 6.8.2.4.3.

The leakproofness test shall be carried out separately on each compartment of compartmented shells.

6.8.2.4.2 Shells and their equipment shall undergo periodic inspections no later than every six years. | five years.

These periodic inspections shall include:

- An external and internal examination;
- A leakproofness test in accordance with 6.8.2.4.3 of the shell with its equipment and check of the satisfactory operation of all the equipment;
- As a general rule, a hydraulic pressure test¹⁰ (for the test pressure for the shells and compartments if applicable, see 6.8.2.4.1).

Sheathing for thermal or other insulation shall be removed only to the extent required for reliable appraisal of the characteristics of the shell.

In the case of tanks intended for the carriage of powdery or granular substances, and with the agreement of the expert approved by the competent authority, the periodic hydraulic pressure tests may be omitted and replaced by leakproofness tests in accordance with 6.8.2.4.3, at an effective internal pressure at least equal to the maximum working pressure.

6.8.2.4.3 Shells and their equipment shall undergo intermediate inspections at least every three years | two and a half years

after the initial inspection and each periodic inspection. These intermediate inspections may be performed within three months before or after the specified date.

However, the intermediate inspection may be performed at any time before the specified date.

If an intermediate inspection is performed more than three months before the due date, another intermediate inspection shall be performed at the latest

three years | two and a half years

after this date.

¹⁰ *In special cases and with the agreement of the expert approved by the competent authority, the hydraulic pressure test may be replaced by a pressure test using another liquid or gas, where such an operation does not present any danger.*

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These intermediate inspections shall include a leakproofness test of the shell with its equipment and check of the satisfactory operation of all the equipment. For this purpose the tank shall be subjected to an effective internal pressure at least equal to the maximum working pressure. For tanks intended for the carriage of liquids or solids in the granular or powdery state, when a gas is used for the leakproofness test it shall be carried out at a pressure at least equal to 25% of the maximum working pressure. In all cases, it shall not be less than 20 kPa (0.2 bar) (gauge pressure).

For tanks equipped with breather devices and a safety device to prevent the contents spilling out if the tank overturns, the pressure test shall be equal to the static pressure of the filling substance.

The leakproofness test shall be carried out separately on each compartment of compartmented shells.

6.8.2.4.4 When the safety of the tank or of its equipment may have been impaired as a result of repairs, alterations or accident, an exceptional check shall be carried out. If an exceptional check fulfilling the requirements of 6.8.2.4.2 has been performed, then the exceptional check may be considered to be a periodic inspection. If an exceptional check fulfilling the requirements of 6.8.2.4.3 has been performed then the exceptional check may be considered to be an intermediate inspection.

6.8.2.4.5 The tests, inspections and checks in accordance with 6.8.2.4.1 to 6.8.2.4.4 shall be carried out by the expert approved by the competent authority. Certificates shall be issued showing the results of these operations, even in the case of negative results. These certificates shall refer to the list of the substances permitted for carriage in this tank or to the tank code and the alphanumeric codes of special provisions in accordance with 6.8.2.3.

A copy of these certificates shall be attached to the tank record of each tank, battery-vehicle or MEGC tested (see 4.3.2.1.7).

6.8.2.5 *Marking*

6.8.2.5.1 Every tank shall be fitted with a corrosion-resistant metal plate permanently attached to the tank in a place readily accessible for inspection. The following particulars at least shall be marked on the plate by stamping or by any other similar method. These particulars may be engraved directly on the walls of the shell itself, if the walls are so reinforced that the strength of the shell is not impaired¹³:

- approval number;
- manufacturer's name or mark;
- manufacturer's serial number;
- year of manufacture;
- test pressure (gauge pressure);
- external design pressure (see 6.8.2.1.7);
- capacity of the shell – in the case of multiple-compartment shells, the capacity of each compartment –, followed by the symbol "S" when the shells or the compartments of more than 7 500 litres are divided by surge plates into sections of not more than 7 500 litres capacity;
- design temperature (only if above +50 °C or below -20 °C);

¹³ Add the units of measurement after the numerical values.

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- date and type of the most recent test: "month, year" followed by a "P" when the test is the initial test or a periodic test in accordance with 6.8.2.4.1 and 6.8.2.4.2, or "month, year" followed by an "L" when the test is an intermediate leakproofness test in accordance with 6.8.2.4.3;
- stamp of the expert who carried out the tests;
- material of the shell and reference to materials standards, if available and, where appropriate, the protective lining;
- test pressure on the shell as a whole and test pressure by compartment in MPa or bar (gauge pressure) where the pressure by compartment is less than the pressure on the shell.

In addition, the maximum working pressure allowed shall be inscribed on pressure-filled or pressure-discharge tanks.

6.8.2.5.2	<p>The following particulars shall be inscribed on the tank-vehicle (on the tank itself or on plates)¹³:</p> <ul style="list-style-type: none"> - name of owner or operator; - unladen mass of the tank-vehicle; and - maximum permissible mass of the tank-vehicle. <p>The following particulars shall be inscribed on a demountable tank (on the tank itself or on plates)¹³:</p> <ul style="list-style-type: none"> - name of owner or operator; - "demountable tank"; - tare of the tank; - maximum permissible gross mass of the tank; - for the substances according to 4.3.4.1.3, the proper shipping name of the substance(s) accepted for carriage; - tank code according to 4.3.4.1.1; and - for substances other than those according to 4.3.4.1.3, the alphanumeric codes of all special provisions TC and TE which are shown in column (13) of Table A of Chapter 3.2 for the substances to be carried in the tank. 	<p>The following particulars shall be inscribed on the tank-container (on the tank itself or on plates)¹³:</p> <ul style="list-style-type: none"> - names of owner and of operator; - capacity of the shell; - tare; - maximum permissible gross mass; - for the substances according to 4.3.4.1.3, the proper shipping name of the substance(s) accepted for carriage; - tank code according to 4.3.4.1.1; and - for substances other than those according to 4.3.4.1.3, the alphanumeric codes of all special provisions TC and TE which are shown in column (13) of Table A of Chapter 3.2 for the substances to be carried in the tank.
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6.8.2.6 ***Requirements for tanks which are designed, constructed and tested according to referenced standards***

NOTE: Persons or bodies identified in standards as having responsibilities in accordance with ADR shall meet the requirements of ADR.

¹³ Add the units of measurement after the numerical values.

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6.8.2.6.1 *Design and construction*

The standards referenced in the table below shall be applied for the issue of type approvals as indicated in column (4) to meet the requirements of Chapter 6.8 referred to in column (3). The requirements of Chapter 6.8 referred to in column (3) shall prevail in all cases. Column (5) gives the latest date when existing type approvals shall be withdrawn according to 1.8.7.2.4 or 6.8.2.3.3; if no date is shown the type approval remains valid until it expires.

Since 1 January 2009 the use of the referenced standards has been mandatory. Exceptions are dealt with in 6.8.2.7 and 6.8.3.7.

If more than one standard is referenced for the application of the same requirements, only one of them shall be applied, but in full unless otherwise specified in the table below.

Reference	Title of document	Applicable sub-sections and paragraphs	Applicable for new type approvals or for renewals	Latest date for withdrawal of existing type approvals
(1)	(2)	(3)	(4)	(5)
For all tanks				
EN 14025:2003 + AC:2005	Tanks for the transport of dangerous goods – Metallic pressure tanks – Design and construction	6.8.2.1	Between 1 January 2005 and 30 June 2009	
EN 14025:2008	Tanks for the transport of dangerous goods – Metallic pressure tanks – Design and construction	6.8.2.1 and 6.8.3.1	Until further notice	
EN 14432:2006	Tanks for the transport of dangerous goods – Tank equipment for the transport of liquid chemicals – Product discharge and air inlet valves	6.8.2.2.1	Until further notice	
EN 14433:2006	Tanks for the transport of dangerous goods – Tank equipment for the transport of liquid chemicals – Foot valves	6.8.2.2.1	Until further notice	
For tanks with a maximum working pressure not exceeding 50 kPa and intended for the carriage of substances for which a tank code with the letter "G" is given in column (12) of Table A of Chapter 3.2				
EN 13094:2004	Tanks for the transport of dangerous goods – Metallic tanks with a working pressure not exceeding 0.5 bar – Design and construction	6.8.2.1	Between 1 January 2005 and 31 December 2009	
EN 13094:2008 + AC:2008	Tanks for the transport of dangerous goods – Metallic tanks with a working pressure not exceeding 0.5 bar – Design and construction	6.8.2.1	Until further notice	
For tanks for gases of Class 2				
EN 12493:2001 (except Annex C)	Welded steel tanks for liquefied petroleum gas (LPG) – Road tankers – Design and manufacture <i>NOTE: Road tankers is to be understood in the meaning of "fixed tanks" and "demountable tanks" as per ADR.</i>	6.8.2.1 (with the exception of 6.8.2.1.17); 6.8.2.4.1 (with the exclusion of the leakproofness test); 6.8.2.5.1, 6.8.3.1 and 6.8.3.5.1	Between 1 January 2005 and 31 December 2010	31 December 2012
EN 12493:2008 (except Annex C)	LPG equipment and accessories - Welded steel tanks for liquefied petroleum gas (LPG) – Road tankers – Design and manufacture <i>NOTE: Road tankers is to be understood in the meaning of "fixed tanks" and "demountable tanks" as per ADR.</i>	6.8.2.1 (with the exception of 6.8.2.1.17), 6.8.2.5, 6.8.3.1, 6.8.3.5, 6.8.5.1 to 6.8.5.3	Between 1 January 2010 and 31 December 2013	31 December 2014

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Reference	Title of document	Applicable sub-sections and paragraphs	Applicable for new type approvals or for renewals	Latest date for withdrawal of existing type approvals
(1)	(2)	(3)	(4)	(5)
EN 12493:2008 + A1:2012 (except Annex C)	LPG equipment and accessories – Welded steel tanks for liquefied petroleum gas (LPG) – Road tankers – Design and manufacture <i>NOTE: Road tankers is to be understood in the meaning of "fixed tanks" and "demountable tanks" as per ADR.</i>	6.8.2.1 (with the exception of 6.8.2.1.17), 6.8.2.5, 6.8.3.1, 6.8.3.5, 6.8.5.1 to 6.8.5.3	Until 31 December 2013	31 December 2015
EN 12252:2000	Equipping of LPG road tankers <i>NOTE: Road tankers is to be understood in the meaning of "fixed tanks" and "demountable tanks" as per ADR.</i>	6.8.3.2 (with the exception of 6.8.3.2.3)	Between 1 January 2005 and 31 December 2010	31 December 2012
EN 12252:2005 + A1:2008	LPG equipment and accessories – Equipping of LPG road tankers <i>NOTE: Road tankers is to be understood in the meaning of "fixed tanks" and "demountable tanks" as per ADR.</i>	6.8.3.2 (with the exception of 6.8.3.2.3) and 6.8.3.4.9	Until further notice	
EN 13530-2:2002	Cryogenic vessels – Large transportable vacuum insulated vessels – Part 2: Design, fabrication, inspection and testing	6.8.2.1 (with the exception of 6.8.2.1.17), 6.8.2.4, 6.8.3.1 and 6.8.3.4	Between 1 January 2005 and 30 June 2007	
EN 13530-2:2002 + A1:2004	Cryogenic vessels – Large transportable vacuum insulated vessels – Part 2: Design, fabrication, inspection and testing	6.8.2.1 (with the exception of 6.8.2.1.17), 6.8.2.4, 6.8.3.1 and 6.8.3.4	Until further notice	
EN 14398-2:2003 (except Table 1)	Cryogenic vessels - Large transportable non-vacuum insulated vessels - Part 2: Design, fabrication, inspection and testing	6.8.2.1 (with the exception of 6.8.2.1.17, 6.8.2.1.19 and 6.8.2.1.20), 6.8.2.4, 6.8.3.1 and 6.8.3.4	Until further notice	
For tanks intended for the carriage of liquid petroleum products and other dangerous substances of Class 3 which have a vapour pressure not exceeding 110 kPa at 50 °C and petrol, and which have no toxic or corrosive subsidiary hazard				
EN 13094:2004	Tanks for the transport of dangerous goods – Metallic tanks with a working pressure not exceeding 0.5 bar – Design and construction	6.8.2.1	Between 1 January 2005 and 31 December 2009	
EN 13094:2008 + AC:2008	Tanks for the transport of dangerous goods – Metallic tanks with a working pressure not exceeding 0.5 bar – Design and construction	6.8.2.1	Until further notice	
EN 13082:2001	Tanks for transport of dangerous goods – Service equipment for tanks – Vapour transfer valve	6.8.2.2 and 6.8.2.4.1	Between 1 January 2005 and 30 June 2013	31 December 2014
EN 13082:2008 + A1:2011	Tanks for transport of dangerous goods – Service equipment for tanks – Vapour transfer valve	6.8.2.2 and 6.8.2.4.1	Until further notice	
EN 13308:2002	Tanks for transport of dangerous goods – Service equipment for tanks – Non pressure balanced footvalve	6.8.2.2 and 6.8.2.4.1	Until further notice	
EN 13314:2002	Tanks for transport of dangerous goods – Service equipment for tanks – Fill hole cover	6.8.2.2 and 6.8.2.4.1	Until further notice	
EN 13316:2002	Tanks for transport of dangerous goods – Service equipment for tanks – Pressure balanced footvalve	6.8.2.2 and 6.8.2.4.1	Until further notice	
EN 13317:2002 (except for the figure and table B.2 in Annex B) (The material shall meet the requirements of standard EN 13094:2004, Clause 5.2)	Tanks for transport of dangerous goods – Service equipment for tanks – Manhole cover assembly	6.8.2.2 and 6.8.2.4.1	Between 1 January 2005 and 31 December 2010	31 December 2012

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Reference	Title of document	Applicable sub-sections and paragraphs	Applicable for new type approvals or for renewals	Latest date for withdrawal of existing type approvals
(1)	(2)	(3)	(4)	(5)
EN 13317:2002 + A1:2006	Tanks for transport of dangerous goods – Service equipment for tanks – Manhole cover assembly	6.8.2.2 and 6.8.2.4.1	Until further notice	
EN 14595:2005	Tanks for transport of dangerous goods - Service equipment for tanks - Pressure and vacuum breather vent	6.8.2.2 and 6.8.2.4.1	Until further notice	

6.8.2.6.2 *Inspection and test*

The standard referenced in the table below shall be applied for the inspection and test of tanks as indicated in column (4) to meet the requirements of Chapter 6.8 referred to in column (3) which shall prevail in all cases.

The use of a referenced standard is mandatory.

Reference	Title of document	Applicable sub-sections and paragraphs	Applicable
(1)	(2)	(3)	(4)
EN 12972:2007	Tanks for transport of dangerous goods – Testing, inspection and marking of metallic tanks	6.8.2.4 6.8.3.4	Until further notice

6.8.2.7 *Requirements for tanks which are not designed, constructed and tested according to referenced standards*

To reflect scientific and technical progress or where no standard is referenced in 6.8.2.6 or to deal with specific aspects not addressed in a standard referenced in 6.8.2.6, the competent authority may recognize the use of a technical code providing the same level of safety. Tanks shall, however, comply with the minimum requirements of 6.8.2.

The competent authority shall transmit to the secretariat of UNECE a list of the technical codes that it recognises. The list should include the following details: name and date of the code, purpose of the code and details of where it may be obtained. The secretariat shall make this information publicly available on its website.

A standard which has been adopted for reference in a future edition of the ADR may be approved by the competent authority for use without notifying the UNECE secretariat.

For testing, inspection and marking, the applicable standard referenced in 6.8.2.6 may also be used.

6.8.3 **Special requirements applicable to Class 2**

6.8.3.1 *Construction of shells*

6.8.3.1.1 Shells intended for the carriage of compressed or liquefied gases or dissolved gases shall be made of steel. In the case of weldless shells, by derogation from 6.8.2.1.12 a minimum elongation at fracture of 14% and also a stress σ lower than or equal to limits hereafter given according to the material may be accepted:

- (a) When the ratio Re/Rm (of the minimum guaranteed characteristics after heat treatment) is higher than 0.66 without exceeding 0.85:

$$\sigma \leq 0.75 Re;$$

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- (b) When the ratio R_e/R_m (of the minimum guaranteed characteristics after heat treatment) is higher than 0.85:

$$\sigma \leq 0.5 R_m.$$

6.8.3.1.2 The requirements of 6.8.5 apply to the materials and construction of welded shells.

6.8.3.1.3 *(Reserved)*

Construction of battery-vehicles and MEGCs

6.8.3.1.4 Cylinders, tubes, pressure drums and bundles of cylinders, as elements of a battery-vehicle or MEGC, shall be constructed in accordance with Chapter 6.2.

NOTE 1: *Bundles of cylinders which are not elements of a battery-vehicle or of a MEGC shall be subject to the requirements of Chapter 6.2.*

NOTE 2: *Tanks as elements of battery-vehicles and MEGCs shall be constructed in accordance with 6.8.2.1 and 6.8.3.1.*

NOTE 3: *Demountable tanks¹⁴ are not to be considered elements of battery-vehicles or MEGCs.*

6.8.3.1.5 Elements and their fastenings shall be capable of absorbing under the maximum permissible load the forces defined in 6.8.2.1.2. Under each force the stress at the most severely stressed point of the element and its fastenings shall not exceed the value defined in 6.2.5.3 for cylinders, tubes, pressure drums and bundles of cylinders and for tanks the value of σ defined in 6.8.2.1.16.

6.8.3.2 *Items of equipment*

6.8.3.2.1 The discharge pipes of tanks shall be capable of being closed by blank flanges or some other equally reliable device. For tanks intended for the carriage of refrigerated liquefied gases, these blank flanges or other equally reliable devices may be fitted with pressure-release openings of a maximum diameter of 1.5 mm.

6.8.3.2.2 Shells intended for the carriage of liquefied gases may be provided with, in addition to the openings prescribed in 6.8.2.2.2 and 6.8.2.2.4, openings for the fitting of gauges, thermometers, manometers and with bleed holes, as required for their operation and safety.

6.8.3.2.3 The internal stop-valve of all filling and all discharge openings of tanks

| with a capacity greater than 1 m³

intended for the carriage of liquefied flammable or toxic gases shall be instant-closing and shall close automatically in the event of an unintended movement of the tank or in the event of fire. It shall also be possible to operate the internal stop-valve by remote control.

However on tanks intended for the carriage of liquefied non-toxic flammable gases, the internal stop-valve with remote control may be replaced by a non-return valve for filling openings into the vapour

¹⁴ For the definition of "demountable tank" see 1.2.1.

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phase of the tank only. The non-return valve shall be positioned internally in the tank, be spring loaded so that the valve is closed if the pressure in the filling line is equal to or lower than the pressure in the tank and be equipped with appropriate sealing¹⁵.

- 6.8.3.2.4 All openings, other than those accommodating safety valves and closed bleed holes, of tanks intended for the carriage of liquefied flammable and/or toxic gases shall, if their nominal diameter is more than 1.5 mm, shall be equipped with an internal shut-off device.
- 6.8.3.2.5 Notwithstanding the requirements of 6.8.2.2.2, 6.8.3.2.3 and 6.8.3.2.4, tanks intended for the carriage of refrigerated liquefied gases may be equipped with external devices in place of internal devices if the external devices afford protection against external damage at least equivalent to that afforded by the wall of the shell.
- 6.8.3.2.6 If the tanks are equipped with gauges in direct contact with the substance carried, the gauges shall not be made of a transparent material. If there are thermometers, they shall not project directly into the gas or liquid through the shell.
- 6.8.3.2.7 Filling and discharge openings situated in the upper part of tanks shall be equipped with, in addition to what is prescribed in 6.8.3.2.3, a second, external, closing device. This device shall be capable of being closed by a blank flange or some other equally reliable device.
- 6.8.3.2.8 Safety valves shall meet the requirements of 6.8.3.2.9 to 6.8.3.2.12 below:
- 6.8.3.2.9 Tanks intended for the carriage of compressed or liquefied gases or dissolved gases, may be fitted with spring-loaded safety valves. These valves shall be capable of opening automatically under a pressure between 0.9 and 1.0 times the test pressure of the tank to which they are fitted. They shall be of such a type as to resist dynamic stresses, including liquid surge. The use of dead weight or counter weight valves is prohibited. The required capacity of the safety valves shall be calculated in accordance with the formula contained in 6.7.3.8.1.1.
- 6.8.3.2.10 Where tanks are intended for carriage by sea, the requirements of 6.8.3.2.9 shall not prohibit the fitting of safety valves conforming to the IMDG Code.
- 6.8.3.2.11 Tanks intended for the carriage of refrigerated liquefied gases shall be equipped with two or more independent safety valves capable of opening at the maximum working pressure indicated on the tank. Two of these safety valves shall be individually sized to allow the gases formed by evaporation during normal operation to escape from the tank in such a way that the pressure does not at any time exceed by more than 10% the working pressure indicated on the tank.

One of the safety valves may be replaced by a bursting disc which shall be such as to burst at the test pressure.

In the event of loss of the vacuum in a double-walled tank, or of destruction of 20% of the insulation of a single-walled tank, the combination of the pressure relief devices shall permit an outflow such that the pressure in the shell cannot exceed the test pressure. The provisions of 6.8.2.1.7 shall not apply to vacuum-insulated tanks.

¹⁵ *The use of metal to metal sealing is not permitted.*

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6.8.3.2.12 These pressure relief devices of tanks intended for the carriage of refrigerated liquefied gases shall be so designed as to function faultlessly even at their lowest working temperature. The reliability of their operation at that temperature shall be established and checked either by testing each device or by testing a specimen device of each design-type.

6.8.3.2.13 The valves of demountable tanks that can be rolled shall be provided with protective caps.

Thermal insulation

6.8.3.2.14 If tanks intended for the carriage of liquefied gases are equipped with thermal insulation, such insulation shall consist of either:

- a sun shield covering not less than the upper third but not more than the upper half of the tank surface and separated from the shell by an air space at least 4 cm across; or
- a complete cladding, of adequate thickness, of insulating materials.

6.8.3.2.15 Tanks intended for the carriage of refrigerated liquefied gases shall be thermally insulated. Thermal insulation shall be ensured by means of a continuous sheathing. If the space between the shell and the sheathing is under vacuum (vacuum insulation), the protective sheathing shall be so designed as to withstand without deformation an external pressure of at least 100 kPa (1 bar) (gauge pressure). By derogation from the definition of "calculation pressure" in 1.2.1, external and internal reinforcing devices may be taken into account in the calculations. If the sheathing is so closed as to be gas-tight, a device shall be provided to prevent any dangerous pressure from developing in the insulating layer in the event of inadequate gas-tightness of the shell or of its items of equipment. The device shall prevent the infiltration of moisture into the heat-insulating sheath.

6.8.3.2.16 Tanks intended for the carriage of liquefied gases having a boiling point below -182°C at atmospheric pressure shall not include any combustible material either in the thermal insulation or in the means of attachment.

The means of attachment for vacuum insulated tanks may, with the approval of the competent authority, contain plastics substances between the shell and the sheathing.

6.8.3.2.17 By derogation from the requirements of 6.8.2.2.4 shells intended for the carriage of refrigerated liquefied gases need not have an inspection opening.

Items of equipment for battery-vehicles and MEGCs

6.8.3.2.18 Service and structural equipment shall be configured or designed to prevent damage that could result in the release of the pressure receptacle contents during normal conditions of handling and carriage. When the connection between the frame of the battery-vehicle or MEGC and the elements allows relative movement between the sub-assemblies, the equipment shall be so fastened as to permit such movement without damage to working parts. Manifold piping leading to shut-off valves shall be sufficiently flexible to protect the valves and the piping from shearing, or releasing the pressure receptacle contents. The filling and discharge devices (including flanges or threaded plugs) and any protective caps shall be capable of being secured against unintended opening.

6.8.3.2.19 In order to avoid any loss of content in the event of damage, the manifolds, the discharge fittings (pipe sockets, shut-off devices), and the stop-valves shall be protected or arranged from being wrenched off by external forces or designed to withstand them.

6.8.3.2.20 The manifold shall be designed for service in a temperature range of -20°C to $+50^{\circ}\text{C}$.

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The manifold shall be designed, constructed and installed so as to avoid the risk of damage due to thermal expansion and contraction, mechanical shock and vibration. All piping shall be of suitable metallic material. Welded pipe joints shall be used wherever possible.

Joints in copper tubing shall be brazed or have an equally strong metal union. The melting point of brazing materials shall be no lower than 525°C. The joints shall not decrease the strength of tubing as may happen when cutting threads.

- 6.8.3.2.21 Except for UN No.1001 acetylene, dissolved, the permissible maximum stress σ of the manifolding arrangement at the test pressure of the receptacles shall not exceed 75% of the guaranteed yield strength of the material.

The necessary wall thickness of the manifolding arrangement for the carriage of UN No.1001 acetylene, dissolved shall be calculated according to an approved code of practice.

NOTE: For the yield strength, see 6.8.2.1.11.

The basic requirements of this paragraph shall be deemed to have been complied with if the following standards are applied: (*Reserved*).

- 6.8.3.2.22 By derogation from the requirements of 6.8.3.2.3, 6.8.3.2.4 and 6.8.3.2.7, for cylinders, tubes, pressure drums and bundles of cylinders (frames) forming a battery-vehicle or MEGC, the required closing devices may be provided for within the manifolding arrangement.
- 6.8.3.2.23 If one of the elements is equipped with a safety valve and shut-off devices are provided between the elements, every element shall be so equipped.
- 6.8.3.2.24 The filling and discharge devices may be affixed to a manifold.
- 6.8.3.2.25 Each element, including each individual cylinder of a bundle, intended for the carriage of toxic gases, shall be capable of being isolated by a shut-off valve.
- 6.8.3.2.26 Battery-vehicles or MEGCs intended for the carriage of toxic gases shall not have safety valves, unless the safety valves are preceded by a bursting disc. In the latter case, the arrangement of the bursting disc and safety valve shall be satisfactory to the competent authority.
- 6.8.3.2.27 When battery-vehicles or MEGCs are intended for carriage by sea, the requirements of 6.8.3.2.26 shall not prohibit the fitting of safety valves conforming to the IMDG Code.
- 6.8.3.2.28 Receptacles which are elements of a battery-vehicle or MEGC intended for the carriage of flammable gases shall be combined in groups of not more than 5 000 litres which are capable of being isolated by a shut-off valve.

Each element of a battery-vehicle or MEGC intended for the carriage of flammable gases, when consisting of tanks conforming to this Chapter, shall be capable of being isolated by a shut-off valve.

6.8.3.3 *Type approval*

No special requirements.

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6.8.3.4 *Inspections and tests*

- 6.8.3.4.1 The materials of every welded shell with the exception of cylinders, tubes, pressure drums and cylinders as part of bundles of cylinders which are elements of a battery-vehicle or of a MEGC shall be tested according to the method described in 6.8.5.
- 6.8.3.4.2 The basic requirements for the test pressure are given in 4.3.3.2.1 to 4.3.3.2.4 and the minimum test pressures are given in the table of gases and gas mixtures in 4.3.3.2.5.
- 6.8.3.4.3 The first hydraulic pressure test shall be carried out before thermal insulation is placed in position. When the shell, its fittings, piping and items of equipment have been tested separately, the tank shall be subjected to a leakproofness test after assembly.
- 6.8.3.4.4 The capacity of each shell intended for the carriage of compressed gases filled by mass, liquefied gases or dissolved gases shall be determined, under the supervision of an expert approved by the competent authority, by weighing or volumetric measurement of the quantity of water which fills the shell; the measurement of shell capacity shall be accurate to within 1%. Determination by a calculation based on the dimensions of the shell is not permitted. The maximum filling masses allowed in accordance with packing instruction P200 or P203 in 4.1.4.1 as well as 4.3.3.2.2 and 4.3.3.2.3 shall be prescribed by an approved expert.
- 6.8.3.4.5 Checking of the welds shall be carried out in accordance with the $\lambda=1$ requirements of 6.8.2.1.23.
- 6.8.3.4.6 By derogation from the requirements of 6.8.2.4.2, the periodic inspections shall take place:
- | | |
|---|--|
| <p>at least after six years</p> <p>of service and thereafter at least every 12 years in the case of tanks intended for the carriage of refrigerated liquefied gases.</p> <p>The intermediate inspections according to 6.8.2.4.3 shall be carried out at least six years after each periodic inspection.</p> | <p>at least after eight years</p> <p>A leakproofness test or an intermediate inspection according to 6.8.2.4.3 may be performed, at the request of the competent authority, between any two successive periodic inspections.</p> |
|---|--|
- 6.8.3.4.7 In the case of vacuum-insulated tanks, the hydraulic-pressure test and the check of the internal condition may, with the consent of the approved expert, be replaced by a leakproofness test and measurement of the vacuum.
- 6.8.3.4.8 If, at the time of periodic inspections, openings have been made in shells intended for the carriage of refrigerated liquefied gases, the method by which they are hermetically closed before the shells are returned to service shall be approved by the approved expert and shall ensure the integrity of the shell.
- 6.8.3.4.9 Leakproofness tests of tanks intended for the carriage of gases shall be performed at a pressure of not less than:
- For compressed gases, liquefied gases and dissolved gases: 20% of the test pressure;
 - For refrigerated liquefied gases: 90% of the maximum working pressure.

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Inspections and tests for battery-vehicles and MEGCs

- 6.8.3.4.10 The elements and items of equipment of each battery-vehicle or MEGC shall be inspected and tested either together or separately before being put into service for the first time (initial inspection and test). Thereafter battery-vehicles or MEGCs the elements of which are receptacles shall be inspected at not more than five-year intervals. Battery-vehicles and MEGCs the elements of which are tanks shall be inspected according to 6.8.3.4.6. An exceptional inspection and test shall be performed regardless of the last periodic inspection and test when necessary according to 6.8.3.4.14.
- 6.8.3.4.11 The initial inspection shall include:
- a check of conformity to the approved type;
 - a check of the design characteristics;
 - an examination of the internal and external conditions;
 - a hydraulic pressure test¹⁰ at the test pressure indicated on the plate prescribed in 6.8.3.5.10;
 - a leakproofness test at the maximum working pressure; and
 - a check of satisfactory operation of the equipment.
- When the elements and their fittings have been pressure-tested separately, they shall be subjected together after assembly to a leakproofness test.
- 6.8.3.4.12 Cylinders, tubes and pressure drums and cylinders as part of bundles of cylinders shall be tested according to packing instruction P200 or P203 in 4.1.4.1.
- The test pressure of the manifold of the battery-vehicle or MEGC shall be the same as that of the elements of the battery-vehicle or MEGC. The pressure test of the manifold may be performed as a hydraulic test or by using another liquid or gas with the agreement of the competent authority or its authorised body. By derogation from this requirement, the test pressure for the manifold of battery-vehicle or MEGC shall not be less than 300 bar for UN No. 1001 acetylene, dissolved.
- 6.8.3.4.13 The periodic inspection shall include a leakproofness test at the maximum working pressure and an external examination of the structure, the elements and the service equipment without disassembling. The elements and the piping shall be tested at the periodicity defined in packing instruction P200 of 4.1.4.1 and in accordance with the requirements of 6.2.1.6 and 6.2.3.5 respectively. When the elements and equipment have been pressure-tested separately, they shall be subjected together after assembly to a leakproofness test.
- 6.8.3.4.14 An exceptional inspection and test is necessary when the battery-vehicle or MEGC shows evidence of damaged or corroded areas, or leakage, or any other conditions, that indicate a deficiency that could affect the integrity of the battery-vehicle or MEGC. The extent of the exceptional inspection and test and, if deemed necessary, the disassembling of elements shall depend on the amount of damage or deterioration of the battery-vehicle or MEGC. It shall include at least the examinations required under 6.8.3.4.15.

¹⁰ *In special cases and with the agreement of the expert approved by the competent authority, the hydraulic pressure test may be replaced by a pressure test using another liquid or gas, where such an operation does not present any danger.*

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- 6.8.3.4.15 The examinations shall ensure that:
- (a) The elements are inspected externally for pitting, corrosion, or abrasions, dents, distortions, defects in welds or any other conditions, including leakage, that might render the battery-vehicles or MEGCs unsafe for transport;
 - (b) The piping, valves, and gaskets are inspected for corroded areas, defects, and other conditions, including leakage, that might render battery-vehicles or MEGCs unsafe for filling, discharge or transport;
 - (c) Missing or loose bolts or nuts on any flanged connection or blank flange are replaced or tightened;
 - (d) All emergency devices and valves are free from corrosion, distortion and any damage or defect that could prevent their normal operation. Remote closure devices and self-closing stop-valves shall be operated to demonstrate proper operation;
 - (e) Required markings on the battery-vehicles or MEGCs are legible and in accordance with the applicable requirements; and
 - (f) Any framework, supports and arrangements for lifting the battery-vehicles or MEGCs are in satisfactory condition.
- 6.8.3.4.16 The tests, inspections and checks in accordance with 6.8.3.4.10 to 6.8.3.4.15 shall be carried out by the expert approved by the competent authority. Certificates shall be issued showing the results of these operations, even in the case of negative results.

These certificates shall refer to the list of the substances permitted for carriage in this battery-vehicle or MEGC in accordance with 6.8.2.3.1.

A copy of these certificates shall be attached to the tank record of each tank, battery-vehicle or MEGC tested (see 4.3.2.1.7).

6.8.3.5 *Marking*

6.8.3.5.1 The following additional particulars shall be marked by stamping or by any other similar method on the plate prescribed in 6.8.2.5.1, or directly on the walls of the shell itself if the walls are so reinforced that the strength of the tank is not impaired.

6.8.3.5.2 On tanks intended for the carriage of only one substance:

- the proper shipping name of the gas and, in addition for gases classified under an n.o.s. entry, the technical name¹⁶;

¹⁶ *Instead of the proper shipping name or, if applicable, of the proper shipping name of the n.o.s. entry followed by the technical name, the use of the following names is permitted:*

- *for UN No. 1078 refrigerant gas, n.o.s.: mixture F1, mixture F2, mixture F3;*
- *for UN No. 1060 methylacetylene and propadiene mixtures, stabilized: mixture P1, mixture P2;*
- *for UN No. 1965 hydrocarbon gas mixture, liquefied, n.o.s.: mixture A, mixture A01, mixture A02, mixture A0, mixture A1, mixture B1, mixture B2, mixture B, mixture C. The names customary in the trade and mentioned in 2.2.2.3, Classification code 2F, UN No. 1965, Note 1 may be used only as a complement;*
- *for UN No. 1010 Butadienes, stabilized: 1,2-Butadiene, stabilized, 1,3-Butadiene, stabilized.*

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This indication shall be supplemented:

- in the case of tanks intended for the carriage of compressed gases filled by volume (pressure), by an indication of the maximum filling pressure at 15 °C permitted for the tank; and
- in the case of tanks intended for the carriage of compressed gases filled by mass, and of liquefied gases, refrigerated liquefied gases or dissolved gases by an indication of the maximum permissible load mass in kg and of the filling temperature if below -20 °C.

6.8.3.5.3 On multipurpose tanks:

- the proper shipping names of the gases and, in addition for gases classified under an n.o.s. entry, the technical name of the gases¹⁶ for whose carriage the tank is approved.

These particulars shall be supplemented by an indication of the maximum permissible load mass in kg for each gas.

6.8.3.5.4 On tanks intended for the carriage of refrigerated liquefied gases:

- the maximum working pressure allowed.

6.8.3.5.5 On tanks equipped with thermal insulation:

- the inscription "thermally insulated" or "thermally insulated by vacuum".

6.8.3.5.6 In addition to the particulars prescribed in 6.8.2.5.2, the following shall be inscribed on the tank-vehicle (on the tank itself or on plates)¹³: In addition to the particulars prescribed in 6.8.2.5.2, the following shall be inscribed on the tank-container (on the tank itself or on plates)¹³:

- (a) - the tank code according to the certificate (see 6.8.2.3.1) with the actual test pressure of the tank;
 - the inscription: "minimum filling temperature allowed: ...";
- (b) where the tank is intended for the carriage of one substance only:
 - the proper shipping name of the gas and, in addition for gases classified under an n.o.s. entry, the technical name¹⁶;
 - for compressed gases which are filled by mass, and for liquefied gases, refrigerated liquefied gases or dissolved gases, the maximum permissible load mass in kg;

¹³ Add the units of measurement after the numerical values.

¹⁶ Instead of the proper shipping name or, if applicable, of the proper shipping name of the n.o.s. entry followed by the technical name, the use of the following names is permitted:

- for UN No. 1078 refrigerant gas, n.o.s.: mixture F1, mixture F2, mixture F3;
- for UN No. 1060 methylacetylene and propadiene mixtures, stabilized: mixture P1, mixture P2;
- for UN No. 1965 hydrocarbon gas mixture, liquefied, n.o.s.: mixture A, mixture A01, mixture A02, mixture A0, mixture A1, mixture B1, mixture B2, mixture B, mixture C. The names customary in the trade and mentioned in 2.2.2.3, Classification code 2F, UN No. 1965, Note 1 may be used only as a complement;
- for UN No. 1010 Butadienes, stabilized: 1,2-Butadiene, stabilized, 1,3-Butadiene, stabilized.

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- (c) where the tank is a multipurpose tank:
 - the proper shipping name of the gas and, for gases classified under an n.o.s. entry, the technical name¹⁶ of all gases to whose carriage the tank is assigned with an indication of the maximum permissible load mass in kg for each of them;
- (d) where the shell is equipped with thermal insulation:
 - the inscription "thermally insulated" (or "thermally insulated by vacuum"), in an official language of the country of registration and also, if that language is not English, French or German, in English, French or German, unless any agreements concluded between the countries concerned in the transport operation provide otherwise.

6.8.3.5.7 (Reserved)

6.8.3.5.8 These particulars shall not be required in the case of a vehicle carrying demountable tanks.

6.8.3.5.9 (Reserved)

Marking of battery-vehicles and MEGCs

- 6.8.3.5.10 Every battery-vehicle and every MEGC shall be fitted with a corrosion-resistant metal plate permanently attached in a place readily accessible for inspection. The following particulars at least shall be marked on the plate by stamping or by any other similar method¹³
- approval number;
 - manufacturer's name or mark;
 - manufacturer's serial number;
 - year of manufacture;
 - test pressure (gauge pressure)
 - design temperature (only if above +50 °C or below -20 °C);
 - date (month and year) of initial test and most recent periodic test in accordance with 6.8.3.4.10 to 6.8.3.4.13;
 - stamp of the expert who carried out the tests.

¹³ Add the units of measurement after the numerical values.

¹⁶ Instead of the proper shipping name or, if applicable, of the proper shipping name of the n.o.s. entry followed by the technical name, the use of the following names is permitted:

- for UN No. 1078 refrigerant gas, n.o.s.: mixture F1, mixture F2, mixture F3;
- for UN No. 1060 methylacetylene and propadiene mixtures, stabilized: mixture P1, mixture P2;
- for UN No. 1965 hydrocarbon gas mixture, liquefied, n.o.s.: mixture A, mixture A01, mixture A02, mixture A0, mixture A1, mixture B1, mixture B2, mixture B, mixture C. The names customary in the trade and mentioned in 2.2.2.3, Classification code 2F, UN No. 1965, Note 1 may be used only as a complement;
- for UN No. 1010 Butadienes, stabilized: 1,2-Butadiene, stabilized, 1,3-Butadiene, stabilized.

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- | | |
|---|---|
| <p>6.8.3.5.11 The following particulars shall be inscribed on the battery-vehicle itself or on a plate¹³:</p> <ul style="list-style-type: none"> - names of owner or of operator; - number of elements; - total capacity of the elements; <p>and for battery-vehicles filled by mass:</p> <ul style="list-style-type: none"> - unladen mass; - maximum permissible mass. | <p>The following particulars shall be inscribed either on the MEGC itself or on a plate¹³:</p> <ul style="list-style-type: none"> - names of owner and of operator; - number of elements; - total capacity of the elements; - maximum permissible laden mass; - the tank code according to the certificate of approval (see 6.8.2.3.1) with the actual test pressure of the MEGC; - the proper shipping name of the gases, and in addition, for gases classified under an n.o.s. entry, the technical name¹⁶ of the gases for whose carriage the MEGC is used; <p>and for MEGCs filled by mass:</p> <ul style="list-style-type: none"> - tare. |
| <p>6.8.3.5.12 The frame of a battery-vehicle or MEGC shall bear near the filling point a plate specifying:</p> <ul style="list-style-type: none"> - the maximum filling pressure¹³ at 15 °C allowed for elements intended for compressed gases; - the proper shipping name of the gas in accordance with Chapter 3.2 and, in addition for gases classified under an n.o.s. entry, the technical name¹⁶; <p>and, in addition, in the case of liquefied gases:</p> <ul style="list-style-type: none"> - the permissible maximum load per element¹³. | |
| <p>6.8.3.5.13 Cylinders, tubes and pressure drums, and cylinders as part of bundles of cylinders, shall be marked according to 6.2.2.7. These receptacles need not be labelled individually with the danger labels as required in Chapter 5.2.</p> <p>Battery-vehicles and MEGCs shall be placarded and marked according to Chapter 5.3.</p> | |

¹³ Add the units of measurements after the numerical values.

¹⁶ Instead of the proper shipping name or, if applicable, of the proper shipping name of the n.o.s. entry followed by the technical name, the use of the following names is permitted:

- for UN No. 1078 refrigerant gas, n.o.s.: mixture F1, mixture F2, mixture F3;
- for UN No. 1060 methylacetylene and propadiene mixtures, stabilized: mixture P1, mixture P2;
- for UN No. 1965 hydrocarbon gas mixture, liquefied, n.o.s.: mixture A, mixture A01, mixture A02, mixture A0, mixture A1, mixture B1, mixture B2, mixture B, mixture C. The names customary in the trade and mentioned in 2.2.2.3, Classification code 2F, UN No. 1965, Note 1 may be used only as a complement;
- for UN No. 1010 Butadienes, stabilized: 1,2-Butadiene, stabilized, 1,3-Butadiene, stabilized.

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6.8.3.6 Requirements for battery-vehicles and MEGCs which are designed, constructed and tested according to referenced standards

NOTE: Persons or bodies identified in standards as having responsibilities in accordance with ADR shall meet the requirements of ADR.

The standard referenced in the table below shall be applied for the issue of type approvals as indicated in column (4) to meet the requirements of Chapter 6.8 referred to in column (3). The requirements of Chapter 6.8 referred to in column (3) shall prevail in all cases. Column (5) gives the latest date when existing type approvals shall be withdrawn according to 1.8.7.2.4; if no date is shown the type approval remains valid until it expires.

Since 1 January 2009 the use of the referenced standards has been mandatory. Exceptions are dealt with in 6.8.3.7

If more than one standard is referenced for the application of the same requirements, only one of them shall be applied, but in full unless otherwise specified in the table below.

Reference	Title of document	Applicable sub-sections and paragraphs	Applicable for new type approvals or for renewals	Latest date for withdrawal of existing type approvals
(1)	(2)	(3)	(4)	(5)
EN 13807:2003	Transportable gas cylinders – Battery vehicles – Design, manufacture, identification and testing	6.8.3.1.4 and 6.8.3.1.5, 6.8.3.2.18 to 6.8.3.2.26, 6.8.3.4.10 to 6.8.3.4.12 and 6.8.3.5.10 to 6.8.3.5.13	Until further notice	

6.8.3.7 Requirements for battery-vehicles and MEGCs which are not designed, constructed and tested according to referenced standards

To reflect scientific and technical progress or where no standard is referenced in 6.8.3.6 or to deal with specific aspects not addressed in a standard referenced in 6.8.3.6, the competent authority may recognize the use of a technical code providing the same level of safety. Battery-vehicles and MEGCs shall, however, comply with the minimum requirements of 6.8.3.

In the type approval the issuing body shall specify the procedure for periodic inspections if the standards referenced in 6.2.2, 6.2.4 or 6.8.2.6 are not applicable or shall not be applied.

The competent authority shall transmit to the secretariat of UNECE a list of the technical codes that it recognises. The list should include the following details: name and date of the code, purpose of the code and details of where it may be obtained. The secretariat shall make this information publicly available on its website.

A standard which has been adopted for reference in a future edition of the ADR may be approved by the competent authority for use without notifying the UNECE secretariat.

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6.8.4 Special provisions

NOTE 1: For liquids having a flash-point of not more than 60 °C and for flammable gases, see also 6.8.2.1.26, 6.8.2.1.27 and 6.8.2.2.9.

NOTE 2: For requirements for tanks subjected to a pressure test of not less than 1 MPa (10 bar) or for tanks intended for the carriage of refrigerated liquefied gases, see 6.8.5.

When they are shown under an entry in Column (13) of Table A of Chapter 3.2, the following special provisions apply:

(a) Construction (TC)

TC1 The requirements of 6.8.5 are applicable to the materials and construction of these shells.

TC2 Shells, and their items of equipment, shall be made of aluminium not less than 99.5% pure or of suitable steel not liable to cause hydrogen peroxide to decompose. Where shells are made of aluminium not less than 99.5% pure, the wall thickness need not exceed 15 mm, even where calculation in accordance with 6.8.2.1.17 gives a higher value.

TC3 The shells shall be made of austenitic steel.

TC4 Shells shall be provided with an enamel or equivalent protective lining if the material of the shell is attacked by UN No. 3250 chloroacetic acid.

TC5 Shells shall be provided with a lead lining not less than 5 mm thick or an equivalent lining.

TC6 Where the use of aluminium is necessary for tanks, such tanks shall be made of aluminium not less than 99.5% pure; the wall thickness need not exceed 15 mm even where calculation in accordance with 6.8.2.1.17 gives a higher value.

TC7 The effective minimum thickness of the shell shall not be less than 3 mm.

TC8 The shells shall be made of aluminium or aluminium alloy.

(b) Items of equipment (TE)

TE1 (Deleted)

TE2 (Deleted)

TE3 Tanks shall in addition meet the following requirements. The heating device shall not penetrate into, but shall be exterior to the shell. However, a pipe used for extracting the phosphorus may be equipped with a heating jacket. The device heating the jacket shall be so regulated as to prevent the temperature of the phosphorus from exceeding the filling temperature of the shell. Other piping shall enter the shell in its upper part; openings shall be situated above the highest permissible level of the phosphorus and be capable of being completely enclosed under lockable caps. The tank shall be equipped with a gauging system for verifying the level of the phosphorus and, if water is used as a protective agent, with a fixed gauge mark showing the highest permissible level of the water.

TE4 Shells shall be equipped with thermal insulation made of materials which are not readily flammable.

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- TE5** If shells are equipped with thermal insulation, such insulation shall be made of materials which are not readily flammable.
- TE6** Tanks may be equipped with a device of a design which precludes its obstruction by the substance carried and which prevents leakage and the build-up of excess overpressure or underpressure inside the shell.
- TE7** The shell-discharge system shall be equipped with two mutually independent shut-off devices mounted in series, the first taking the form of a quick-closing internal stop-valve of an approved type and the second that of an external stop-valve, one at each end of the discharge pipe. A blank flange, or another device providing the same measure of security, shall also be fitted at the outlet of each external stop-valve. The internal stop-valve shall be such that if the pipe is wrenched off the stop-valve will remain integral with the shell and in the closed position.
- TE8** The connections to the external pipe-sockets of tanks shall be made of materials not liable to cause decomposition of hydrogen peroxide.
- TE9** Tanks shall be fitted in their upper part with a shut-off device preventing any build-up of excess pressure inside the shell due to the decomposition of the substances carried, any leakage of liquid, and any entry of foreign matter into the shell.
- TE10** The shut-off devices of tanks shall be so designed as to preclude obstruction of the devices by the solidified substance during carriage. Where tanks are sheathed in thermally-insulating material, the material shall be of an inorganic nature and entirely free from combustible matter.
- TE11** Shells and their service equipment shall be so designed as to prevent the entry of foreign matter, leakage of liquid or any building up of dangerous excess pressure inside the shell due to the decomposition of the substances carried. A safety valve preventing the entry of foreign matter also fulfils this provision.
- TE12** Tanks shall be equipped with thermal insulation complying with the requirements of 6.8.3.2.14. If the SADT of the organic peroxide in the tank is 55 °C or less, or the tank is constructed of aluminium, the shell shall be completely insulated. The sun shield and any part of the tank not covered by it, or the outer sheathing of a complete lagging, shall be painted white or finished in bright metal. The paint shall be cleaned before each transport journey and renewed in case of yellowing or deterioration. The thermal insulation shall be free from combustible matter. Tanks shall be fitted with temperature sensing devices.

Tanks shall be fitted with safety valves and emergency pressure-relief devices. Vacuum-relief devices may also be used. Emergency pressure-relief devices shall operate at pressures determined according to both the properties of the organic peroxide and the construction characteristics of the tank. Fusible elements shall not be permitted in the body of the shell.

Tanks shall be fitted with spring-loaded safety valves to prevent significant pressure build-up within the shell of the decomposition products and vapours released at a temperature of 50 °C. The capacity and start-to-discharge pressure of the safety-valve(s) shall be based on the results of the tests specified in special provision TA2. The start-to-discharge pressure shall however in no case be such that liquid could escape from the valve(s) if the tank were overturned.

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The emergency-relief devices may be of the spring-loaded or frangible types designed to vent all the decomposition products and vapours evolved during a period of not less than one hour of complete fire-engulfment as calculated by the following formula:

$$q = 70961 \times F \times A^{0.82}$$

where:

q = heat absorption [W]

A = wetted area [m²]

F = insulation factor

F = 1 for non-insulated tanks, or

$$F = \frac{U(923 - T_{p0})}{47032} \text{ for insulated tanks}$$

where:

K = heat conductivity of insulation layer [W·m⁻¹·K⁻¹]

L = thickness of insulation layer [m]

U = K/L = heat transfer coefficient of the insulation [W·m⁻²·K⁻¹]

T_{p0} = temperature of peroxide at relieving conditions [K]

The start-to-discharge pressure of the emergency-relief device(s) shall be higher than that above specified and based on the results of the tests referred to in special provision TA2. The emergency-relief devices shall be dimensioned in such a way that the maximum pressure in the tank never exceeds the test pressure of the tank.

NOTE: An example of a method to determine the size of emergency-relief devices is given in Appendix 5 of the Manual of Tests and Criteria.

For tanks equipped with thermal insulation consisting of a complete cladding, the capacity and setting of the emergency-relief device(s) shall be determined assuming a loss of insulation from 1% of the surface area.

Vacuum-relief devices and spring-loaded safety valves of tanks shall be provided with flame arresters unless the substances to be carried and their decomposition products are non-combustible. Due attention shall be paid to the reduction of the relief capacity caused by the flame arrester.

- TE13** Tanks shall be thermally insulated and fitted with a heating device on the outside.
- TE14** Tanks shall be equipped with thermal insulation. The thermal insulation directly in contact with the shell shall have an ignition temperature at least 50 °C higher than the maximum temperature for which the tank was designed.
- TE15** (Deleted)
- TE16** (Reserved)
- TE17** (Reserved)
- TE18** Tanks intended for the carriage of substances filled at a temperature higher than 190 °C shall be equipped with deflectors placed at right angles to the upper filling openings, so as to avoid a sudden localized increase in wall temperature during filling.

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TE19 Fittings and accessories mounted in the upper part of the tank shall be either:

- inserted in a recessed housing; or
- equipped with an internal safety valve; or
- shielded by a cap, or by transverse and/or longitudinal members, or by other equally effective devices, so profiled that in the event of overturning the fittings and accessories will not be damaged.

Fittings and accessories mounted in the lower part of the tank:

Pipe-sockets, lateral shut-off devices, and all discharge devices shall either be recessed by at least 200 mm from the extreme outer edge of the tank or be protected by a rail having a coefficient of inertia of not less than 20 cm³ transversally to the direction of travel; their ground clearance shall be not less than 300 mm with the tank full.

Fittings and accessories mounted on the rear face of the tank shall be protected by the bumper prescribed in 9.7.6. Their height above the ground shall be such that they are adequately protected by the bumper

TE20 Notwithstanding the other tank-codes which are permitted in the hierarchy of tanks of the rationalized approach in 4.3.4.1.2, tanks shall be equipped with a safety valve.

TE21 The closures shall be protected with lockable caps.

TE22 *(Reserved)*

TE23 Tanks shall be equipped with a device of a design which precludes its obstruction by the substance carried and which prevents leakage and the build-up of excess overpressure or underpressure inside the shell.

TE24 If tanks, intended for the carriage and handling of bitumen, are equipped with a spray bar at the end of the discharge pipe, the closing device, as required by 6.8.2.2.2, may be replaced by a shut-off valve, situated on the discharge pipe and preceding the spray bar.

TE25 *(Reserved)*

(c) **Type approval (TA)**

TA1 Tanks shall not be approved for the carriage of organic substances.

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TA2 This substance may be carried in fixed or demountable tanks or tank-containers under the conditions laid down by the competent authority of the country of origin, if, on the basis of the tests mentioned below, the competent authority is satisfied that such a transport operation can be carried out safely. If the country of origin is not party to ADR, these conditions shall be recognized by the competent authority of the first ADR country reached by the consignment.

For the type approval tests shall be undertaken:

- to prove the compatibility of all materials normally in contact with the substance during carriage;
- to provide data to facilitate the design of the emergency pressure-relief devices and safety valves taking into account the design characteristics of the tank; and
- to establish any special requirements necessary for the safe carriage of the substance.

The test results shall be included in the report for the type approval.

TA3 This substance may be carried only in tanks with the tank code LGAV or SGAV; the hierarchy in 4.3.4.1.2 is not applicable.

TA4 The conformity assessment procedures of section 1.8.7 shall be applied by the competent authority, its delegate or inspection body conforming to 1.8.6.2, 1.8.6.4, 1.8.6.5 and 1.8.6.8 and accredited to EN ISO/IEC 17020:2004 type A.

TA5 This substance may be carried only in tanks with the tank code S2.65AN(+); the hierarchy in 4.3.4.1.2 is not applicable.

(d) **Tests (TT)**

TT1 Tanks of pure aluminium need to be subjected to the initial and periodic hydraulic pressure tests at a pressure of only 250 kPa (2.5 bar) (gauge pressure).

TT2 The condition of the lining of shells shall be inspected every year by an expert approved by the competent authority, who shall inspect the inside of the shell.

TT3 By derogation from the requirements of 6.8.2.4.2, periodic inspections shall take place at least every eight years and shall include a thickness check using suitable instruments. For such tanks, the leakproofness test and check for which provision is made in 6.8.2.4.3 shall be carried out at least every four years.

TT4 (*Reserved*)

TT5 The hydraulic pressure tests shall take place at least every
3 years. | 2½ years.

TT6 The periodic tests, including the hydraulic pressure test, shall be carried out at least every
3 years. |

TT7 Notwithstanding the requirements of 6.8.2.4.2, the periodic internal inspection may be replaced by a programme approved by the competent authority.

TT8 Tanks on which the proper shipping name required for the entry UN 1005 AMMONIA, ANHYDROUS is marked in accordance with 6.8.3.5.1 to 6.8.3.5.3 and

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constructed of fine-grained steel with a yield strength of more than 400 N/mm² in accordance with the material standard, shall be subjected at each periodic test according to 6.8.2.4.2, to magnetic particle inspections to detect surface cracking.

For the lower part of each shell at least 20% of the length of each circumferential and longitudinal weld shall, together with all nozzle welds and any repair or ground areas, be inspected.

If the marking of the substance on the tank or tank plate is removed, a magnetic particle inspection shall be carried out and these actions recorded in the inspection certificate attached to the tank record.

Such magnetic particle inspections shall be carried out by a competent person qualified for this method according to EN 473 (Non-destructive testing – Qualification and certification of NDT personnel – General principles).

TT9 For inspections and tests (including supervision of the manufacture) the procedures of section 1.8.7 shall be applied by the competent authority, its delegate or inspection body conforming to 1.8.6.2, 1.8.6.4, 1.8.6.5 and 1.8.6.8 and accredited according to EN ISO/IEC 17020:2004 type A.

TT10 The periodic inspections according to 6.8.2.4.2 shall take place:

at least every three years. | at least every two and a half years.

(e) **Marking (TM)**

NOTE: These particulars shall be in an official language of the country of approval, and also, if that language is not English, French or German, in English, French or German, unless any agreements concluded between the countries concerned in the transport operation provide otherwise.

TM1 Tanks shall bear in addition to the particulars prescribed in 6.8.2.5.2, the words: "**Do not open during carriage. Liable to spontaneous combustion**" (see also the Note above).

TM2 Tanks shall bear in addition to the particulars prescribed in 6.8.2.5.2, the words: "**Do not open during carriage. Gives off flammable gases on contact with water**" (see also the Note above).

TM3 Tanks shall also bear, on the plate prescribed in 6.8.2.5.1, the proper shipping names of the approved substances and the maximum permissible load of the tank in kg.

TM4 For tanks the following additional particulars shall be marked by stamping or by any other similar method on the plate prescribed in 6.8.2.5.2 or directly on the shell itself, if the walls are so reinforced that the strength of the tank is not impaired: the chemical name with the approved concentration of the substance concerned.

TM5 Tanks shall bear, in addition to the particulars referred to in 6.8.2.5.1 the date (month, year) of the most recent inspection of the internal condition of the shell.

TM6 (Reserved)

TM7 The trefoil symbol, as described in 5.2.1.7.6, shall be marked by stamping or any other equivalent method on the plate described in 6.8.2.5.1. This trefoil may be engraved directly on the walls of the shell itself, if the walls are so reinforced that the strength of the shell is not impaired.

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6.8.5 Requirements concerning the materials and construction of fixed welded tanks, demountable welded tanks, and welded shells of tank-containers for which a test pressure of not less than 1 MPa (10 bar) is required, and of fixed welded tanks, demountable welded tanks and welded shells of tank-containers intended for the carriage of refrigerated liquefied gases of Class 2

6.8.5.1 *Materials and shells*

- 6.8.5.1.1 (a) Shells intended for the carriage of :
- compressed, liquefied gases or dissolved gases of Class 2;
 - UN Nos. 1380, 2845, 2870, 3194 and 3391 to 3394 of Class 4.2; and
 - UN No. 1052 hydrogen fluoride, anhydrous and UN No.1790 hydrofluoric acid with more than 85% hydrogen fluoride of Class 8

shall be made of steel;

- (b) Shells constructed of fine-grained steels for the carriage of:
- corrosive gases of Class 2 and UN No. 2073 ammonia solution; and
 - UN No. 1052 hydrogen fluoride, anhydrous and UN No.1790 hydrofluoric acid with more than 85% hydrogen fluoride of Class 8

shall be heat-treated for thermal stress relief;

- (c) Shells intended for the carriage of refrigerated liquefied gases of Class 2, shall be made of steel, aluminium, aluminium alloy, copper or copper alloy (e.g. brass). However, shells made of copper or copper alloy shall be allowed only for gases containing no acetylene; ethylene, however, may contain not more than 0.005% acetylene;
- (d) Only materials appropriate to the lowest and highest working temperatures of the shells and of their fittings and accessories may be used.

6.8.5.1.2 The following materials shall be allowed for the manufacture of shells:

- (a) Steels not subject to brittle fracture at the lowest working temperature (see 6.8.5.2.1):
- mild steels (except for refrigerated liquefied gases of Class 2);
 - fine-grained steels, down to a temperature of -60 °C;
 - nickel steels (with a nickel content of 0.5 to 9%), down to a temperature of -196 °C, depending on the nickel content;
 - austenitic chrome-nickel steels, down to a temperature of -270 °C;
- (b) Aluminium not less than 99.5% pure or aluminium alloys (see 6.8.5.2.2);
- (c) Deoxidized copper not less than 99.9% pure, or copper alloys having a copper content of over 56% (see 6.8.5.2.3).

- 6.8.5.1.3 (a) Shells made of steel, aluminium or aluminium alloys shall be either seamless or welded;
- (b) Shells made of austenitic steel, copper or copper alloy may be hard-soldered.

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6.8.5.1.4 The fittings and accessories may either be screwed to the shells or be secured thereto as follows:

- (a) Shells made of steel, aluminium or aluminium alloy: by welding;
- (b) Shells made of austenitic steel, of copper or of copper alloy: by welding or hard-soldering.

6.8.5.1.5 The construction of shells and their attachment to the vehicle, to the underframe or in the container frame shall be such as to preclude with certainty any such reduction in the temperature of the load-bearing components as would be likely to render them brittle. The means of attachment of shells shall themselves be so designed that even when the shell is at its lowest working temperature they still possess the necessary mechanical properties.

6.8.5.2 *Test requirements*

6.8.5.2.1 *Steel shells*

The materials used for the manufacture of shells and the weld beads shall, at their lowest working temperature, but at least at -20 °C, meet at least the following requirements as to impact strength:

- The tests shall be carried out with test-pieces having a V-shaped notch;
- The minimum impact strength (see 6.8.5.3.1 to 6.8.5.3.3) for test-pieces with the longitudinal axis at right angles to the direction of rolling and a V-shaped notch (conforming to ISO R 148) perpendicular to the plate surface, shall be 34 J/cm² for mild steel (which, because of existing ISO standards, may be tested with test-pieces having the longitudinal axis in the direction of rolling); fine-grained steel; ferritic alloy steel Ni < 5%, ferritic alloy steel 5% ≤ Ni ≤ 9%; or austenitic Cr - Ni steel;
- In the case of austenitic steels, only the weld bead need be subjected to an impact-strength test;
- For working temperatures below -196°C the impact-strength test is not performed at the lowest working temperature, but at -196 °C.

6.8.5.2.2 *Shells made of aluminium or aluminium alloy*

The seams of shells shall meet the requirements laid down by the competent authority.

6.8.5.2.3 *Shells made of copper or copper alloy*

It is not necessary to carry out tests to determine whether the impact strength is adequate.

6.8.5.3 *Impact-strength tests*

6.8.5.3.1 For sheets less than 10 mm but not less than 5 mm thick, test-pieces having a cross-section of 10 mm × e mm, where "e" represents the thickness of the sheet, shall be used. Machining to 7.5 mm or 5 mm is permitted if it is necessary. The minimum value of 34 J/cm² shall be required in every case.

NOTE: No impact-strength test shall be carried out on sheets less than 5 mm thick, or on their weld seams.

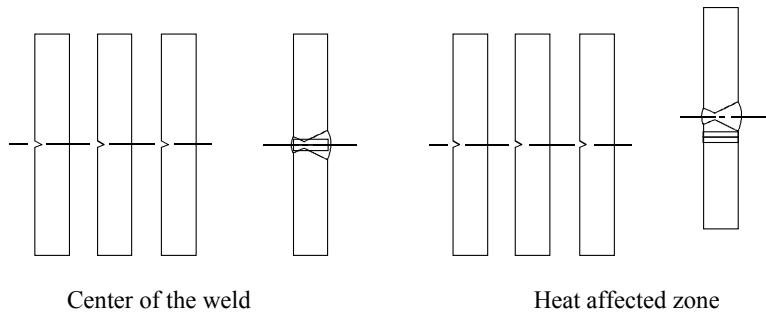
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- 6.8.5.3.2 (a) For the purpose of testing sheets, the impact strength shall be determined on three test-pieces. Test-pieces shall be taken at right angles to the direction of rolling; however, for mild steel they may be taken in the direction of rolling.
- (b) For testing weld seams the test-pieces shall be taken as follows:

when $e \leq 10$ mm:

three test-pieces with the notch at the centre of the weld;

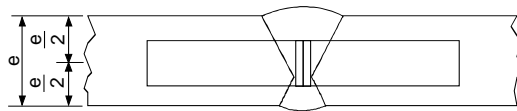
three test-pieces with the notch in the centre of the heat affected zone (the V-notch to cross the fusion boundary at the centre of the specimen);



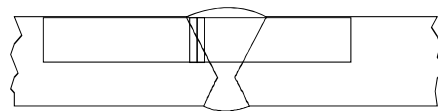
when $10 \text{ mm} < e \leq 20 \text{ mm}$:

three test-pieces from the centre of the weld;

three test-pieces from the heat affected zone (the V-notch to cross the fusion boundary at the centre of the specimen);



Center of the weld

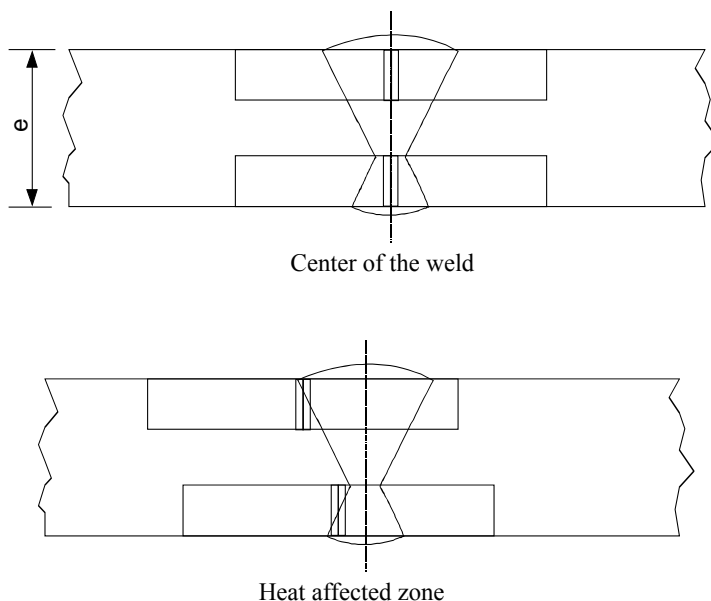


Heat affected zone

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when $e > 20$ mm

two sets of three test-pieces, one set on the upper face, one set on the lower face at each of the points indicated below (the V-notch to cross the fusion boundary at the centre of the specimen for those taken from the heat affected zone)



- 6.8.5.3.3 (a) For sheets, the average of the three tests shall meet the minimum value of 34 J/cm^2 indicated in 6.8.5.2.1; not more than one of the individual values may be below the minimum value and then not below 24 J/cm^2 ;
- (b) For welds, the average value obtained from the three test-pieces taken at the centre of the weld shall not be below the minimum value of 34 J/cm^2 ; not more than one of the individual values may be below the minimum value and then not below 24 J/cm^2 ;
- (c) For the heat affected zone (the V-notch to cross the fusion boundary at the centre of the specimen) the value obtained from not more than one of the three test-pieces may be below the minimum value of 34 J/cm^2 , though not below 24 J/cm^2 .
- 6.8.5.3.4 If the requirements prescribed in 6.8.5.3.3 are not met, one retest only may be done if:
- (a) the average value of the first three tests is below the minimum value of 34 J/cm^2 ; or
- (b) more than one of the individual values is less than the minimum value of 34 J/cm^2 but not below 24 J/cm^2 .
- 6.8.5.3.5 In a repeated impact test on sheets or welds, none of the individual values may be below 34 J/cm^2 . The average value of all the results of the original test and of the retest should be equal to or more than the minimum of 34 J/cm^2 .

On a repeated impact strength test on the heat-affected zone, none of the individual values may be below 34 J/cm^2 .

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6.8.5.4 *Reference to standards*

The requirements of 6.8.5.2 and 6.8.5.3 shall be deemed to have been complied with if the following relevant standards have been applied:

EN 1252-1:1998 Cryogenic vessels - Materials - Part 1: Toughness requirements for temperature below - 80 °C.

EN 1252-2:2001 Cryogenic vessels - Materials - Part 2: Toughness requirements for temperature between - 80 °C and - 20 °C.

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CHAPTER 6.9

REQUIREMENTS FOR THE DESIGN, CONSTRUCTION, EQUIPMENT, TYPE APPROVAL, TESTING AND MARKING OF FIBRE-REINFORCED PLASTICS (FRP) FIXED TANKS (TANK-VEHICLES), DEMOUNTABLE TANKS, TANK-CONTAINERS AND TANK SWAP BODIES

NOTE: *For portable tanks and UN multiple-element gas containers (MEGCs) see Chapter 6.7; for fixed tanks (tank-vehicles), demountable tanks and tank-containers and tank swap bodies, with shells made of metallic materials, and battery-vehicles and multiple element gas containers (MEGCs) other than UN MEGCs see Chapter 6.8; for vacuum operated waste tanks see Chapter 6.10.*

6.9.1 General

- 6.9.1.1 FRP tanks shall be designed, manufactured and tested in accordance with a quality assurance programme recognized by the competent authority; in particular, lamination work and welding of thermoplastic liners shall only be carried out by qualified personnel in accordance with a procedure recognized by the competent authority.
- 6.9.1.2 For the design and testing of FRP tanks, the provisions of 6.8.2.1.1, 6.8.2.1.7, 6.8.2.1.13, 6.8.2.1.14 (a) and (b), 6.8.2.1.25, 6.8.2.1.27, 6.8.2.1.28 and 6.8.2.2.3 shall also apply.
- 6.9.1.3 Heating elements shall not be used for FRP tanks.
- 6.9.1.4 For the stability of tank-vehicles, the requirements of 9.7.5.1 shall apply.

6.9.2 Construction

- 6.9.2.1 Shells shall be made of suitable materials, which shall be compatible with the substances to be carried in a service temperature range of between -40°C and +50°C, unless temperature ranges are specified for specific climatic conditions by the competent authority of the country where the transport operation is performed.
- 6.9.2.2 Shells shall consist of the following three elements :
- internal liner,
 - structural layer,
 - external layer.
- 6.9.2.2.1 The internal liner is the inner shell wall zone designed as the primary barrier to provide for the long-term chemical resistance in relation to the substances to be carried, to prevent any dangerous reaction with the contents or the formation of dangerous compounds and any substantial weakening of the structural layer owing to the diffusion of products through the internal liner.

The internal liner may either be a FRP liner or a thermoplastic liner.

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6.9.2.2.2 FRP liners shall consist of:

- (a) surface layer ("gel-coat"): adequate resin rich surface layer, reinforced with a veil, compatible with the resin and contents. This layer shall have a fibre mass content of not more than 30% and have a thickness between 0.25 and 0.60 mm;
- (b) strengthening layer(s): layer or several layers with a minimum thickness of 2 mm, containing a minimum of 900 g/m² of glass mat or chopped fibres with a mass content in glass of not less than 30% unless equivalent safety is demonstrated for a lower glass content.

6.9.2.2.3 Thermoplastic liners shall consist of thermoplastic sheet material as referred to in 6.9.2.3.4, welded together in the required shape, to which the structural layers are bonded. Durable bonding between liners and the structural layer shall be achieved by the use of an appropriate adhesive.

***NOTE:** For the carriage of flammable liquids the internal layer may require additional measures in accordance with 6.9.2.14, in order to prevent the accumulation of electrical charges.*

6.9.2.2.4 The structural layer of the shell is the zone specially designed according to 6.9.2.4 to 6.9.2.6 to withstand the mechanical stresses. This part normally consists of several fibre reinforced layers in determined orientations.

6.9.2.2.5 The external layer is the part of the shell which is directly exposed to the atmosphere. It shall consist of a resin rich layer with a thickness of at least 0.2 mm. For a thickness larger than 0.5 mm, a mat shall be used. This layer shall have a mass content in glass of less than 30% and shall be capable of withstanding exterior conditions, in particular the occasional contact with the substance to be carried. The resin shall contain fillers or additives to provide protection against deterioration of the structural layer of the shell by ultra-violet radiation.

6.9.2.3 Raw materials

6.9.2.3.1 All materials used for the manufacture of FRP tanks shall be of known origin and specifications.

6.9.2.3.2 *Resins*

The processing of the resin mixture shall be carried out in strict compliance with the recommendations of the supplier. This concerns mainly the use of hardeners, initiators and accelerators. These resins can be:

- unsaturated polyester resins;
- vinyl ester resins;
- epoxy resins;
- phenolic resins.

The heat distortion temperature (HDT) of the resin, determined in accordance with ISO 75-1:1993 shall be at least 20°C higher than the maximum service temperature of the tank, but shall in any case not be lower than 70 °C.

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6.9.2.3.3 *Reinforcement fibres*

The reinforcement material of the structural layers shall be a suitable grade of fibres such as glass fibres of type E or ECR according to ISO 2078:1993. For the internal surface liner, glass fibres of type C according to ISO 2078:1993 may be used. Thermoplastic veils may only be used for the internal liner when their compatibility with the intended contents has been demonstrated.

6.9.2.3.4 *Thermoplastic liner material*

Thermoplastic liners, such as unplasticized polyvinyl chloride (PVC-U), polypropylene (PP), polyvinylidene fluoride (PVDF), polytetrafluoroethylene (PTFE), etc. may be used as lining materials.

6.9.2.3.5 *Additives*

Additives necessary for the treatment of the resin, such as catalysts, accelerators, hardeners and thixotropic substances as well as materials used to improve the tank, such as fillers, colours, pigments etc. shall not cause weakening of the material, taking into account lifetime and temperature expectancy of the design.

6.9.2.4 Shells, their attachments and their service and structural equipment shall be designed to withstand without loss of contents (other than quantities of gas escaping through any degassing vents) during the design lifetime:

- the static and dynamic loads in normal conditions of carriage;
- the prescribed minimum loads as defined in 6.9.2.5 to 6.9.2.10.

6.9.2.5 At the pressures as indicated in 6.8.2.1.14 (a) and (b), and under the static gravity forces caused by the contents with maximum density specified for the design and at maximum filling degree, the design stress σ in longitudinal and circumferential direction of any layer of the shell shall not exceed the following value:

$$\sigma \leq \frac{R_m}{K}$$

where:

R_m = the value of tensile strength given by taking the mean value of the test results minus twice the standard deviation of the test results. The tests shall be carried out, in accordance with the requirements of EN 61:1977, on not less than six samples representative of the design type and construction method;

K = $S \times K_0 \times K_1 \times K_2 \times K_3$

where

K shall have a minimum value of 4, and

S = the safety coefficient. For the general design, if the tanks are referred to in Column (12) of Table A of Chapter 3.2 by a tank code including the letter "G" in its second part (see 4.3.4.1.1), the value for S shall be equal to or more than 1.5. For tanks intended for the carriage of substances which require an increased safety level, i.e. if the tanks are referred to in Column (12) of Table A of Chapter 3.2 by a tank code including the number "4" in its second part (see 4.3.4.1.1), the value of S shall be multiplied by a factor of two, unless the shell is provided

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with protection against damage consisting of a complete metal skeleton including longitudinal and transverse structural members;

K_0 = a factor related to the deterioration in the material properties due to creep and ageing and as a result of the chemical action of the substances to be carried. It shall be determined by the formula:

$$K_0 = \frac{1}{\alpha\beta}$$

where " α " is the creep factor and " β " is the ageing factor determined in accordance with EN 978:1997 after performance of the test according to EN 977:1997. Alternatively, a conservative value of $K_0 = 2$ may be applied. In order to determine α and β the initial deflection shall correspond to 2σ ;

K_1 = a factor related to the service temperature and the thermal properties of the resin, determined by the following equation, with a minimum value of 1:

$$K_1 = 1.25 - 0.0125 (\text{HDT} - 70)$$

where HDT is the heat distortion temperature of the resin, in °C;

K_2 = a factor related to the fatigue of the material; the value of $K_2 = 1.75$ shall be used unless otherwise agreed with the competent authority. For the dynamic design as outlined in 6.9.2.6 the value of $K_2 = 1.1$ shall be used;

K_3 = a factor related to curing and has the following values:

- 1.1 where curing is carried out in accordance with an approved and documented process;
- 1.5 in other cases.

6.9.2.6 At the dynamic stresses, as indicated in 6.8.2.1.2 the design stress shall not exceed the value specified in 6.9.2.5, divided by the factor α .

6.9.2.7 At any of the stresses as defined in 6.9.2.5 and 6.9.2.6, the resulting elongation in any direction shall not exceed 0.2% or one tenth of the elongation at fracture of the resin, whichever is lower.

6.9.2.8 At the specified test pressure, which shall not be less than the relevant calculation pressure as specified in 6.8.2.1.14 (a) and (b) the maximum strain in the shell shall not be greater than the elongation at fracture of the resin.

6.9.2.9 The shell shall be capable of withstanding the ball drop test according to 6.9.4.3.3 without any visible internal or external defects.

6.9.2.10 The overlay laminates used in the joints, including the end joints, the joints of the surge plates and the partitions with the shell shall be capable of withstanding the static and dynamic stresses mentioned above. In order to avoid concentrations of stresses in the overlay lamination, the applied taper shall not be steeper than 1:6.

The shear strength between the overlay laminate and the tank components to which it is bonded shall not be less than:

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$$\tau = \frac{Q}{l} \leq \frac{\tau_R}{K}$$

where:

τ_R is the bending shear strength according to EN ISO 14125:1998 (three points method) with a minimum of $\tau_R = 10 \text{ N/mm}^2$, if no measured values are available;

Q is the load per unit width that the joint shall carry under the static and dynamic loads;

K is the factor calculated in accordance with 6.9.2.5 for the static and dynamic stresses;

l is the length of the overlay laminate.

6.9.2.11 Openings in the shell shall be reinforced to provide at least the same safety factors against the static and dynamic stresses as specified in 6.9.2.5 and 6.9.2.6 as that for the shell itself. The number of openings shall be minimized. The axis ratio of oval-shaped openings shall be not more than 2.

6.9.2.12 For the design of flanges and pipework attached to the shell, handling forces and the fastening of bolts shall also be taken into account.

6.9.2.13 The tank shall be designed to withstand, without significant leakage, the effects of a full engulfment in fire for 30 minutes as specified by the test requirements in 6.9.4.3.4. Testing may be waived with the agreement of the competent authority, where sufficient proof can be provided by tests with comparable tank designs.

6.9.2.14 *Special requirements for the carriage of substances with a flash-point of not more than 60 °C*

FRP tanks used for the carriage of substances with a flash-point of not more than 60°C shall be constructed so as to ensure the elimination of static electricity from the various component parts so as to avoid the accumulation of dangerous charges.

6.9.2.14.1 The electrical surface resistance of the inside and outside of the shell as established by measurements shall not be higher than 10^9 ohms. This may be achieved by the use of additives in the resin or interlaminar conducting sheets, such as metal or carbon network.

6.9.2.14.2 The discharge resistance to earth as established by measurements shall not be higher than 10^7 ohms.

6.9.2.14.3 All components of the shell shall be electrically connected to each other and to the metal parts of the service and structural equipment of the tank and to the vehicle. The electrical resistance between components and equipment in contact with each other shall not exceed 10 ohms.

6.9.2.14.4 The electrical surface-resistance and discharge resistance shall be measured initially on each manufactured tank or a specimen of the shell in accordance with a procedure recognized by the competent authority.

6.9.2.14.5 The discharge resistance to earth of each tank shall be measured as part of the periodic inspection in accordance with a procedure recognized by the competent authority.

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6.9.3 Items of equipment

6.9.3.1 The requirements of 6.8.2.2.1, 6.8.2.2.2 and 6.8.2.2.4 to 6.8.2.2.8 shall apply.

6.9.3.2 In addition, when they are shown under an entry in Column (13) of Table A of Chapter 3.2, the special provisions of 6.8.4 (b) (TE) shall also apply.

6.9.4 Type testing and approval

6.9.4.1 For any design of a FRP tank type, its materials and a representative prototype shall be subjected to the design type testing as outlined below.

6.9.4.2 Material testing

6.9.4.2.1 The elongation at fracture according to EN ISO 527-5:1997 and the heat distortion temperature according to ISO 75-1:1993 shall be determined for the resins to be used.

6.9.4.2.2 The following characteristics shall be determined for samples cut out of the shell. Samples manufactured in parallel may only be used, if it is not possible to use cutouts from the shell. Prior to testing, any liner shall be removed.

The tests shall cover:

- Thickness of the laminates of the central shell wall and the ends;
- Mass content and composition of glass, orientation and arrangement of reinforcement layers;
- Tensile strength, elongation at fracture and modulus of elasticity according to EN ISO 527-5:1997 in the direction of stresses. In addition, the elongation at fracture of the resin shall be established by means of ultrasound;
- Bending strength and deflection established by the bending creep test according to ISO 14125:1998 for a period of 1000 hours using a sample with a minimum width of 50 mm and a support distance of at least 20 times the wall thickness. In addition, the creep factor α and the ageing factor β shall be determined by this test and according to EN 978:1997.

6.9.4.2.3 The interlaminar shear strength of the joints shall be measured by testing representative samples in the tensile test according to EN ISO 14130:1997.

6.9.4.2.4 The chemical compatibility of the shell with the substances to be carried shall be demonstrated by one of the following methods with the agreement of the competent authority. This demonstration shall account for all aspects of the compatibility of the materials of the shell and its equipment with the substances to be carried, including chemical deterioration of the shell, initiation of critical reactions of the contents and dangerous reactions between both.

- In order to establish any deterioration of the shell, representative samples taken from the shell, including any internal liners with welds, shall be subjected to the chemical compatibility test according to EN 977:1997 for a period of 1 000 hours at 50°C. Compared with a virgin sample, the loss of strength and elasticity modulus measured by the bending test according to EN 978:1997 shall not exceed 25%. Cracks, bubbles, pitting effects as well as separation of layers and liners and roughness shall not be acceptable.

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- Certified and documented data of positive experiences on the compatibility of the filling substances in question with the materials of the shell with which they come into contact at given temperatures, times and any other relevant service conditions.
- Technical data published in relevant literature, standards or other sources, acceptable to the competent authority.

6.9.4.3 *Type testing*

A representative prototype tank shall be subjected to tests as specified below. For this purpose service equipment may be replaced by other items if necessary.

6.9.4.3.1 The prototype shall be inspected for compliance with the design type specification. This shall include an internal and external visual inspection and measurement of the main dimensions.

6.9.4.3.2 The prototype, equipped with strain gauges at all locations where a comparison with the design calculation is required, shall be subjected to the following loads and the strains shall be recorded:

- Filled with water to the maximum filling degree. The measuring results shall be used to calibrate the design calculation according to 6.9.2.5;
- Filled with water to the maximum filling degree and subjected to accelerations in all three directions by means of driving and braking exercises with the prototype attached to a vehicle. For comparison with the design calculation according to 6.9.2.6 the strains recorded shall be extrapolated in relation to the quotient of the accelerations required in 6.8.2.1.2 and measured;
- Filled with water and subjected to the specified test pressure. Under this load, the shell shall exhibit no visual damage or leakage.

6.9.4.3.3 The prototype shall be subjected to the ball drop test according to EN 976-1:1997, No. 6.6. No visible damage inside or outside the tank shall occur.

6.9.4.3.4 The prototype with its service and structural equipment in place and filled to 80% of its maximum capacity with water, shall be exposed to a full engulfment in fire for 30 minutes, caused by an open heating oil pool fire or any other type of fire with the same effect. The dimensions of the pool shall exceed those of the tank by at least 50 cm to each side and the distance between fuel level and tank shall be between 50 cm and 80 cm. The rest of the tank below liquid level, including openings and closures, shall remain leakproof except for drips.

6.9.4.4 *Type approval*

6.9.4.4.1 The competent authority or a body designated by that authority shall issue in respect of each new type of tank an approval attesting that the design is suitable for the purpose for which it is intended and meets the construction and equipment requirements of this chapter as well as the special provisions applicable to the substances to be carried.

6.9.4.4.2 The approval shall be based on the calculation and the test report, including all material and prototype test results and its comparison with the design calculation, and shall refer to the design type specification and the quality assurance programme.

6.9.4.4.3 The approval shall include the substances or group of substances for which compatibility with the shell is provided. Their chemical names or the corresponding collective entry (see 2.1.1.2), and their class and classification code shall be indicated.

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6.9.4.4.4 In addition, it shall include design and threshold values (such as life-time, service temperature range, working and test pressures, material data) specified and all precautions to be taken for the manufacture, testing, type approval, marking and use of any tank, manufactured in accordance with the approved design type.

6.9.5 Inspections

6.9.5.1 For every tank, manufactured in conformity with the approved design, material tests and inspections shall be performed as specified below.

6.9.5.1.1 The material tests according to 6.9.4.2.2, except for the tensile test and for a reduction of the testing time for the bending creep test to 100 hours shall be performed with samples taken from the shell. Samples manufactured in parallel may only be used, if no cutouts from the shell are possible. The approved design values shall be met.

6.9.5.1.2 Shells and their equipment shall either together or separately undergo an initial inspection before being put into service. This inspection shall include:

- a check of conformity to the approved design;
- a check of the design characteristics;
- an internal and external examination;
- a hydraulic pressure test at the test pressure indicated on the plate prescribed in 6.8.2.5.1;
- a check of operation of the equipment;
- a leakproofness test, if the shell and its equipment have been pressure tested separately.

6.9.5.2 For the periodic inspection of tanks the requirements of 6.8.2.4.2 to 6.8.2.4.4 shall apply. In addition, the inspection in accordance with 6.8.2.4.3 shall include an examination of the internal condition of the shell.

6.9.5.3 The inspections and tests in accordance with 6.9.5.1 and 6.9.5.2 shall be carried out by the expert approved by the competent authority. Certificates shall be issued showing the results of these operations. These certificates shall refer to the list of the substances permitted for carriage in this shell in accordance with 6.9.4.4.

6.9.6 Marking

6.9.6.1 The requirements of 6.8.2.5 shall apply to the marking of FRP tanks, with the following amendments:

- the tank plate may also be laminated to the shell or be made of suitable plastics materials;
- the design temperature range shall always be marked.

6.9.6.2 In addition, when they are shown under an entry in Column (13) of Table A of Chapter 3.2, the special provisions of 6.8.4 (e) (TM) shall also apply.

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CHAPTER 6.10

REQUIREMENTS FOR THE CONSTRUCTION, EQUIPMENT, TYPE APPROVAL, INSPECTION AND MARKING OF VACUUM-OPERATED WASTE TANKS

NOTE 1: For portable tanks and UN multiple-element gas containers (MEGCs) see Chapter 6.7; for fixed tanks (tank-vehicles), demountable tanks and tank containers and tank swap bodies, with shells made of metallic materials, and battery-vehicles and multiple element gas containers (MEGCs) other than UN MEGCs see Chapter 6.8; for fibre-reinforced plastic tanks see Chapter 6.9.

NOTE 2: This Chapter applies to fixed tanks, demountable tanks, tank-containers and tank swap bodies.

6.10.1 General

6.10.1.1 Definition

NOTE: A tank which fully complies with the requirements of Chapter 6.8 is not considered to be a "vacuum-operated waste tank".

6.10.1.1.1 The term "protected area" means the areas located as follows:

- (a) The lower part of the tank in a zone which extends over a 60° angle on either side of the lower generating line;
- (b) The top part of the tank in a zone which extends over a 30° angle on either side of the top generating line;
- (c) On the end front of the tank on motor vehicles;
- (d) On the rear end of the tank inside the protection volume formed by the device stipulated in 9.7.6.

6.10.1.2 Scope

6.10.1.2.1 The special requirements of 6.10.2 to 6.10.4 complete or modify Chapter 6.8 and are applied to vacuum-operated waste tanks.

Vacuum-operated waste tanks may be equipped with openable ends, if the requirements of Chapter 4.3 allow bottom discharge of the substances to be carried (indicated by letters "A" or "B" in Part 3 of the tank code given in Column (12) of Table A of Chapter 3.2, in accordance with 4.3.4.1.1).

Vacuum-operated waste tanks shall comply with all requirements of Chapter 6.8, with the exception of requirements overtaken by a special provision in this Chapter. However the requirements of 6.8.2.1.19, 6.8.2.1.20, and 6.8.2.1.21 shall not apply.

6.10.2 Construction

6.10.2.1 Tanks shall be designed for a calculation pressure equal to 1.3 times the filling or discharge pressure but not less than 400 kPa (4 bar) (gauge pressure). For the carriage of substances for which a higher calculation pressure of the tank is specified in Chapter 6.8, this higher pressure shall apply.

6.10.2.2 Tanks shall be designed to withstand a negative internal pressure of 100 kPa (1 bar).

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6.10.3 Items of equipment

6.10.3.1 The items of equipment shall be so arranged as to be protected against the risk of being wrenched off or damaged during carriage or handling. This requirement can be fulfilled by placing the items of equipment in a so called "protected area" (see 6.10.1.1.1).

6.10.3.2 The bottom discharge of shells may be constituted by external piping with a stop-valve fitted as close to the shell as practicable and a second closure which may be a blank flange or other equivalent device.

6.10.3.3 The position and closing direction of the stop-valve(s) connected to the shell, or to any compartment in the case of compartmented shells, shall be unambiguous, and be able to be checked from the ground.

6.10.3.4 In order to avoid any loss of contents in the event of damage to the external filling and discharge fittings (pipes, lateral shut-off devices), the internal stop-valve, or the first external stop-valve (where applicable), and its seatings shall be protected against the danger of being wrenched off by external stresses or shall be so designed as to withstand them. The filling and discharge devices (including flanges or threaded plugs) and protective caps (if any) shall be capable of being secured against any unintended opening.

6.10.3.5 The tanks may be equipped with openable ends. Openable ends shall comply with the following conditions:

- (a) The ends shall be designed to be secured leaktight when closed;
- (b) Unintentional opening shall not be possible;
- (c) Where the opening mechanism is power operated the end shall remain securely closed in the event of a power failure;
- (d) A safety or breakseal device shall be incorporated to ensure that the openable end cannot be opened when there is still a residual over pressure in the tank. This requirement does not apply to openable ends which are power-operated, where the movement is positively controlled. In this case the controls shall be of the dead-man type and be so positioned that the operator can observe the movement of the openable end at all times and is not endangered during opening and closing of the openable end; and
- (e) Provisions shall be made to protect the openable end and prevent it from being forced open during a roll-over of the vehicle, tank-container or tank swap body.

6.10.3.6 Vacuum-operated waste tanks which are fitted with an internal piston to assist in the cleaning of the tank or discharging shall be provided with stop-devices to prevent the piston in every operational position being ejected from the tank when a force equivalent to the maximum working pressure of the tank is applied to the piston. The maximum working pressure for tanks or compartments with pneumatic operated piston shall not exceed 100 kPa (1.0 bar). The internal piston shall be constructed in a manner and of materials which will not cause an ignition source when the piston is moved.

The internal piston may be used as a compartment provided it is secured in position. Where any of the means by which the internal piston is secured is external to the tank, it shall be placed in a position not liable to accidental damage.

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- 6.10.3.7 The tanks may be equipped with suction booms if:
- (a) The boom is fitted with an internal or external stop-valve fixed directly to the shell, or directly to a bend that is welded to the shell; a rotation crown wheel can be fitted between the shell or the bend and the external stop valve, if this rotation crown wheel is located in the protected area and the stop-valve control device is protected with a housing or cover against the danger of being wrenched off by external loads;
 - (b) The stop-valve mentioned in (a) is so arranged that carriage with the valve in an open position is prevented; and
 - (c) The boom is constructed in such a way that the tank will not leak as a result of accidental impact on the boom.
- 6.10.3.8 The tanks shall be fitted with the following additional service equipment:
- (a) The outlet of a pump/exhauster unit shall be so arranged as to ensure that any flammable or toxic vapours are diverted to a place where they will not cause a danger;
 - (b) A device to prevent immediate passage of flame shall be fitted to both the inlet and outlet of a vacuum pump/exhauster unit which may create sparks and which is fitted on a tank used for the carriage of flammable wastes;
 - (c) Pumps which can deliver a positive pressure shall have a safety device fitted in the pipework which can be pressurised. The safety device shall be set to discharge at a pressure not exceeding the maximum working pressure of the tank;
 - (d) A stop-valve shall be fitted between the shell, or the outlet of the overfill prevention device fitted to the shell, and the pipework connecting the shell to the pump/exhauster unit;
 - (e) The tank shall be fitted with a suitable pressure/vacuum manometer which shall be mounted in a position where it can be easily read by the person operating the pump/exhauster unit. A distinguishing line shall be marked on the scale to indicate the maximum working pressure of the tank;
 - (f) The tank, or in case of compartmented tanks, every compartment, shall be equipped with a level indicating device. Sight glasses may be used as level indicating devices provided:
 - (i) they form a part of the tank wall and have a resistance to the pressure comparable to that of the tank; or they are fitted external to the tank;
 - (ii) the top and bottom connections to the tank are equipped with shut-off valves fixed directly to the shell and so arranged that carriage with the valves in an open position is prevented;
 - (iii) are suitable for operation at the maximum working pressure of the tank; and
 - (iv) are placed in a position where they will not be liable to accidental damage.
- 6.10.3.9 The shells of vacuum-operated waste tanks shall be fitted with a safety valve preceded by a bursting disc.
- The valve shall be capable of opening automatically at a pressure between 0.9 and 1.0 times the test pressure of the tank to which it is fitted. The use of dead weight or counterweight valves is prohibited.

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The bursting disc shall burst at the earliest when the initial opening pressure of the valve is reached and at the latest when this pressure reaches the test pressure of the tank to which it is fitted.

Safety devices shall be of such a type as to resist dynamic stresses, including liquid surge.

The space between the bursting disc and the safety valve shall be provided with a pressure gauge or suitable tell-tale indicator for the detection of disc rupture, pinholing or leakage which could cause a malfunction of the safety valve.

6.10.4 Inspection

Vacuum-operated waste tanks shall be subject every three years for fixed tanks or demountable tanks and at least every two and a half years for tank-containers and tank swap bodies to an examination of the internal condition, in addition to the tests according to 6.8.2.4.3.

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CHAPTER 6.11**REQUIREMENTS FOR THE DESIGN, CONSTRUCTION, INSPECTION AND TESTING OF BULK CONTAINERS****6.11.1 Definitions**

For the purposes of this section:

Closed bulk container means a totally closed bulk container having a rigid roof, sidewalls, end walls and floor (including hopper-type bottoms). The term includes bulk containers with an opening roof, side or end wall that can be closed during carriage. Closed bulk containers may be equipped with openings to allow for the exchange of vapours and gases with air and which prevent under normal conditions of carriage the release of solid contents as well as the penetration of rain and splash water;

Sheeted bulk container means an open top bulk container with rigid bottom (including hopper-type bottom), side and end walls and a non-rigid covering;

6.11.2 Application and general requirements

6.11.2.1 Bulk containers and their service and structural equipment shall be designed and constructed to withstand, without loss of contents, the internal pressure of the contents and the stresses of normal handling and carriage.

6.11.2.2 Where a discharge valve is fitted, it shall be capable of being made secure in the closed position and the whole discharge system shall be suitably protected from damage. Valves having lever closures shall be able to be secured against unintended opening and the open or closed position shall be readily apparent.

6.11.2.3 Code for designating types of bulk container

The following table indicates the codes to be used for designating types of bulk containers:

Types of bulk containers	Code
Sheeted bulk container	BK1
Closed bulk container	BK2

6.11.2.4 In order to take account of progress in science and technology, the use of alternative arrangements which offer at least equivalent safety as provided by the requirements of this chapter may be considered by the competent authority.

6.11.3 Requirements for the design, construction, inspection and testing of containers conforming to the CSC used as BK1 or BK2 bulk containers**6.11.3.1 Design and construction requirements**

6.11.3.1.1 The general design and construction requirements of this sub-section are deemed to be met if the bulk container complies with the requirements of ISO 1496-4:1991 "Series 1 Freight containers- Specification and testing – Part 4: Non pressurized containers for dry bulk" and the container is siftproof.

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- 6.11.3.1.2 Containers designed and tested in accordance with ISO 1496-1:1990 "Series 1 Freight containers- Specification and testing - Part 1: General cargo containers for general purposes" shall be equipped with operational equipment which is, including its connection to the container, designed to strengthen the end walls and to improve the longitudinal restraint as necessary to comply with the test requirements of ISO 1496-4:1991 as relevant.
- 6.11.3.1.3 Bulk containers shall be siftproof. Where a liner is used to make the container siftproof it shall be made of a suitable material. The strength of material used for, and the construction of, the liner shall be appropriate to the capacity of the container and its intended use. Joins and closures of the liner shall withstand pressures and impacts liable to occur under normal conditions of handling and carriage. For ventilated bulk containers any liner shall not impair the operation of ventilating devices.
- 6.11.3.1.4 The operational equipment of bulk containers designed to be emptied by tilting shall be capable of withstanding the total filling mass in the tilted orientation.
- 6.11.3.1.5 Any movable roof or side or end wall or roof section shall be fitted with locking devices with securing devices designed to show the locked state to an observer at ground level.

6.11.3.2 *Service equipment*

- 6.11.3.2.1 Filling and discharge devices shall be so constructed and arranged as to be protected against the risk of being wrenched off or damaged during carriage and handling. The filling and discharge devices shall be capable of being secured against unintended opening. The open and closed position and direction of closure shall be clearly indicated.
- 6.11.3.2.2 Seals of openings shall be so arranged as to avoid any damage by the operation, filling and emptying of the bulk container.
- 6.11.3.2.3 Where ventilation is required bulk containers shall be equipped with means of air exchange, either by natural convection, e.g. by openings, or active elements, e.g. fans. The ventilation shall be designed to prevent negative pressures in the container at all times. Ventilating elements of bulk containers for the carriage of flammable substances or substances emitting flammable gases or vapours shall be designed so as not to be a source of ignition.

6.11.3.3 *Inspection and testing*

- 6.11.3.3.1 Containers used, maintained and qualified as bulk containers in accordance with the requirements of this section shall be tested and approved in accordance with the CSC.
- 6.11.3.3.2 Containers used and qualified as bulk containers shall be inspected periodically according to the CSC.

6.11.3.4 *Marking*

- 6.11.3.4.1 Containers used as bulk containers shall be marked with a Safety Approval Plate in accordance with the CSC.

6.11.4 **Requirements for the design, construction and approval of BK1 or BK2 bulk containers other than containers conforming to the CSC**

NOTE: When containers conforming to the provisions of this section are used for the carriage of solids in bulk, the following statement shall be shown on the transport document:

"Bulk container BK(x) approved by the competent authority of". (see 5.4.1.1.17)".

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6.11.4.1 Bulk containers covered in this section include skips, offshore bulk containers, bulk bins, swap bodies, trough shaped containers, roller containers, and load compartments of vehicles.

NOTE: These bulk containers also include containers conforming to the UIC leaflets 591 and 592-2 to 592-4 as mentioned in 7.1.3 which do not conform to the CSC.

6.11.4.2 These bulk containers shall be designed and constructed so as to be strong enough to withstand the shocks and loadings normally encountered during carriage including, as applicable, transshipment between modes of transport.

6.11.4.3 *(Reserved)*

6.11.4.4 These bulk containers shall be approved by the competent authority and the approval shall include the code for designating types of bulk containers in accordance with 6.11.2.3 and the requirements for inspection and testing as appropriate.

6.11.4.5 Where it is necessary to use a liner in order to retain the dangerous goods it shall meet the provisions of 6.11.3.1.3.

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CHAPTER 6.12

REQUIREMENTS FOR THE CONSTRUCTION, EQUIPMENT, TYPE APPROVAL, INSPECTIONS AND TESTS, AND MARKING OF TANKS, BULK CONTAINERS AND SPECIAL COMPARTMENTS FOR EXPLOSIVES OF MOBILE EXPLOSIVES MANUFACTURING UNITS (MEMUs)

NOTE 1: *For portable tanks, see Chapter 6.7; for fixed tanks (tank-vehicles), demountable tanks, tank-containers and tank swap bodies, with shells made of metallic materials, see Chapter 6.8; for fibre-reinforced plastics tanks see Chapter 6.9; for vacuum operated waste tanks see Chapter 6.10; for bulk containers see Chapter 6.11.*

NOTE 2: *This Chapter applies to fixed tanks, demountable tanks, tank-containers, tank swap bodies, which do not comply with all requirements of the Chapters mentioned in Note 1 as well as bulk containers and special compartments for explosives.*

6.12.1 Scope

The requirements of this Chapter are applicable to tanks, bulk containers and special compartments intended for the carriage of dangerous goods on MEMUs.

6.12.2 General provisions

6.12.2.1 Tanks shall meet the requirements of Chapter 6.8, notwithstanding the minimum capacity defined in section 1.2.1 for fixed tanks, as modified by the special provisions of this Chapter.

6.12.2.2 Bulk containers intended for the carriage of dangerous goods on MEMUs shall comply with the requirements for bulk containers of type BK2.

6.12.2.3 Where a single tank or bulk container contains more than one substance each substance shall be separated by at least two walls with drained air space between.

6.12.3 Tanks

6.12.3.1 Tanks with a capacity of 1 000 litres or more

6.12.3.1.1 These tanks shall meet the requirements of section 6.8.2.

6.12.3.1.2 For UN Nos. 1942 and 3375, the tank shall meet the requirements of Chapters 4.3 and 6.8 concerning breather devices and, in addition, shall have bursting discs or other suitable means of emergency pressure relief, approved by the competent authority of the country of use.

6.12.3.1.3 For shells not of a circular cross-section, for example box-shaped or elliptical shells, which cannot be calculated according to 6.8.2.1.4 and standards or technical code mentioned therein, the ability to withstand the permissible stress may be demonstrated by a pressure test specified by the competent authority.

These tanks shall meet the requirements of sub-section 6.8.2.1 other than 6.8.2.1.3, 6.8.2.1.4 and 6.8.2.1.13 to 6.8.2.1.22.

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The thickness of these shells shall not be less than the values given in the table below:

Material	Minimum thickness
Stainless austenitic steels	2.5 mm
Other steels	3 mm
Aluminium alloys	4 mm
Pure aluminium of 99.80%	6 mm

Protection of the tank against damage through lateral impact or overturning shall be provided. Protection shall be provided according to 6.8.2.1.20 or the competent authority shall approve alternative protection measures.

6.12.3.1.4 By derogation from the requirements of 6.8.2.5.2 tanks do not need to be marked with the tank code and the special provisions, as applicable.

6.12.3.2 Tanks with a capacity of less than 1 000 litres

6.12.3.2.1 The construction of these tanks shall meet the requirements of sub-section 6.8.2.1 other than 6.8.2.1.3, 6.8.2.1.4, 6.8.2.1.6, 6.8.2.1.10 to 6.8.2.1.23 and 6.8.2.1.28.

6.12.3.2.2 The equipment of these tanks shall meet the requirements of 6.8.2.2.1. For UN Nos. 1942 and 3375, the tank shall meet the requirements of Chapters 4.3 and 6.8 concerning breather devices and, in addition, shall have bursting discs or other suitable means of emergency pressure relief, approved by the competent authority of the country of use.

6.12.3.2.3 The thickness of these shells shall not be less than the values given in the table below:

Material	Minimum thickness
Stainless austenitic steels	2.5 mm
Other steels	3 mm
Aluminium alloys	4 mm
Pure aluminium of 99.80%	6 mm

6.12.3.2.4 Tanks may have constructional parts that are without a radius of convexity. Alternative supportive measures may be curved walls, corrugated walls or ribs. In at least one direction the distance between parallel supports on each side of the tank shall not be greater than 100 times the wall thickness.

6.12.3.2.5 Welds shall be skilfully made and shall afford the fullest safety. Welding shall be performed by skilled welders using a welding process whose effectiveness (including any heat treatments required) has been demonstrated by test.

6.12.3.2.6 The requirements of 6.8.2.4 do not apply. However, the initial and periodic inspections of these tanks shall be carried out under the responsibility of the user or owner of the MEMU. Shells and their equipment shall be subject to visual examination of their external and internal condition and a leakproofness test to the satisfaction of the competent authority at least every three years.

6.12.3.2.7 The requirements for type approval of 6.8.2.3 and for marking of 6.8.2.5 do not apply.

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6.12.4 Items of equipment

- 6.12.4.1 Tanks with bottom discharge for UN 1942 and UN 3375 shall have at least two closures. One of these closures may be the product mixing or discharge pump or auger.
- 6.12.4.2 Any piping after the first closure shall be of a fusible material (i.e. rubber hose) or have fusible elements.
- 6.12.4.3 In order to avoid any loss of contents in the event of damage to the external pumps and discharge fittings (pipes), the first closure and its seatings shall be protected against the danger of being wrenched off by external stresses or shall be so designed as to withstand them. The filling and discharge devices (including flanges or threaded plugs) and protective caps (if any) shall be capable of being secured against any unintended opening.
- 6.12.4.4 Breather devices in accordance with 6.8.2.2.6 on tanks for UN 3375 may be substituted by "goose necks". Such equipment shall be protected against the danger of being wrenched off by external stresses or shall be so designed as to withstand them.

6.12.5 Special compartments for explosives

Compartments for packages of explosives containing detonators and/or detonator assemblies and those containing substances or articles of compatibility group D shall be designed to provide effective segregation such that there is no danger of transmission of detonation from the detonators and/or detonator assemblies to the substances or articles of compatibility group D. Segregation shall be achieved by the use of separate compartments or by placing one of the two types of explosive in a special containment system. Either method of segregation shall be approved by the competent authority. If the material used for the compartment is metal, the complete inside of the compartment shall be covered with materials providing suitable fire resistance. The explosives compartments shall be located where they are protected from impact and from damage on rough terrain and dangerous interaction with other dangerous goods on board and from ignition sources on the vehicle e.g. exhausts etc.

***NOTE:** Materials classified as class B-s3-d2 according to standard EN 13501-1:2002 are deemed to fulfil the fire resistance requirement.*

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PART 7

Provisions concerning the conditions of carriage, loading, unloading and handling

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CHAPTER 7.1

GENERAL PROVISIONS

7.1.1 The carriage of dangerous goods is subject to the mandatory use of a particular type of transport equipment in accordance with the provisions of this Chapter and Chapter 7.2 for carriage in packages, Chapter 7.3 for carriage in bulk and Chapter 7.4 for carriage in tanks. In addition, the provisions of Chapter 7.5 concerning loading, unloading and handling shall be observed.

Columns (16), (17) and (18) of Table A of Chapter 3.2 show the particular provisions of this Part that apply to specific dangerous goods.

7.1.2 In addition to the provisions of this Part, vehicles used for the carriage of dangerous goods shall, as regards their design, construction and, if appropriate, their approval, conform to the relevant requirements of Part 9.

7.1.3 Large containers, portable tanks and tank-containers which meet the definition of "container" given in the CSC (1972), as amended, or in UIC leaflets 591 (status at 01.10.2007, 3rd edition), 592-2 (status at 01.10.2004, 6th edition), 592-3 (status at 01.01.1998, 2nd edition) and 592-4 (status at 01.05.2007, 3rd edition) may not be used to carry dangerous goods unless the large container or the frame of the portable tank or tank-container satisfies the provisions of the CSC or of UIC leaflets 591 and 592-2 to 592-4.

7.1.4 A large container may be presented for carriage only if it is structurally serviceable.

"Structurally serviceable" means that the container is free from major defects in its structural components, e.g. top and bottom side rails, doorsill and header, floor cross members, corner posts, and corner fittings. "Major defects" are dents or bends in structural members greater than 19 mm in depth, regardless of length; cracks or breaks in structural members; more than one splice or an improper splice (e.g. a lapped splice) in top or bottom end rails or door headers or more than two splices in any one top or bottom side rail or any splice in a door sill or corner post; door hinges and hardware that are seized, twisted, broken, missing or otherwise inoperative; non-closing gaskets and seals; any distortion of the overall configuration sufficient to prevent proper alignment of handling equipment, mounting and securing on a chassis or vehicle.

In addition, deterioration in any component of the container, such as rusted metal in side walls or disintegrated fibreglass is unacceptable, regardless of the material of construction. Normal wear, including oxidization (rust), slight dents and scratches and other damage that do not affect serviceability or weather-tightness are, however, acceptable.

Prior to loading the container shall also be checked to ensure that it is free from any residue of a previous load and that the interior floor and walls are free from protrusions.

7.1.5 Large containers shall meet the requirements concerning the body of the vehicle laid down in this Part and, if appropriate, those laid down in Part 9 for the load in question; the body of the vehicle need not then satisfy those provisions.

However, large containers carried on vehicles whose platforms have insulation and heat-resistant qualities which satisfy those requirements need not then satisfy the said requirements.

This provision also applies to small containers for the carriage of explosive substances and articles of Class 1.

7.1.6 Subject to the provisions of the last part of the first sentence of 7.1.5, the fact that dangerous goods are contained in one or more containers shall not affect the conditions to be met by the vehicle by reason of the nature and quantities of the dangerous goods carried.

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CHAPTER 7.2

PROVISIONS CONCERNING CARRIAGE IN PACKAGES

- 7.2.1 Unless otherwise provided in 7.2.2 to 7.2.4, packages may be loaded:
- (a) in closed vehicles or in closed containers; or
 - (b) in sheeted vehicles or in sheeted containers; or
 - (c) in open vehicles or in open containers.
- 7.2.2 Packages comprising packagings made of materials sensitive to moisture shall be loaded on to closed or on to sheeted vehicles or into closed or sheeted containers.
- 7.2.3 *(Reserved)*
- 7.2.4 When they are shown under an entry in Column (16) of Table A of Chapter 3.2, the following special provisions apply:
- V1 Packages shall be loaded on to closed or sheeted vehicles or into closed or sheeted containers.
 - V2
 - (1) Packages shall only be loaded on to EX/II or EX/III vehicles which satisfy the relevant requirements of Part 9. The choice of vehicle depends on the quantity to be carried, which is limited per transport unit in accordance with the provisions concerning loading (see 7.5.5.2).
 - (2) Trailers, except semi-trailers, which satisfy the requirements for EX/II or EX/III vehicles may be drawn by motor vehicles which do not satisfy those requirements.
- For carriage in containers, see also 7.1.3 to 7.1.6.
- Where substances or articles of Class 1 in quantities requiring a transport unit made up of EX/III vehicle(s) are being carried in containers to or from harbour areas, rail terminals or airports of arrival or departure as part of a multimodal journey, a transport unit made up of EX/II vehicle(s) may be used instead, provided that the containers being carried comply with the appropriate requirements of the IMDG Code, the RID or the ICAO Technical Instructions.
- V3 For free-flowing powdery substances and for fireworks the floor of a container shall have a non-metallic surface or covering.
 - V4 *(Reserved)*
 - V5 Packages may not be carried in small containers.
 - V6 Flexible IBCs shall be carried in closed vehicles or in closed containers, in sheeted vehicles or in sheeted containers. The sheet shall be of an impermeable and non-combustible material.
 - V7 *(Reserved)*

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- V8 (1) Substances stabilized by temperature control shall be forwarded in such manner that the control temperatures indicated in 2.2.41.1.17 and 2.2.41.4 or in 2.2.52.1.16 and 2.2.52.4, as appropriate, are never exceeded.
- (2) The means of temperature control chosen for the transport operation depends on a number of factors such as:
- the control temperature(s) of the substance(s) to be carried;
 - the difference between the control temperature and the expected ambient temperature;
 - the effectiveness of the thermal insulation;
 - the duration of the transport operation; and
 - the safety margin to be allowed for delays en route.
- (3) Suitable methods to prevent the control temperature from being exceeded are listed below, in ascending order of effectiveness:
- R1 Thermal insulation, provided that the initial temperature of the substance(s) is sufficiently below the control temperature;
- R2 Thermal insulation and coolant system, provided that:
- an adequate quantity of non-flammable coolant (e.g. liquid nitrogen or solid carbon dioxide), allowing a reasonable margin for possible delay, is carried or a means of replenishment is assured;
 - liquid oxygen or air is not used as coolant;
 - there is a uniform cooling effect even when most of the coolant has been consumed; and
 - the need to ventilate the transport unit before entering is clearly indicated by a warning on the door(s);
- R3 Thermal insulation and single mechanical refrigeration, provided that for substances with a flash-point lower than the sum of the emergency temperature plus 5 °C explosion-proof electrical fittings, EEx IIB T3, are used within the cooling compartment to prevent ignition of flammable vapours from the substances;
- R4 Thermal insulation and combined mechanical refrigeration system and coolant system, provided that:
- the two systems are independent of one another; and
 - the requirements of methods R2 and R3 above are met;
- R5 Thermal insulation and dual mechanical refrigeration system, provided that:
- apart from the integral power supply unit, the two systems are independent of one another;

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- each system alone is capable of maintaining adequate temperature control; and
 - for substances with a flash-point lower than the sum of the emergency temperature plus 5 °C explosion-proof electrical fittings, EEx IIB T3, are used within the cooling compartment to prevent ignition of flammable vapours from the substances.
- (4) Methods R4 and R5 may be used for all organic peroxides and self-reactive substances.

Method R3 may be used for organic peroxides and self-reactive substances of Types C, D, E and F and, when the maximum ambient temperature to be expected during carriage does not exceed the control temperature by more than 10 °C, for organic peroxides and self-reactive substances of Type B.

Method R2 may be used for organic peroxides and self-reactive substances of Types C, D, E and F when the maximum ambient temperature to be expected during carriage does not exceed the control temperature by more than 30 °C.

Method R1 may be used for organic peroxides and self-reactive substances of Types C, D, E and F when the maximum ambient temperature to be expected during carriage is at least 10 °C below the control temperature.

- (5) Where substances are required to be carried in insulated, refrigerated or mechanically-refrigerated vehicles or containers, these vehicles or containers shall satisfy the requirements of Chapter 9.6.
- (6) If substances are contained in protective packagings filled with a coolant, they shall be loaded in closed or sheeted vehicles or closed or sheeted containers. If the vehicles or containers used are closed they shall be adequately ventilated. Sheeted vehicles and containers shall be fitted with sideboards and a tailboard. The sheets of these vehicles and containers shall be of an impermeable and non-combustible material.
- (7) Any control and temperature sensing devices in the refrigeration system shall be readily accessible and all electrical connections shall be weatherproof. The temperature of the air inside the transport unit shall be measured by two independent sensors and the output shall be recorded so that any change in temperature is readily detectable. When substances having a control temperature of less than +25 °C are carried, the transport unit shall be equipped with visible and audible alarms, powered independently of the refrigeration system and set to operate at or below the control temperature.
- (8) A back-up refrigeration system or spare parts shall be available.

NOTE: This provision V8 does not apply to substances referred to in 3.1.2.6 when substances are stabilized by the addition of chemical inhibitors such that the SADT is greater than 50 °C. In this latter case, temperature control may be required under conditions of carriage where the temperature may exceed 55 °C.

V9 (Reserved)

V10 IBCs shall be carried in closed or sheeted vehicles or closed or sheeted containers.

V11 IBCs other than metal or rigid plastics IBCs shall be carried in closed or sheeted vehicles or closed or sheeted containers.

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- V12 IBCs of type 31HZ2 (31HA2, 31HB2, 31HN2, 31HD2 and 31HH2) shall be carried in closed vehicles or containers.
- V13 When packed in 5H1, 5L1 or 5 M1 bags, shall be carried in closed vehicles or containers.
- V14 Aerosols carried for the purposes of reprocessing or disposal under special provision 327 in Chapter 3.3 shall only be carried in ventilated or open vehicles or containers.

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CHAPTER 7.3

PROVISIONS CONCERNING CARRIAGE IN BULK

7.3.1 General provisions

7.3.1.1 Goods may not be carried in bulk in bulk containers, containers or vehicles unless:

- (a) either a special provision, identified by the code BK, explicitly authorizing this mode of carriage is indicated in column (10) of Table A of Chapter 3.2 and the relevant conditions of 7.3.2 are satisfied in addition to those of this section; or
- (b) a special provision, identified by the code VV, explicitly authorizing this mode of carriage is indicated in column (17) of Table A of Chapter 3.2 and the conditions of this special provision, as laid down in 7.3.3 are satisfied in addition to those of this section.

Nevertheless, empty packagings, uncleaned, may be carried in bulk if this mode of carriage is not explicitly prohibited by other provisions of ADR.

NOTE: For carriage in tanks, see Chapters 4.2 and 4.3.

7.3.1.2 Substances which may become liquid at temperatures likely to be encountered during carriage, are not permitted for carriage in bulk.

7.3.1.3 Bulk containers, containers or bodies of vehicles shall be siftproof and shall be so closed that none of the contents can escape under normal conditions of carriage including the effect of vibration, or by changes of temperature, humidity or pressure.

7.3.1.4 Bulk solids shall be loaded and evenly distributed in a manner that minimises movement that could result in damage to the bulk container, container or vehicle or leakage of the dangerous goods.

7.3.1.5 Where venting devices are fitted they shall be kept clear and operable.

7.3.1.6 Bulk solids shall not react dangerously with the material of the bulk container, container, vehicle, gaskets, equipment including lids and tarpaulins and with protective coatings which are in contact with the contents or significantly weaken them. Bulk containers, containers or vehicles shall be so constructed or adapted that the goods cannot penetrate between wooden floor coverings or come into contact with those parts of the bulk container, container or vehicle that may be affected by the materials or residues thereof.

7.3.1.7 Before being filled and handed over for carriage, each bulk container, container or vehicle shall be inspected and cleaned to ensure that it does not contain any residue on the interior or exterior of the bulk container, container or vehicle that could:

- cause a dangerous reaction with the substance intended for carriage;
- detrimentally affect the structural integrity of the bulk container, container or vehicle; or
- affect the dangerous goods retention capabilities of the bulk container, container or vehicle.

7.3.1.8 During carriage, no dangerous residues shall adhere to the outer surfaces of bulk containers, containers or of the bodies of vehicles.

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- 7.3.1.9 If several closure systems are fitted in series, the system which is located nearest to the substance to be carried shall be closed first before filling.
- 7.3.1.10 Empty bulk containers, containers or vehicles which have carried a dangerous solid substance in bulk shall be treated in the same manner as is required by ADR for a filled bulk container, container or vehicle, unless adequate measures have been taken to nullify any hazard.
- 7.3.1.11 If bulk containers, containers or vehicles are used for the carriage in bulk of goods liable to cause a dust explosion, or evolve flammable vapours (e. g. for certain wastes) measures shall be taken to exclude sources of ignition and prevent dangerous electrostatic discharge during carriage, filling or discharge of the substance.
- 7.3.1.12 Substances, for example wastes, which may react dangerously with one another and substances of different classes and goods not subject to ADR, which are liable to react dangerously with one another shall not be mixed together in the same bulk container, container or vehicle. Dangerous reactions are:
- (a) Combustion and/or evolution of considerable heat;
 - (b) Emission of flammable and/or toxic gases;
 - (c) Formation of corrosive liquids; or
 - (d) Formation of unstable substances.
- 7.3.1.13 Before a bulk container, container or vehicle is filled it shall be visually examined to ensure it is structurally serviceable, its interior walls, ceiling and floors are free from protrusions or damage and that any inner liners or substance retaining equipment are free from rips, tears or any damage that would compromise its cargo retention capabilities. Structurally serviceable means the bulk container, container or vehicle does not have major defects in its structural components, such as top and bottom side rails, top and bottom end rails, door sill and header, floor cross members, corner posts, and corner fittings in a bulk container or container. Major defects include:
- (a) Bends, cracks or breaks in the structural or supporting members that affect the integrity of the bulk container, container or of the body of the vehicle;
 - (b) More than one splice or an improper splice (such as a lapped splice) in top or bottom end rails or door headers;
 - (c) More than two splices in any one top or bottom side rail;
 - (d) Any splice in a door sill or corner post;
 - (e) Door hinges and hardware that are seized, twisted, broken, missing, or otherwise inoperative;
 - (f) Gaskets and seals that do not seal;
 - (g) Any distortion of the overall configuration of a bulk container or container great enough to prevent proper alignment of handling equipment, mounting and securing on a chassis or vehicle;
 - (h) Any damage to lifting attachments or handling equipment interface features; or
 - (i) Any damage to service or operational equipment.

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7.3.2 Additional provisions for the carriage in bulk when the provisions of 7.3.1.1 (a) are applied

7.3.2.1 The codes BK1 and BK2 in column (10) of Table A of Chapter 3.2 have the following meanings:

BK1: Carriage in bulk in sheeted bulk containers is permitted;

BK2: Carriage in bulk in closed bulk containers is permitted.

7.3.2.2 The bulk container used shall conform to the requirements of Chapter 6.11.

7.3.2.3 Goods of Class 4.2

The total mass carried in a bulk container shall be such that its spontaneous ignition temperature is greater than 55 °C.

7.3.2.4 Goods of Class 4.3

These goods shall be carried in bulk containers (code BK2) which are waterproof.

7.3.2.5 Goods of Class 5.1

Bulk containers shall be so constructed or adapted that the goods cannot come into contact with wood or any other incompatible material.

7.3.2.6 Goods of Class 6.2

7.3.2.6.1 Animal material containing infectious substances (UN Nos. 2814, 2900 and 3373) is authorized for carriage in bulk containers provided the following conditions are met:

- (a) Sheeted bulk containers BK1 are permitted provided that they are not filled to maximum capacity to avoid substances coming into contact with the sheeting. Closed bulk containers BK2 are also permitted;
- (b) Closed and sheeted bulk containers, and their openings, shall be leak-proof by design or by the fitting of a suitable liner;
- (c) The animal material shall be thoroughly treated with an appropriate disinfectant before loading prior to carriage;
- (d) Sheeted bulk containers shall be covered by an additional top liner weighted down by absorbent material treated with an appropriate disinfectant;
- (e) Closed or sheeted bulk containers shall not be re-used until after they have been thoroughly cleaned and disinfected.

NOTE: Additional provisions may be required by appropriate national health authorities.

7.3.2.6.2 Wastes of Class 6.2 (UN 3291)

- (a) (Reserved);
- (b) Closed bulk containers and their openings shall be leakproof by design. These bulk containers shall have non porous interior surfaces and shall be free from cracks or other features which could damage packagings inside, impede disinfection or permit inadvertent release;

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- (c) Wastes of UN No. 3291 shall be contained within the closed bulk container in UN type tested and approved sealed leakproof plastics bags tested for solids of packing group II and marked in accordance with 6.1.3.1. Such plastics bags shall be capable of passing the tests for tear and impact resistance according to ISO 7765-1:1988 "Plastics film and sheeting - Determination of impact resistance by the free-falling dart method - Part 1: Staircase methods" and ISO 6383-2:1983 "Plastics - Film and sheeting - Determination of tear resistance. Part 2: Elmendorf method". Each bag shall have an impact resistance of at least 165 g and a tear resistance of at least 480 g in both parallel and perpendicular planes with respect to the length of the bag. The maximum net mass of each plastics bag shall be 30 kg;
- (d) Single articles exceeding 30 kg such as soiled mattresses may be carried without the need for a plastics bag when authorized by the competent authority;
- (e) Wastes of UN No. 3291 which contain liquids shall only be carried in plastics bags containing sufficient absorbent material to absorb the entire amount of liquid without it spilling in the bulk container;
- (f) Wastes of UN No. 3291 containing sharp objects shall only be carried in UN type tested and approved rigid packagings meeting the provisions of packing instructions P621, IBC620 or LP621;
- (g) Rigid packagings specified in packing instructions P621, IBC620 or LP621 may also be used. They shall be properly secured to prevent damage during normal conditions of carriage. Wastes carried in rigid packagings and plastics bags together in the same closed bulk container shall be adequately segregated from each other, e.g. by suitable rigid barriers or dividers, mesh nets or otherwise securing, such that they prevent damage to the packagings during normal conditions of carriage;
- (h) Wastes of UN No. 3291 in plastics bags shall not be compressed in a closed bulk container in such a way that bags may be rendered no longer leakproof;
- (i) The closed bulk container shall be inspected for leakage or spillage after each journey. If any wastes of UN No. 3291 have leaked or been spilled in the closed bulk container, it shall not be re-used until after it has been thoroughly cleaned and, if necessary, disinfected or decontaminated with an appropriate agent. No other goods shall be carried together with UN No. 3291 other than medical or veterinary wastes. Any such other wastes carried in the same closed bulk container shall be inspected for possible contamination.

7.3.2.7 *Material of Class 7*

For the carriage of unpackaged radioactive material, see 4.1.9.2.3.

7.3.2.8 *Goods of Class 8*

These goods shall be carried in bulk containers which are watertight.

7.3.3 **Special provisions for the carriage in bulk when the provisions of 7.3.1.1 (b) are applied**

When they are shown under an entry in Column (17) of Table A of Chapter 3.2, the following special provisions apply:

- VV1 Carriage in bulk in closed or sheeted vehicles, in closed containers or in large sheeted containers is permitted.

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- VV2 Carriage in bulk is permitted in closed vehicles with a metal body, closed metal containers and in sheeted vehicles and sheeted large containers covered with a non-combustible sheet and having a metal body or having floor and walls protected from the load.
- VV3 Carriage in bulk is permitted in sheeted vehicles and sheeted large containers with adequate ventilation.
- VV4 Carriage in bulk is permitted in closed or sheeted vehicles with a metal body, and in closed metal containers or in sheeted large metal containers.
For UN Nos. 2008, 2009, 2210, 2545, 2546, 2881, 3189 and 3190, only carriage in bulk of solid waste is permitted.
- VV5 Carriage in bulk is permitted in specially equipped vehicles and containers.
The openings used for loading and unloading shall be capable of being closed hermetically.
- VV6 *(Reserved)*
- VV7 Carriage in bulk in closed or sheeted vehicles, in closed containers or in large sheeted containers is permitted only if the substance is in pieces.
- VV8 Carriage in bulk is permitted, as a full load, in closed vehicles, closed containers or sheeted vehicles or large containers covered with an impermeable, non-combustible sheet.
Vehicles and containers shall be so constructed either that the substances contained cannot come into contact with wood or any other combustible material, or that the entire surface of the floor and walls, if made of wood or another combustible material has been provided with an impermeable surfacing resistant to combustion or has been coated with sodium silicate or a similar substance.
- VV9 Carriage in bulk is permitted, as a full load, in sheeted vehicles, closed containers or in sheeted large containers with complete walls.
For substances of Class 8, the body of the vehicle or container shall be equipped with a suitable and sufficiently stout inner lining.
- VV10 Carriage in bulk is permitted, as a full load, in sheeted vehicles, closed containers or sheeted large containers with complete walls.
The body of vehicles or containers shall be leakproof or rendered leakproof, for example by means of a suitable and sufficiently stout inner lining.
- VV11 Carriage in bulk is permitted in specially equipped vehicles and containers in a manner which avoids risks to humans, animals and the environment, e.g. by loading the wastes in bags or by airtight connections.
- VV12 Substances for which carriage in tank-vehicles, in portable tanks or in tank-containers is unsuitable because of the high temperature and density of the substance may be carried in special vehicles or containers in accordance with standards specified by the competent authority of the country of origin. If the country of origin is not a contracting party to ADR, the conditions laid down shall be recognized by the competent authority of the first country contracting party to ADR reached by the consignment.
- VV13 Carriage in bulk is permitted in specially equipped vehicles or containers in accordance with standards specified by the competent authority of the country of

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origin. If the country of origin is not a contracting party to ADR, the conditions laid down shall be recognized by the competent authority of the first country contracting party to ADR reached by the consignment.

- VV14 (1) Used batteries may be carried in bulk in specially equipped vehicles or containers. Large plastics containers shall not be permitted. Small plastics containers shall be capable of withstanding, when fully loaded, a drop from a height of 0.8 m onto a hard surface at -18 °C, without breakage.
- (2) The load compartments of vehicles or containers shall be of steel resistant to the corrosive substances contained in the batteries. Less resistant steels may be used when there is a sufficiently great wall thickness or a plastics lining/layer resistant to the corrosive substances.

The design of the load compartments of vehicles or containers shall take account of any residual currents and impact from the batteries.

NOTE: Steel exhibiting a maximum rate of progressive reduction of 0.1 mm per year under the effects of the corrosive substances may be considered as resistant.

- (3) It shall be ensured by means of constructional measures that there will be no leakage of corrosive substances from the load compartments of vehicles or containers during carriage. Open load compartments shall be covered. The cover shall be resistant to the corrosive substances.
- (4) Before loading, the load compartments of vehicles or containers, including their equipment, shall be inspected for damage. Vehicles or containers with damaged load compartments shall not be loaded.

The load compartments of vehicles or containers shall not be loaded above the top of their walls.

- (5) No batteries containing different substances and no other goods liable to react dangerously with each other shall be present in the load compartments of vehicles or containers (see "*Dangerous reaction*" in 1.2.1).

During carriage no dangerous residue of the corrosive substances contained in the batteries shall adhere to the outer surface of the load compartments of vehicles or containers.

- VV15 Carriage in bulk is permitted in closed or sheeted vehicles, closed containers or sheeted large containers with complete walls for solids (substances or mixtures, such as preparations or wastes) containing on an average not more than 1 000 mg/kg of substance to which this UN No is assigned. At no point of the load shall the concentration of this substance or these substances be higher than 10 000 mg/kg.

The bodies of vehicles or containers shall be leakproof or rendered leakproof, for example by means of a suitable and sufficiently stout inner lining.

- VV16 Carriage in bulk is permitted in accordance with the provisions of 4.1.9.2.3.

- VV17 Carriage in bulk of SCO-I is permitted in accordance with the provisions of 4.1.9.2.3.

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CHAPTER 7.4

PROVISIONS CONCERNING CARRIAGE IN TANKS

- 7.4.1 Dangerous goods may not be carried in tanks unless a code is indicated in Columns (10) or (12) of Table A of Chapter 3.2 or unless a competent authority approval is granted as detailed in 6.7.1.3. The carriage shall be in accordance with the provisions of Chapters 4.2, 4.3, 4.4 or 4.5 as applicable. The vehicles, whether they be rigid vehicles, drawing vehicles, trailers or semi-trailers, shall satisfy the relevant requirements of Chapters 9.1, 9.2 and 9.7.2 concerning the vehicle to be used, as indicated in Column (14) of Table A in Chapter 3.2.
- 7.4.2 The vehicles designated by the codes EX/III, FL, OX or AT in 9.1.1.2 shall be used as follows:
- Where an EX/III vehicle is prescribed, only an EX/III vehicle may be used;
 - Where a FL vehicle is prescribed, only an FL vehicle may be used;
 - Where a OX vehicle is prescribed, only an OX vehicle may be used;
 - Where a AT vehicle is prescribed, AT, FL and OX vehicles may be used.

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CHAPTER 7.5

PROVISIONS CONCERNING LOADING, UNLOADING AND HANDLING

7.5.1 General provisions concerning loading, unloading and handling

NOTE: Within the meaning of this section, placing a container, bulk-container, tank-container or portable tank onto a vehicle is considered as loading, and removing it is considered as unloading.

7.5.1.1 The vehicle and its driver, as well as the large container(s), bulk-container(s), tank-container(s) or portable tank(s) if any, shall comply with the regulatory provisions (especially those concerning safety, security, cleanliness and satisfactory operation of the equipment used in loading and unloading) upon arrival at the loading and unloading sites, which include container terminals.

7.5.1.2 Unless otherwise specified in ADR, the loading shall not be carried out if:

- (a) an examination of the documents; or
- (b) a visual inspection of the vehicle or of the large container(s), bulk-container(s), tank-container(s) or portable tank(s) if any, as well as of their equipment used in loading and unloading,

shows that the vehicle, the driver, a large container, a bulk-container, a tank-container, a portable tank or their equipment do not comply with the regulatory provisions. The interior and exterior of a vehicle or container shall be inspected prior to loading to ensure that there is no damage that could affect its integrity or that of the packages to be loaded in it.

7.5.1.3 Unless otherwise specified in ADR, the unloading shall not be carried out, if the above-mentioned inspections reveal deficiencies that might affect the safety or the security of the unloading.

7.5.1.4 In accordance with the special provisions of 7.3.3 or 7.5.11, in conformity with Columns (17) and (18) of Table A of Chapter 3.2, certain dangerous goods shall only be forwarded as a "full load" (see definition in 1.2.1). In such a case, the competent authorities may require the vehicle or large container used for such carriage to be loaded at only one point and unloaded at only one point.

7.5.1.5 When orientation arrows are required packages and overpacks shall be oriented in accordance with such markings.

NOTE: Liquid dangerous goods shall be loaded below dry dangerous goods whenever practicable.

7.5.2 Mixed loading prohibition

7.5.2.1 Packages bearing different danger labels shall not be loaded together in the same vehicle or container unless mixed loading is permitted according to the following Table based on the danger labels they bear.

NOTE: In accordance with 5.4.1.4.2, separate transport documents shall be drawn up for consignments that cannot be loaded together in the same vehicle or container.

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Labels Nos.	1	1.4	1.5	1.6	2.1, 2.2, 2.3	3	4.1	4.1 + 1	4.2	4.3	5.1	5.2	5.2 + 1	6.1	6.2	7 A, B, C	8	9					
1	See 7.5.2.2										d								b				
1.4					a	a	a		a	a	a	a		a	a	a	a	a	a	a	a	a	
1.5																							b
1.6																							b
2.1, 2.2, 2.3		a			X	X	X		X	X	X	X		X	X	X	X	X	X				
3		a			X	X	X		X	X	X	X		X	X	X	X	X	X				
4.1		a			X	X	X		X	X	X	X		X	X	X	X	X	X				
4.1 + 1								X															
4.2		a			X	X	X		X	X	X	X		X	X	X	X	X	X				
4.3		a			X	X	X		X	X	X	X		X	X	X	X	X	X				
5.1	d	a			X	X	X		X	X	X	X		X	X	X	X	X	X				
5.2		a			X	X	X		X	X	X	X	X	X	X	X	X	X	X				
5.2 + 1												X	X										
6.1		a			X	X	X		X	X	X	X		X	X	X	X	X	X				
6.2		a			X	X	X		X	X	X	X		X	X	X	X	X	X				
7A, B, C		a			X	X	X		X	X	X	X		X	X	X	X	X	X				
8		a			X	X	X		X	X	X	X		X	X	X	X	X	X				
9	b	a b c	b	b	X	X	X		X	X	X	X		X	X	X	X	X	X				

X Mixed loading permitted.

a Mixed loading permitted with 1.4S substances and articles.

b Mixed loading permitted between goods of Class 1 and life-saving appliances of Class 9 (UN Nos. 2990, 3072 and 3268).

c Mixed loading permitted between air bag inflators, or air bag modules, or seat-belt pretensioners of Division 1.4, compatibility group G, (UN No. 0503) and air bag inflators or air bag modules or seat-belt pretensioners of Class 9 (UN No. 3268).

d Mixed loading permitted between blasting explosives (except UN No. 0083 explosive, blasting, type C) and ammonium nitrate (UN Nos. 1942 and 2067) and alkali metal nitrates and alkaline earth metal nitrates provided the aggregate is treated as blasting explosives under Class 1 for the purposes of placarding, segregation, stowage and maximum permissible load. Alkali metal nitrates include caesium nitrate (UN 1451), lithium nitrate (UN 2722), potassium nitrate (UN 1486), rubidium nitrate (UN 1477) and sodium nitrate (UN 1498). Alkaline earth metal nitrates include barium nitrate (UN 1446), beryllium nitrate (UN 2464), calcium nitrate (UN 1454), magnesium nitrate (UN 1474) and strontium nitrate (UN 1507).

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7.5.2.2 Packages containing substances or articles of Class 1, bearing a label conforming to models Nos. 1, 1.4, 1.5 or 1.6 which are assigned to different compatibility groups shall not be loaded together in the same vehicle or container, unless mixed loading is permitted in accordance with the following Table for the corresponding compatibility groups.

Compatibility Group	A	B	C	D	E	F	G	H	J	L	N	S
A	X											
B		X		^a								X
C			X	X	X		X				^{b c}	X
D		^a	X	X	X		X				^{b c}	X
E			X	X	X		X				^{b c}	X
F						X						X
G			X	X	X		X					X
H								X				X
J									X			X
L										^d		
N			^{b c}	^{b c}	^{b c}						^b	X
S		X	X	X	X	X	X	X	X		X	X

X Mixed loading permitted.

^a Packages containing articles of compatibility group B and those containing substances or articles of compatibility group D may be loaded together on one vehicle or in one container provided they are effectively segregated such that there is no danger of transmission of detonation from the articles of compatibility group B to the substances or articles of compatibility group D. Segregation shall be achieved by the use of separate compartments or by placing one of the two types of explosive in a special containment system. Either method of segregation shall be approved by the competent authority.

^b Different types of articles of division 1.6, compatibility group N, may be carried together as articles of division 1.6, compatibility group N, only when it is proven by testing or analogy that there is no additional risk of sympathetic detonation between the articles. Otherwise they should be treated as hazard division 1.1.

^c When articles of compatibility group N are carried with substances or articles of compatibility groups C, D or E, the articles of compatibility group N should be considered as having the characteristics of compatibility group D.

^d Packages containing substances and articles of Compatibility Group L may be loaded together on one vehicle or in one container with packages containing the same type of substances and articles of that compatibility group.

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7.5.2.3 For the purpose of the application of the prohibitions of mixed loading on one vehicle, no account shall be taken of substances contained in closed containers with complete sides. Nevertheless, the mixed loading prohibitions laid down in 7.5.2.1 concerning mixed loading of packages bearing labels conforming to models Nos. 1, 1.4, 1.5 or 1.6 with other packages, and in 7.5.2.2 concerning mixed loading of explosives of different compatibility groups shall also apply between dangerous goods contained in a container and the other dangerous goods loaded on the same vehicle, whether or not the latter goods are enclosed in one or more other containers.

7.5.2.4 Mixed loading of dangerous goods packed in limited quantities with any type of explosive substances and articles, except those of Division 1.4 and UN Nos. 0161 and 0499, is prohibited.

7.5.3 *(Reserved)*

7.5.4 **Precautions with respect to foodstuffs, other articles of consumption and animal feeds**

If special provision CV28 is indicated for a substance or article in Column (18) of Table A of Chapter 3.2, precautions with respect to foodstuffs, other articles of consumption and animal feeds shall be taken as follows.

Packages as well as uncleaned empty packagings, including large packagings and intermediate bulk containers (IBCs), bearing labels conforming to models Nos. 6.1 or 6.2 and those bearing labels conforming to model No. 9 containing goods of UN Nos. 2212, 2315, 2590, 3151, 3152 or 3245, shall not be stacked on or loaded in immediate proximity to packages known to contain foodstuffs, other articles of consumption or animal feeds in vehicles, in containers and at places of loading, unloading or transhipment.

When these packages, bearing the said labels, are loaded in immediate proximity of packages known to contain foodstuffs, other articles of consumption or animal feeds, they shall be kept apart from the latter:

- (a) By complete partitions which should be as high as the packages bearing the said labels;
- (b) By packages not bearing labels conforming to models Nos. 6.1, 6.2 or 9 or packages bearing labels conforming to model No.9 but not containing goods of UN Nos. 2212, 2315, 2590, 3151, 3152 or 3245; or
- (c) By a space of at least 0.8 m;

unless the packages bearing the said labels are provided with an additional packaging or are completely covered (e.g. by a sheeting, a fibreboard cover or other measures).

7.5.5 **Limitation of the quantities carried**

7.5.5.1 If the provisions below, or the additional provisions of 7.5.11 to be applied according to Column (18) of Table A of Chapter 3.2 require a limitation of the quantity of specific goods that can be carried, the fact that dangerous goods are contained in one or more containers shall not affect the mass limitations per transport unit laid down by these provisions.

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7.5.5.2 Limitations with respect to explosive substances and articles**7.5.5.2.1 Substances and quantities carried**

The total net mass in kg of explosive substance (or in the case of explosive articles, the total net mass of explosive substance contained in all the articles combined) which may be carried on one transport unit shall be limited as indicated in the table below (see also 7.5.2.2 as regards the prohibition of mixed loading):

Maximum permissible net mass in kg of explosive in Class 1 goods per transport unit

Transport Unit	Division	1.1		1.2	1.3	1.4		1.5 and 1.6	Empty uncleaned packagings
		1.1A	Other than 1.1A			Other than 1.4S	1.4S		
EX/II ^a		6.25	1 000	3 000	5 000	15 000	Unlimited	5 000	Unlimited
EX/III ^a		18.75	16 000	16 000	16 000	16 000	Unlimited	16 000	Unlimited

^a For the description of EX/II and EX/III vehicles see Part 9.

7.5.5.2.2 Where substances and articles of different divisions of Class 1 are loaded on one transport unit in conformity with the prohibitions of mixed loading contained in 7.5.2.2, the load as a whole shall be treated as if it belonged to the most dangerous division (in the order 1.1, 1.5, 1.2, 1.3, 1.6, 1.4). However, the net mass of explosives of compatibility group S shall not count towards the limitation of quantities carried.

Where substances classified as 1.5D are carried on one transport unit together with substances or articles of division 1.2, the entire load shall be treated for carriage as if it belonged to division 1.1.

7.5.5.2.3 Carriage of explosives on MEMUs

Carriage of explosives on MEMUs is only permitted subject to the following conditions:

- (a) The competent authority shall authorize the transport operation within its territory;
- (b) The type and quantity of packaged explosives carried shall be limited to those necessary for the quantity of material to be manufactured on the MEMU, and in any case shall not exceed:
 - 200 kg of explosives of compatibility group D; and
 - a total of 400 units of detonators or detonator assemblies, or a mixture of both, unless otherwise approved by the competent authority;
- (c) Packaged explosives shall only be carried in compartments that meet the requirements of 6.12.5;
- (d) No other dangerous goods may be carried in the same compartment as the packaged explosives;
- (e) Packaged explosives shall only be loaded onto the MEMU once the loading of other dangerous goods has been completed and immediately prior to carriage;
- (f) When mixed loading is permitted between explosives and substances of Class 5.1 (UN 1942 and UN 3375) the aggregate is treated as blasting explosives under Class 1 for the purposes of segregation, stowage and maximum permissible load.

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7.5.5.3 The maximum quantity of organic peroxides of Class 5.2 and self-reactive substances of Class 4.1 of Types B, C, D, E or F is limited to 20 000 kg per transport unit.

7.5.6 *(Reserved)*

7.5.7 **Handling and stowage**

7.5.7.1 Where appropriate the vehicle or container shall be fitted with devices to facilitate securing and handling of the dangerous goods. Packages containing dangerous substances and unpackaged dangerous articles shall be secured by suitable means capable of restraining the goods (such as fastening straps, sliding slatboards, adjustable brackets) in the vehicle or container in a manner that will prevent any movement during carriage which would change the orientation of the packages or cause them to be damaged. When dangerous goods are carried with other goods (e.g. heavy machinery or crates), all goods shall be securely fixed or packed in the vehicles or containers so as to prevent the release of dangerous goods. Movement of packages may also be prevented by filling any voids by the use of dunnage or by blocking and bracing. Where restraints such as banding or straps are used, these shall not be over-tightened to cause damage or deformation of the package¹. The requirements of this paragraph are deemed to be complied with if the cargo is secured in accordance with standard EN 12195-1:2010.

7.5.7.2 Packages shall not be stacked unless designed for that purpose. Where different design types of packages that have been designed for stacking are to be loaded together, consideration shall be given to their compatibility for stacking with each other. Where necessary, stacked packages shall be prevented from damaging the package below by the use of load-bearing devices.

7.5.7.3 During loading and unloading, packages containing dangerous goods shall be protected from being damaged.

***NOTE:** Particular attention shall be paid to the handling of packages during their preparation for carriage, the type of vehicle or container on which they are to be carried and to the method of loading or unloading, so that accidental damage is not caused through dragging or mishandling the packages.*

7.5.7.4 The provisions of 7.5.7.1 also apply to the loading, stowage and unloading of containers, tank-containers, portable tanks and MEGCs on to and from vehicles.

7.5.7.5 Members of the vehicle crew may not open a package containing dangerous goods.

¹ Guidance on the stowage of dangerous goods can be found in the European Best Practice Guidelines on Cargo Securing for Road Transport published by the European Commission. Other guidance is also available from competent authorities and industry bodies.

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7.5.8 Cleaning after unloading

7.5.8.1 If, when a vehicle or container which has contained packaged dangerous goods is unloaded, some of the contents are found to have escaped, the vehicle or container shall be cleaned as soon as possible and in any case before reloading.

If it is not possible to do the cleaning locally, the vehicle or container shall be carried, with due regard to adequate safety, to the nearest suitable place where cleaning can be carried out.

Carriage is adequately safe if suitable measures have been taken to prevent the uncontrolled release of the dangerous goods that have escaped.

7.5.8.2 Vehicles or containers which have been loaded with dangerous goods in bulk shall be properly cleaned before reloading unless the new load consists of the same dangerous goods as the preceding load.

7.5.9 Prohibition of smoking

Smoking shall be prohibited during handling operations in the vicinity of vehicles or containers and inside the vehicles or containers.

7.5.10 Precautions against electrostatic charges

In the case of flammable gases, or liquids with a flash-point of 60 °C or below, or UN No. 1361, carbon or carbon black, packing group II, a good electrical connection from the chassis of the vehicle, the portable tank or the tank-container to earth shall be established before tanks are filled or emptied. In addition, the rate of filling shall be limited.

7.5.11 Additional provisions applicable to certain classes or specific goods

In addition to the provisions of sections 7.5.1 to 7.5.10, the following provisions shall apply when they are shown under an entry indicated in Column (18) of Table A of Chapter 3.2.

- CV1 (1) The following operations are prohibited:
- (a) Loading or unloading goods in a public place in a built-up area without special permission from the competent authorities;
 - (b) Loading or unloading goods in a public place elsewhere than in a built-up area without prior notice thereof having been given to the competent authorities, unless these operations are urgently necessary for reasons of safety.
- (2) If, for any reason, handling operations have to be carried out in a public place, then substances and articles of different kinds shall be separated according to the labels.
- CV2 (1) Before loading, the loading surface of the vehicle or container shall be thoroughly cleaned.
- (2) The use of fire or naked flame shall be prohibited on vehicles and containers carrying goods, in their vicinity and during the loading and unloading of these goods.

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- CV3 See 7.5.5.2.
- CV4 Substances and articles of compatibility group L shall only be carried as a full load.
- CV5 to
CV8 *(Reserved)*
- CV9 Packages shall not be thrown or subjected to impact.
- Receptacles shall be so stowed in the vehicle or container that they cannot overturn or fall.
- CV10 Cylinders as defined in 1.2.1, shall be laid parallel to or at right angles to the longitudinal axis of the vehicle or container; however, those situated near the forward transverse wall shall be laid at right angles to the said axis.
- Short cylinders of large diameter (about 30 cm and over) may be stowed longitudinally with their valve-protecting devices directed towards the middle of the vehicle or container.
- Cylinders which are sufficiently stable or are carried in suitable devices effectively preventing them from overturning may be placed upright.
- Cylinders which are laid flat shall be securely and appropriately wedged, attached or secured so that they cannot shift.
- CV11 Receptacles shall always be placed in the position for which they were designed and be protected against any possibility of being damaged by other packages.
- CV12 When pallets loaded with articles are stacked, each tier of pallets shall be evenly distributed over the lower tier, if necessary by the interposition of a material of adequate strength.
- CV13 If any substances have leaked and been spilled in a vehicle or container, it may not be re-used until after it has been thoroughly cleaned and, if necessary, disinfected or decontaminated. Any other goods and articles carried in the same vehicle or container shall be examined for possible contamination.
- CV14 Goods shall be shielded from direct sunlight and heat during carriage.
- Packages shall be stored only in cool, well-ventilated places away from heat sources.
- CV15 See 7.5.5.3.
- CV16 to
CV19 *(Reserved)*
- CV20 The provisions of Chapter 5.3 and special provisions V1 and V8(5) and (6) of Chapter 7.2 shall not apply provided that the substance is packaged in accordance with packing method OP1 or OP2 of packing instruction P520 in 4.1.4.1, as required, and the total quantity of substances to which this derogation applies per transport unit is limited to 10 kg.
- CV21 The transport unit shall be thoroughly inspected prior to loading.
- Before carriage, the carrier shall be informed:

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- about the operation of the refrigeration system, including a list of the suppliers of coolant available en route;
- procedures to be followed in the event of loss of temperature control.

In the case of temperature control in accordance with methods R2 or R4 of special provision V8(3) of Chapter 7.2, a sufficient quantity of non-flammable refrigerant (e.g. liquid nitrogen or dry ice), including a reasonable margin for possible delays, shall be carried unless a means of replenishment is assured.

Packages shall be so stowed as to be readily accessible.

The specified control temperature shall be maintained during the whole transport operation, including loading and unloading, as well as any intermediate stops.

CV22 Packages shall be loaded so that a free circulation of air within the loading space provides a uniform temperature of the load. If the contents of one vehicle or large container exceed 5 000 kg of flammable solids and/or organic peroxides, the load shall be divided into stacks of not more than 5 000 kg separated by air spaces of at least 0.05 m.

CV23 When handling packages, special measures shall be taken to ensure that they do not come into contact with water.

CV24 Before loading, vehicles and containers shall be thoroughly cleaned and in particular be free of any combustible debris (straw, hay, paper, etc.).

The use of readily flammable materials for stowing packages is prohibited.

- CV25
- (1) Packages shall be so stowed that they are readily accessible.
 - (2) When packages are to be carried at an ambient temperature of not more than 15 °C or refrigerated, the temperature shall be maintained when unloading or during storage.
 - (3) Packages shall be stored only in cool places away from sources of heat.

CV26 The wooden parts of a vehicle or container which have come into contact with these substances shall be removed and burnt.

- CV27
- (1) Packages shall be so stowed that they are readily accessible.
 - (2) When packages are to be carried refrigerated, the functioning of the cooling chain shall be ensured when unloading or during storage.
 - (3) Packages shall only be stored in cool places away from sources of heat.

CV28 See 7.5.4.

CV29 to
CV32 (*Reserved*)

CV33 **NOTE 1:** "Critical group" means a group of members of the public which is reasonably homogeneous with respect to its exposure for a given radiation source and given exposure pathway and is typical of individual receiving the highest effective dose by the given exposure pathway from the given source.

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NOTE 2: "Members of the public" means in a general sense, any individuals in the population except when subject to occupational or medical exposure.

NOTE 3: "Workers" are any persons who work, whether full time, part-time or temporarily, for an employer and who have recognised rights and duties in relation to occupational radiation protection.

(1) *Segregation*

(1.1) Packages, overpacks, containers and tanks containing radioactive material and unpacked radioactive material shall be segregated during carriage:

(a) from workers in regularly occupied working areas:

(i) in accordance with Table A below; or

(ii) by distances calculated using a dose criterion of 5 mSv in a year and conservative model parameters;

NOTE: Workers subject to individual monitoring for the purposes of radiation protection shall not be considered for the purposes of segregation.

(b) from members of the critical group of the public, in areas where the public has regular access:

(i) in accordance with Table A below; or

(ii) by distances calculated using a dose criterion of 1 mSv in a year and conservative model parameters;

(c) from undeveloped photographic film and mailbags:

(i) in accordance with Table B below; or

(ii) by distances calculated using a radiation exposure criterion for undeveloped photographic film due to the transport of radioactive material for 0.1 mSv per consignment of such film; and

NOTE: Mailbags shall be assumed to contain undeveloped film and plates and therefore be separated from radioactive material in the same way.

(d) from other dangerous goods in accordance with 7.5.2.

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Table A: Minimum distances between packages of category II-YELLOW or of category III-YELLOW and persons

Sum of transport indexes not more than	Exposure time per year (hours)			
	Areas where members of the public have regular access		Regularly occupied working areas	
	50	250	50	250
	Segregation distance in metres, no shielding material intervening, from:			
2	1	3	0.5	1
4	1.5	4	0.5	1.5
8	2.5	6	1.0	2.5
12	3	7.5	1.0	3
20	4	9.5	1.5	4
30	5	12	2	5
40	5.5	13.5	2.5	5.5
50	6.5	15.5	3	6.5

Table B: Minimum distances between packages of category II-YELLOW or of category III-YELLOW and packages bearing the word "FOTO", or mailbags

Total number of packages not more than		Sum of transport indexes not more than	Journey or storage duration, in hours								
			1	2	4	10	24	48	120	240	
III-yellow	II-yellow		Minimum distances in metres								
			0.2	0.5	0.5	0.5	0.5	1	1	2	3
		0.5	0.5	0.5	0.5	1	1	2	3	5	
	1	1	0.5	0.5	1	1	2	3	5	7	
	2	2	0.5	1	1	1.5	3	4	7	9	
	4	4	1	1	1.5	3	4	6	9	13	
	8	8	1	1.5	2	4	6	8	13	18	
1	10	10	1	2	3	4	7	9	14	20	
2	20	20	1.5	3	4	6	9	13	20	30	
3	30	30	2	3	5	7	11	16	25	35	
4	40	40	3	4	5	8	13	18	30	40	
5	50	50	3	4	6	9	14	20	32	45	

(1.2) Category II-YELLOW or III-YELLOW packages or overpacks shall not be carried in compartments occupied by passengers, except those exclusively reserved for couriers specially authorized to accompany such packages or overpacks.

(1.3) No persons other than members of the vehicle crew shall be permitted in vehicles carrying packages, overpacks or containers bearing category II-YELLOW or III-YELLOW labels.

(2) *Activity limits*

The total activity in a vehicle, for carriage of LSA material or SCO in Industrial Packages Type 1 (Type IP-1), Type 2 (Type IP-2), Type 3 (Type IP-3) or unpackaged, shall not exceed the limits shown in Table C below.

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Table C: Vehicle activity limits for LSA material and SCO in industrial packages or unpackaged

Nature of material or object	Activity limit for vehicle
LSA-I	No limit
LSA-II and LSA-III non-combustible solids	No limit
LSA-II and LSA-III combustible solids, and all liquids and gases	100 A ₂
SCO	100 A ₂

(3) *Stowage during carriage and storage in transit*

(3.1) Consignments shall be securely stowed.

(3.2) Provided that its average surface heat flux does not exceed 15 W/m² and that the immediately surrounding cargo is not in bags, a package or overpack may be carried or stored among packaged general cargo without any special stowage provisions except as may be specifically required by the competent authority in an applicable approval certificate.

(3.3) Loading of containers and accumulation of packages, overpacks and containers shall be controlled as follows:

- (a) Except under the condition of exclusive use, and for consignments of LSA-I material, the total number of packages, overpacks and containers aboard a single vehicle shall be so limited that the total sum of the transport indexes aboard the vehicle does not exceed the values shown in Table D below;
- (b) The radiation level under routine conditions of carriage shall not exceed 2 mSv/h at any point on, and 0.1 mSv/h at 2 m from, the external surface of the vehicle, except for consignments carried under exclusive use, for which the radiation limits around the vehicle are set forth in (3.5) (b) and (c);
- (c) The total sum of the criticality safety indexes in a container and aboard a vehicle shall not exceed the values shown in Table E below.

Table D: Transport Index limits for containers and vehicles not under exclusive use

Type of container or vehicle	Limit on total sum of transport indexes in a container or aboard a vehicle
Small container	50
Large container	50
Vehicle	50

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Table E: Criticality Safety Index for containers and vehicles containing fissile material

Type of container or vehicle	Limit on total sum of criticality safety indexes	
	Not under exclusive use	Under exclusive use
Small container	50	n.a.
Large container	50	100
Vehicle	50	100

(3.4) Any package or overpack having either a transport index greater than 10, or any consignment having a criticality safety index greater than 50, shall be carried only under exclusive use.

(3.5) For consignments under exclusive use, the radiation level shall not exceed:

(a) 10 mSv/h at any point on the external surface of any package or overpack, and may only exceed 2 mSv/h provided that:

(i) the vehicle is equipped with an enclosure which, during routine conditions of carriage, prevents the access of unauthorized persons to the interior of the enclosure;

(ii) provisions are made to secure the package or overpack so that its position within the vehicle enclosure remains fixed during routine conditions of carriage, and

(iii) there is no loading or unloading during the shipment;

(b) 2 mSv/h at any point on the outer surfaces of the vehicle, including the upper and lower surfaces, or, in the case of an open vehicle, at any point on the vertical planes projected from the outer edges of the vehicle, on the upper surface of the load, and on the lower external surface of the vehicle; and

(c) 0.1 mSv/h at any point 2 m from the vertical planes represented by the outer lateral surfaces of the vehicle, or, if the load is carried in an open vehicle, at any point 2 m from the vertical planes projected from the outer edges of the vehicle.

(4) *Segregation of packages containing fissile material during carriage and storage in transit*

(4.1) Any group of packages, overpacks, and containers containing fissile material stored in transit in any one storage area shall be so limited that the total sum of the CSIs in the group does not exceed 50. Each group shall be stored so as to maintain a spacing of at least 6 m from other such groups.

(4.2) Where the total sum of the criticality safety indexes on board a vehicle or in a container exceeds 50, as permitted in Table E above, storage shall be such as to maintain a spacing of at least 6 m from other groups of packages, overpacks or containers containing fissile material or other vehicles carrying radioactive material.

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(5) *Damaged or leaking packages, contaminated packagings*

- (5.1) If it is evident that a package is damaged or leaking, or if it is suspected that the package may have leaked or been damaged, access to the package shall be restricted and a qualified person shall, as soon as possible, assess the extent of contamination and the resultant radiation level of the package. The scope of the assessment shall include the package, the vehicle, the adjacent loading and unloading areas, and, if necessary, all other material which has been carried in the vehicle. When necessary, additional steps for the protection of persons property and the environment, in accordance with provisions established by the competent authority, shall be taken to overcome and minimize the consequences of such leakage or damage.
- (5.2) Packages damaged or leaking radioactive contents in excess of allowable limits for normal conditions of carriage may be removed to an acceptable interim location under supervision, but shall not be forwarded until repaired or reconditioned and decontaminated.
- (5.3) A vehicle and equipment used regularly for the carriage of radioactive material shall be periodically checked to determine the level of contamination. The frequency of such checks shall be related to the likelihood of contamination and the extent to which radioactive material is carried.
- (5.4) Except as provided in paragraph (5.5), any vehicle, or equipment or part thereof which has become contaminated above the limits specified in 4.1.9.1.2 in the course of carriage of radioactive material, or which shows a radiation level in excess of 5 $\mu\text{Sv/h}$ at the surface, shall be decontaminated as soon as possible by a qualified person and shall not be re-used unless the non-fixed contamination does not exceed the limits specified in 4.1.9.1.2, and the radiation level resulting from the fixed contamination on surfaces after decontamination is less than 5 $\mu\text{Sv/h}$ at the surface.
- (5.5) A container, tank, intermediate bulk container or vehicle dedicated to the carriage of unpackaged radioactive material under exclusive use shall be excepted from the requirements of the previous paragraph (5.4) and in 4.1.9.1.4 solely with regard to its internal surfaces and only for as long as it remains under that specific exclusive use.

(6) *Other provisions*

Where a consignment is undeliverable, the consignment shall be placed in a safe location and the competent authority shall be informed as soon as possible and a request made for instructions on further action.

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- CV34 Prior to carriage of pressure receptacles it shall be ensured that the pressure has not risen due to potential hydrogen generation.
- CV35 If bags are used as single packagings, they shall be adequately separated to allow for the dissipation of heat.
- CV36 Packages shall preferably be loaded in open or ventilated vehicles or open or ventilated containers. If this is not feasible and packages are carried in other closed vehicles or containers, the cargo doors of the vehicles or containers shall be marked with the following in letters not less than 25 mm high:

"WARNING
NO VENTILATION
OPEN WITH CAUTION"

This shall be in a language considered appropriate by the consignor.

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ANNEX B

PROVISIONS CONCERNING TRANSPORT EQUIPMENT AND TRANSPORT OPERATIONS

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PART 8

Requirements for vehicle crews, equipment, operation and documentation

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CHAPTER 8.1

GENERAL REQUIREMENTS CONCERNING TRANSPORT UNITS AND EQUIPMENT ON BOARD

8.1.1 Transport units

A transport unit loaded with dangerous goods may in no case include more than one trailer (or semi-trailer).

8.1.2 Documents to be carried on the transport unit

8.1.2.1 In addition to the documents required under other regulations, the following documents shall be carried on the transport unit:

- (a) The transport documents prescribed in 5.4.1, covering all the dangerous goods carried and, when appropriate, the large container or vehicle packing certificate prescribed in 5.4.2;
- (b) The instructions in writing prescribed in 5.4.3;
- (c) *(Reserved)*;
- (d) Means of identification, which include a photograph, for each member of the vehicle crew, in accordance with 1.10.1.4.

8.1.2.2 Where the provisions of ADR require the following documents to be drawn up, they shall likewise be carried on the transport unit:

- (a) The certificate of approval referred to in 9.1.3 for each transport unit or element thereof;
- (b) The driver's training certificate prescribed in 8.2.1;
- (c) A copy of the competent authority approval, when required in 5.4.1.2.1 (c) or (d) or 5.4.1.2.3.3.

8.1.2.3 The instructions in writing prescribed in 5.4.3 shall be kept readily available.

8.1.2.4 *(Deleted)*

8.1.3 Placarding and marking

Transport units carrying dangerous goods shall be placarded and marked in conformity with Chapter 5.3.

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8.1.4 Fire-fighting equipment

8.1.4.1 The following table shows the minimum provisions for portable fire extinguishers for the inflammability Classes¹ A, B and C that apply to transport units carrying dangerous goods except for those referred to in 8.1.4.2:

(1) Transport unit maximum permissible mass	(2) Minimum number of fire extinguishers	(3) Minimum total capacity per transport unit	(4) Extinguisher suitable for engine or cab fire. At least one with a minimum capacity of:	(5) Additional extinguisher(s) requirement. At least one extinguisher shall have a minimum capacity of:
≤ 3.5 tonnes	2	4 kg	2 kg	2 kg
> 3.5 tonnes ≤ 7.5 tonnes	2	8 kg	2 kg	6 kg
>7.5 tonnes	2	12 kg	2 kg	6 kg

The capacities are for dry powder devices (or an equivalent capacity for any other suitable extinguishing agent).

8.1.4.2 Transport units carrying dangerous goods in accordance with 1.1.3.6 shall be equipped with one portable fire extinguisher for the inflammability classes¹ A, B and C, with a minimum capacity of 2 kg dry powder (or an equivalent capacity for any other suitable extinguishing agent).

8.1.4.3 The portable fire extinguishers shall be suitable for use on a vehicle and shall comply with the relevant requirements of EN 3 Portable fire extinguishers, Part 7 (EN 3-7:2004 + A1:2007).

If the vehicle is equipped with a fixed fire extinguisher, automatic or easily brought into action for fighting a fire in the engine, the portable extinguisher need not be suitable for fighting a fire in the engine. The extinguishing agents shall be such that they are not liable to release toxic gases into the driver's cab or under the influence of the heat of the fire.

8.1.4.4 The portable fire extinguishers conforming to the provisions of 8.1.4.1 or 8.1.4.2 shall be fitted with a seal verifying that they have not been used.

In addition, they shall bear a mark of compliance with a standard recognized by a competent authority and an inscription at least indicating the date (month, year) of the next recurrent inspection or of the maximum permissible period of use, as applicable.

The fire extinguishers shall be subjected to periodic inspections in accordance with authorized national standards in order to guarantee their functional safety.

8.1.4.5 The fire extinguishers shall be installed on the transport units in a way that they are easily accessible to the vehicle crew. The installation shall be carried out in such a way that the fire extinguishers shall be protected against effects of the weather so that their operational safety is not affected.

¹ For the definition of the inflammability classes, see Standard EN 2:1992 Classification of fires.

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8.1.5 Miscellaneous equipment and equipment for personal protection

8.1.5.1 Each transport unit carrying dangerous goods shall be provided with items of equipment for general and personal protection in accordance with 8.1.5.2. The items of equipment shall be selected in accordance with the danger label number of the goods loaded. The label numbers can be identified through the transport document.

8.1.5.2 The following equipment shall be carried on board the transport unit:

- For each vehicle, a wheel chock of a size suited to the maximum mass of the vehicle and to the diameter of the wheel;
- Two self-standing warning signs;
- Eye rinsing liquid²; and

for each member of the vehicle crew

- A warning vest (e.g. as described in the EN 471 standard);
- Portable lighting apparatus conforming to the provisions of 8.3.4;
- A pair of protective gloves; and
- Eye protection (e.g. protective goggles).

8.1.5.3 Additional equipment required for certain classes:

- An emergency escape mask³ for each member of the vehicle crew shall be carried on board the vehicle for danger label numbers 2.3 or 6.1;
- A shovel⁴;
- A drain seal⁴;
- A collecting container⁴.

² Not required for danger label numbers 1, 1.4, 1.5, 1.6, 2.1, 2.2 and 2.3.

³ For example an emergency escape mask with a combined gas/dust filter of the A1B1E1K1-P1 or A2B2E2K2-P2 type which is similar to that described in the EN 141 standard.

⁴ Only required for solids and liquids with danger label numbers 3, 4.1, 4.3, 8 or 9.

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CHAPTER 8.2

REQUIREMENTS CONCERNING THE TRAINING OF THE VEHICLE CREW

8.2.1 Scope and general requirements concerning the training of drivers

8.2.1.1 Drivers of vehicles carrying dangerous goods shall hold a certificate issued by the competent authority stating that they have participated in a training course and passed an examination on the particular requirements that have to be met during carriage of dangerous goods.

8.2.1.2 Drivers of vehicles carrying dangerous goods shall attend a basic training course. Training shall be given in the form of a course approved by the competent authority. Its main objectives are to make drivers aware of hazards arising in the carriage of dangerous goods and to give them basic information indispensable for minimizing the likelihood of an incident taking place and, if it does, to enable them to take measures which may prove necessary for their own safety and that of the public and the environment, for limiting the effects of an incident. This training, which shall include individual practical exercises, shall act as the basis of training for all categories of drivers covering at least the subjects defined in 8.2.2.3.2. The competent authority may approve basic training courses limited to specific dangerous goods or to a specific class or classes. These restricted basic training courses shall not be provided for drivers of vehicles referred to in 8.2.1.4.

8.2.1.3 Drivers of vehicles or MEMUs carrying dangerous goods in fixed tanks or demountable tanks with a capacity exceeding 1 m³, drivers of battery-vehicles with a total capacity exceeding 1 m³ and drivers of vehicles or MEMUs carrying dangerous goods in tank-containers, portable tanks or MEGCs with an individual capacity exceeding 3 m³ on a transport unit, shall attend a specialization training course for carriage in tanks covering at least the subjects defined in 8.2.2.3.3. The competent authority may approve tank specialization training courses limited to specific dangerous goods or to a specific class or classes. These restricted tank specialization training courses shall not be provided for drivers of vehicles referred to in 8.2.1.4.

8.2.1.4 Drivers of vehicles carrying substances or articles of Class 1, other than substances and articles of Division 1.4, compatibility group S (see S1 in Chapter 8.5), drivers of MEMU carrying mixed loads of substances or articles of Class 1 and substances of Class 5.1 (see 7.5.5.2.3) and drivers of vehicles carrying certain radioactive material (see S11 and S12 in Chapter 8.5) shall attend specialization training courses covering at least the subjects defined in 8.2.2.3.4 or 8.2.2.3.5.

8.2.1.5 All training courses, practical exercises, examinations and the role of competent authorities shall comply with the provisions of 8.2.2.

8.2.1.6 All training certificates conforming to the requirements of this section and issued in accordance with 8.2.2.8 by the competent authority of a Contracting Party shall be accepted during their period of validity by the competent authorities of other Contracting Parties.

8.2.2 Special requirements concerning the training of drivers

8.2.2.1 The necessary knowledge and skills shall be imparted by training covering theoretical courses and practical exercises. The knowledge shall be tested in an examination.

8.2.2.2 The training body shall ensure that the training instructors have a good knowledge of, and take into consideration, recent developments in regulations and training requirements relating to the carriage of dangerous goods. The training shall be practice-related. The training programme shall conform with the approval referred to in 8.2.2.6, on the subjects set

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out in 8.2.2.3.2 to 8.2.2.3.5. The training shall also include individual practical exercises (see 8.2.2.3.8).

8.2.2.3 *Structure of training*

8.2.2.3.1 Training shall be given in the form of a basic training course and, when applicable, specialization training courses. Basic training courses and specialization training courses may be given in the form of comprehensive training courses, conducted integrally, on the same occasion and by the same training body.

8.2.2.3.2 Subjects to be covered by the basic training course shall be, at least:

- (a) General requirements governing the carriage of dangerous goods;
- (b) Main types of hazard;
- (c) Information on environmental protection in the control of the transfer of wastes;
- (d) Preventive and safety measures appropriate to the various types of hazard;
- (e) What to do after an accident (first aid, road safety, basic knowledge about the use of protective equipment, instructions in writing, etc.);
- (f) Marking, labelling, placarding and orange-coloured plate marking;
- (g) What a driver should and should not do during the carriage of dangerous goods;
- (h) Purpose and the method of operation of technical equipment on vehicles;
- (i) Prohibitions on mixed loading in the same vehicle or container;
- (j) Precautions to be taken during loading and unloading of dangerous goods;
- (k) General information concerning civil liability;
- (l) Information on multimodal transport operations;
- (m) Handling and stowage of packages;
- (n) Traffic restrictions in tunnels and instructions on behaviour in tunnels (prevention of incidents, safety, action in the event of fire or other emergencies, etc.);
- (o) Security awareness.

8.2.2.3.3 Subjects to be covered by the specialization training course for carriage in tanks shall be, at least:

- (a) Behaviour of vehicles on the road, including movements of the load;
- (b) Specific requirements of the vehicles;
- (c) General theoretical knowledge of the various and different filling and discharge systems;
- (d) Specific additional provisions applicable to the use of those vehicles (certificates of approval, approval marking, placarding and orange-coloured plate marking, etc.).

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8.2.2.3.4 Subjects to be covered by the specialization training course for the carriage of substances and articles of Class 1 shall be, at least:

- (a) Specific hazards related to explosive and pyrotechnical substances and articles;
- (b) Specific requirements concerning mixed loading of substances and articles of Class 1.

8.2.2.3.5 Subjects to be covered by the specialization training course for the carriage of radioactive material of Class 7 shall be, at least:

- (a) Specific hazards related to ionizing radiation;
- (b) Specific requirements concerning packing, handling, mixed loading and stowage of radioactive material;
- (c) Special measures to be taken in the event of an accident involving radioactive material.

8.2.2.3.6 Teaching units are intended to last 45 minutes.

8.2.2.3.7 Normally, not more than eight teaching units are permitted on each training day.

8.2.2.3.8 The individual practical exercises shall take place in connection with the theoretical training, and shall at least cover first aid, fire-fighting and what to do in case of an incident or accident.

8.2.2.4 *Initial training programme*

8.2.2.4.1 The minimum duration of the theoretical element of each initial training course or part of the comprehensive training course shall be as follows:

Basic training course	18 teaching units
Specialization training course for carriage in tanks	12 teaching units
Specialization training course for carriage of substances and articles of Class 1	8 teaching units
Specialization training course for carriage of radioactive material of Class 7	8 teaching units

For the basic training course and the specialization training course for carriage in tanks, additional teaching units are required for practical exercises referred to in 8.2.2.3.8 which will vary depending on the number of drivers under instruction.

8.2.2.4.2 The total duration of the comprehensive training course may be determined by the competent authority, who shall maintain the duration of the basic training course and the specialization training course for tanks, but may supplement it with shortened specialization training courses for Classes 1 and 7.

8.2.2.5 *Refresher training programme*

8.2.2.5.1 Refresher training undertaken at regular intervals serves the purpose of bringing the drivers' knowledge up to date; it shall cover new technical, legal and substance-related developments.

8.2.2.5.2 The duration of the refresher training including individual practical exercises shall be of at least two days for comprehensive training courses, or at least one half the duration allocated

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to the corresponding initial basic or initial specialization training courses as specified in 8.2.2.4.1 for individual training courses.

8.2.2.5.3 A driver may replace a refresher training course and examination with the corresponding initial training course and examination.

8.2.2.6 *Approval of training*

8.2.2.6.1 The training courses shall be subject to approval by the competent authority.

8.2.2.6.2 Approval shall only be given with regard to applications submitted in writing.

8.2.2.6.3 The following documents shall be attached to the application for approval:

- (a) A detailed training programme specifying the subjects taught and indicating the time schedule and planned teaching methods;
- (b) Qualifications and fields of activities of the teaching personnel;
- (c) Information on the premises where the courses take place and on the teaching materials as well as on the facilities for the practical exercises;
- (d) Conditions of participation in the courses, such as number of participants.

8.2.2.6.4 The competent authority shall organize the supervision of training and examinations.

8.2.2.6.5 Approval shall be granted in writing by the competent authority subject to the following conditions:

- (a) The training shall be given in conformity with the application documents;
- (b) The competent authority shall be granted the right to send authorized persons to be present at the training courses and examinations;
- (c) The competent authority shall be advised in time of the dates and the places of the individual training courses;
- (d) The approval may be withdrawn if the conditions of approval are not complied with.

8.2.2.6.6 The approval document shall indicate whether the courses concerned are basic or specialization training courses, initial or refresher training courses, and whether they are limited to specific dangerous goods or a specific class or classes.

8.2.2.6.7 If the training body, after a training course has been given approval, intends to make any alterations with respect to such details as were relevant to the approval, it shall seek permission in advance from the competent authority. This applies in particular to changes concerning the training programme.

8.2.2.7 *Examinations*

8.2.2.7.1 *Examinations for the basic training course*

8.2.2.7.1.1 After completion of the basic training, including the practical exercises, an examination shall be held on the corresponding basic training course.

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- 8.2.2.7.1.2 In the examination, the candidate has to prove that he has the knowledge, insight and skill for the practice of professional driver of vehicles carrying dangerous goods as provided in the basic training course.
- 8.2.2.7.1.3 For this purpose the competent authority shall prepare a catalogue of questions which refer to the items summarized in 8.2.2.3.2. Questions in the examination shall be drawn from this catalogue. The candidates shall not have any knowledge of the questions selected from the catalogue prior to the examination.
- 8.2.2.7.1.4 A single examination for comprehensive training courses may be held.
- 8.2.2.7.1.5 Each competent authority shall supervise the modalities of the examination.
- 8.2.2.7.1.6 The examination shall take the form of a written examination or a combination of a written and oral examination. Each candidate shall be asked at least 25 written questions for the basic training course. If the examination follows a refresher training course, at least 15 written questions shall be asked. The duration of these examinations shall be at least 45 and 30 minutes respectively. The questions may be of a varying degree of difficulty and be allocated a different weighting.
- 8.2.2.7.2 *Examinations for specialization training courses for carriage in tanks or carriage of substances and articles of Class 1 or radioactive material of Class 7*
- 8.2.2.7.2.1 After having sat the examination on the basic training course and after having attended the specialization training course for carriage in tanks or carriage of substances and articles of Class 1 or radioactive material of Class 7, the candidate shall be allowed to take part in the examination corresponding to the training.
- 8.2.2.7.2.2 This examination shall be held and supervised on the same basis as in 8.2.2.7.1. The catalogue of questions shall refer to the items summarized in 8.2.2.3.3, 8.2.2.3.4 or 8.2.2.3.5, as appropriate.
- 8.2.2.7.2.3 With respect to each specialization training examination, at least 15 written questions shall be asked. If the examination follows a refresher training course, at least 10 written questions shall be asked. The duration of these examinations shall be at least 30 and 20 minutes respectively.
- 8.2.2.7.2.4 If an examination is based on a restricted basic training course, this limits the examination of the specialization training course to the same scope.

8.2.2.8 *Certificate of driver's training*

- 8.2.2.8.1 The certificate referred to in 8.2.1.1 shall be issued:
- (a) After completion of a basic training course, provided the candidate has successfully passed the examination in accordance with 8.2.2.7.1;
 - (b) If applicable, after completion of a specialization training course for carriage in tanks or carriage of substances and articles of Class 1 or radioactive material of Class 7, or after having acquired the knowledge referred to in special provisions S1 and S11 in Chapter 8.5, provided the candidate has successfully passed an examination in accordance with 8.2.2.7.2;
 - (c) If applicable, after completion of a restricted basic or restricted tank specialization training course, provided the candidate has successfully passed the examination in accordance with 8.2.2.7.1 or 8.2.2.7.2. The certificate issued shall clearly indicate its limited scope of validity to the relevant dangerous goods or class(es).

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8.2.2.8.2 The date of validity of a driver training certificate shall be five years from the date the driver passes an initial basic or initial comprehensive training examination.

The certificate shall be renewed if the driver furnishes proof of participation in refresher training in accordance with 8.2.2.5 and has passed an examination in accordance with 8.2.2.7 in the following cases:

- (a) In the twelve months before the date of expiry of the certificate. The competent authority shall issue a new certificate, valid for five years, the period of validity of which shall begin with the date of expiry of the previous certificate;
- (b) Prior to the twelve months before the date of expiry of the certificate. The competent authority shall issue a new certificate, valid for five years, the period of validity of which shall begin from the date on which the refresher examination was passed.

Where a driver extends the scope of his certificate during its period of validity, by meeting the requirements of 8.2.2.8.1 (b) and (c), the period of validity of a new certificate shall remain that of the previous certificate. When a driver has passed a specialization training examination, the specialization shall be valid until the date of expiry of the certificate.

8.2.2.8.3 The certificate shall have the layout of the model shown in 8.2.2.8.5. Its dimensions shall be in accordance with ISO 7810:2003 ID-1 and it shall be made of plastic. The colour shall be white with black lettering. It shall include an additional security feature such as a hologram, UV printing or guilloche patterns.

8.2.2.8.4 The certificate shall be prepared in the language(s) or one of the languages of the country of the competent authority which issued the certificate. If none of these languages is English, French or German, the title of the certificate, the title of item 8 and the titles on the back shall also be drawn up in English, French or German.

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8.2.2.8.5 *Model for the training certificate for drivers of vehicles carrying dangerous goods*

Front	<p style="text-align: center;">ADR DRIVER TRAINING CERTIFICATE</p> <p style="text-align: center;">**</p> <p style="text-align: center;">1. (CERTIFICATE No.)* 2. (SURNAME)* 3. (OTHER NAME(S))* 4. (DATE OF BIRTH dd/mm/yyyy)* 5. (NATIONALITY)* 6. (DRIVER SIGNATURE)* 7. (ISSUING BODY)* 8. VALID TO: (dd/mm/yyyy)*</p> <p style="text-align: center;">(Insert driver photograph)*</p>				
Back	<p style="text-align: center;">VALID FOR CLASS(ES) OR UN Nos.:</p> <table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">TANKS</td> <td style="text-align: center;">OTHER THAN TANKS</td> </tr> <tr> <td style="text-align: center;">9. (Enter Class or UN Number(s))*</td> <td style="text-align: center;">10. (Enter Class or UN Number(s))*</td> </tr> </table>	TANKS	OTHER THAN TANKS	9. (Enter Class or UN Number(s))*	10. (Enter Class or UN Number(s))*
TANKS	OTHER THAN TANKS				
9. (Enter Class or UN Number(s))*	10. (Enter Class or UN Number(s))*				

* Replace the text with appropriate data.

** Distinguishing sign used on vehicles in international traffic (for Parties to the 1968 Convention on Road Traffic or the 1949 Convention on Road Traffic, as notified to the Secretary General of the United Nations in accordance with respectively article 45(4) or annex 4 of these conventions).

8.2.3 Training of persons other than the drivers holding a certificate in accordance with 8.2.1, involved in the carriage of dangerous goods by road

Persons whose duties concern the carriage of dangerous goods by road shall have received training in the requirements governing the carriage of such goods appropriate to their responsibilities and duties according to Chapter 1.3. This requirement shall apply to individuals such as personnel who are employed by the road vehicle operator or the consignor, personnel who load or unload dangerous goods, personnel in freight forwarding or shipping agencies and drivers of vehicles other than drivers holding a certificate in accordance with 8.2.1, involved in the carriage of dangerous goods by road.

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CHAPTER 8.3

MISCELLANEOUS REQUIREMENTS TO BE COMPLIED WITH BY THE VEHICLE CREW

8.3.1 Passengers

Apart from members of the vehicle crew, no passengers may be carried in transport units carrying dangerous goods.

8.3.2 Use of fire-fighting appliances

Members of the vehicle crew shall know how to use the fire-fighting appliances.

8.3.3 Prohibition on opening packages

A driver or a driver's assistant may not open a package containing dangerous goods.

8.3.4 Portable lighting apparatus

The portable lighting apparatus used shall not exhibit any metal surface liable to produce sparks.

8.3.5 Prohibition on smoking

Smoking shall be prohibited during handling operations in the vicinity of vehicles and inside the vehicles.

8.3.6 Running the engine during loading or unloading

Except where the engine has to be used to drive the pumps or other appliances for loading or unloading the vehicle and the laws of the country in which the vehicle is operating permit such use, the engine shall be shut off during loading and unloading operations.

8.3.7 Use of the parking brakes and wheel chocks

No vehicles carrying dangerous goods may be parked without the parking brakes being applied. Trailers without braking devices shall be restrained from moving by applying at least one wheel chock as described in 8.1.5.2.

8.3.8 Use of cables

In the case of a transport unit equipped with an anti-lock braking system, consisting of a motor vehicle and an O₃ or O₄ trailer, the connections referred to in paragraph 9.2.2.6.3 shall be connecting the towing vehicle and the trailer at all times during carriage.

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CHAPTER 8.4

REQUIREMENTS CONCERNING THE SUPERVISION OF VEHICLES

8.4.1 Vehicles carrying dangerous goods in the quantities shown in special provisions S1 (6) and S14 to S24 of Chapter 8.5 for a given substance according to Column (19) of Table A of Chapter 3.2 shall be supervised or alternatively may be parked, unsupervised, in a secure depot or secure factory premises. If such facilities are not available, the vehicle, after having been properly secured, may be parked in an isolated position meeting the requirements of (a), (b) or (c) below:

- (a) A vehicle park supervised by an attendant who has been notified of the nature of the load and the whereabouts of the driver;
- (b) A public or private vehicle park where the vehicle is not likely to suffer damage from other vehicles; or
- (c) A suitable open space separated from the public highway and from dwellings, where the public does not normally pass or assemble.

The parking facilities permitted in (b) shall be used only if those described in (a) are not available, and those described in (c) may be used only if facilities described in (a) and (b) are not available.

8.4.2 Loaded MEMUs shall be supervised or alternatively may be parked, unsupervised, in a secure depot or secure factory premises. Empty uncleaned MEMUs are exempted from this requirement.

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CHAPTER 8.5

ADDITIONAL REQUIREMENTS RELATING TO PARTICULAR CLASSES OR SUBSTANCES

In addition to the requirements of Chapters 8.1 to 8.4, when reference is made to them in Column (19) of Table A of Chapter 3.2, the following requirements shall apply to the carriage of the substances or articles concerned. In the event of conflict with the requirements of Chapters 8.1 to 8.4, the requirements of this Chapter shall take precedence.

S1: Requirements concerning the carriage of explosive substances and articles (Class 1)

(1) *Special training of drivers*

If, according to other regulations applicable in the country of a Contracting Party, a driver has followed equivalent training under a different regime or for a different purpose, covering the subjects defined in 8.2.2.3.4, the specialization training course may be totally or partially dispensed with.

(2) *Approved official*

If the national regulations so provide, the competent authority of a country contracting party to ADR may require an approved official to be carried in the vehicle at the carrier's expense.

(3) *Prohibition of smoking, fire and naked flame*

Smoking, the use of fire or of naked flames shall be prohibited on vehicles carrying substances and articles of Class 1, in their vicinity and during the loading and unloading of these substances and articles.

(4) *Places of loading and unloading*

(a) Loading or unloading of substances and articles of Class 1 shall not take place in a public place in a built-up area without special permission from the competent authorities;

(b) Loading or unloading of substances and articles of Class 1 in a public space elsewhere than in a built-up area without prior notice thereof having been given to the competent authorities shall be prohibited, unless operations are urgently necessary for reasons of safety;

(c) If, for any reason, handling operations have to be carried out in a public place, then substances and articles of different kinds shall be separated according to the labels;

(d) When vehicles carrying substances and articles of Class 1 are obliged to stop for loading or unloading operations in a public place, a distance of at least 50 m shall be maintained between the stationary vehicles.

(5) *Convoys*

(a) When vehicles carrying substances and articles of Class 1 travel in convoy, a distance of not less than 50 m shall be maintained between each transport unit and the next;

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- (b) The competent authority may lay down rules for the order or composition of convoys.

(6) *Supervision of vehicles*

The requirements of Chapter 8.4 shall be applicable only when substances and articles of Class 1 having a total net mass of explosive substance above the limits set below are carried in a vehicle:

Division 1.1:	0 kg
Division 1.2:	0 kg
Division 1.3, compatibility group C:	0 kg
Division 1.3, other than compatibility group C:	50 kg
Division 1.4, other than those listed below:	50 kg
Division 1.5:	0 kg
Division 1.6:	50 kg
Substances and articles of Division 1.4 belonging to UN numbers 0104, 0237, 0255, 0267, 0289, 0361, 0365, 0366, 0440, 0441, 0455, 0456 and 0500:	0 kg

For mixed loads the lowest limit applicable to any of the substances or articles carried shall be used for the load as a whole.

In addition, these substances and articles shall be supervised at all times in order to prevent any malicious act and to alert the driver and the competent authorities in the event of loss or fire.

Empty uncleaned packagings are exempted.

(7) *Locking of vehicles*

Doors and rigid covers in the load compartments of EX/II vehicles and all openings in the load compartments of EX/III vehicles carrying substances and articles of Class 1 shall be locked during transport, except for the periods of loading and unloading.

S2: Additional requirements concerning the carriage of flammable liquids or gases

(1) *Portable lighting apparatus*

The load compartment of closed vehicles carrying liquids having a flash-point of not more than 60 °C or flammable substances or articles of Class 2, shall not be entered by persons carrying portable lighting apparatus other than those so designed and constructed that they cannot ignite any flammable vapours or gases which may have penetrated into the interior of the vehicle.

(2) *Operation of combustion heaters during loading or unloading*

The operation of combustion heaters of vehicles of type FL (see Part 9) is forbidden during loading and unloading and at loading sites.

(3) *Precautions against electrostatic charges*

In the case of vehicles of type FL (see Part 9), a good electrical connection from the vehicle chassis to earth shall be established before tanks are filled or emptied. In addition, the rate of filling shall be limited.

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S3: Special provisions concerning the carriage of infectious substances

The requirements of the table columns (2), (3) and (5) in 8.1.4.1 and 8.3.4 shall not apply.

S4: Additional requirements concerning carriage under controlled temperatures

Maintenance of the prescribed temperature is essential for safe carriage. In general, there shall be:

- thorough inspection of the transport unit prior to loading;
- instructions to the carrier about the operation of the refrigeration system, including a list of the suppliers of coolant available en route;
- procedures to be followed in the event of loss of control;
- regular monitoring of operating temperatures; and
- availability of a back-up refrigeration system or spare parts.

The temperature of the air space within the transport unit shall be measured by two independent sensors and the output shall be so recorded that temperature changes are readily detectable.

The temperature shall be checked every four to six hours and logged.

If the control temperature is exceeded during carriage, an alert procedure shall be initiated involving any necessary repairs to the refrigeration equipment or an increase in the cooling capacity (e.g. by adding liquid or solid coolant). There shall also be frequent checking of the temperature and preparations for implementation of the emergency procedures. If the emergency temperature (see also 2.2.41.1.17 and 2.2.52.1.15 to 2.2.52.1.18) is reached, the emergency procedures shall be set in operation.

NOTE: This provision S4 does not apply to substances referred to in 3.1.2.6 when substances are stabilized by the addition of chemical inhibitors such that the SADT is greater than 50 °C. In this latter case, temperature control may be required under conditions of carriage where the temperature may exceed 55 °C.

S5: Special provisions common to the carriage of radioactive material of Class 7 in excepted packages (UN Nos. 2908, 2909, 2910 and 2911) only

The requirements of the instructions in writing of 8.1.2.1 (b) and of 8.2.1, 8.3.1 and 8.3.4 shall not apply.

S6: Special provisions common to the carriage of radioactive material of Class 7 other than in excepted packages

The provisions of 8.3.1 shall not apply to vehicles carrying only packages, overpacks or containers bearing category I-WHITE labels.

The provisions of 8.3.4 shall not apply provided there is no subsidiary risk.

Other additional requirements or special provisions

S7: (Deleted)

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- S8:** When a transport unit is loaded with more than 2 000 kg of these substances, stops for service requirements shall as far as possible not be made near inhabited places or frequented places. A longer stop near such places is permissible only with the consent of the competent authorities.
- S9:** During the carriage of these substances, stops for service requirements shall as far as possible not be made near inhabited places or frequented places. A longer stop near such places is permissible only with the consent of the competent authorities.
- S10:** During the period April to October, when a vehicle is stationary, the packages shall, if the legislation of the country in which the vehicle is halted so requires, be effectively protected against the action of the sun, e.g. by means of sheets placed not less than 20 cm above the load.
- S11:** If, according to other regulations applicable in the country of a Contracting Party, a driver has followed equivalent training under a different regime or for a different purpose covering the subjects defined in 8.2.2.3.5, the specialization training course may be totally or partially dispensed with.
- S12:** If the total number of packages containing radioactive material carried does not exceed 10, and the sum of the transport indices does not exceed 3, the requirement in 8.2.1.4 concerning specialization training course for drivers of vehicles carrying radioactive material need not be applied. However, drivers shall then receive appropriate training, commensurate with and appropriate to their duties, which provides them with an awareness of the radiation hazards involved in the carriage of radioactive material. Such awareness training shall be confirmed by a certificate provided by their employer.
- S13:** When a consignment cannot be delivered, it shall be placed in a safe place; the competent authority should be informed as soon as possible and requested for instructions on how to proceed.
- S14:** The provisions of Chapter 8.4 concerning the supervision of vehicles shall apply for vehicles carrying any amount of these substances.
- S15:** The provisions of Chapter 8.4 concerning the supervision of vehicles shall apply for vehicles carrying any amount of these substances. However, the provisions of Chapter 8.4 need not be applied when the loaded compartment is locked or the packages carried are otherwise protected against any illicit unloading.
- S16:** The provisions of Chapter 8.4 concerning the supervision of vehicles shall apply when the total mass of these substances in the vehicle exceeds 500 kg.
- In addition, vehicles carrying more than 500 kg of these substances shall be subject at all times to supervision to prevent any malicious act and to alert the driver and competent authorities in the event of loss or fire.
- S17:** The provisions of Chapter 8.4 concerning the supervision of vehicles shall apply when the total mass of these substances in the vehicle exceeds 1 000 kg.
- S18:** The provisions of Chapter 8.4 concerning the supervision of vehicles shall apply when the total mass of such substances in the vehicle exceeds 2 000 kg.
- S19:** The provisions of Chapter 8.4 concerning the supervision of vehicles shall apply when the total mass of such substances in the vehicle exceeds 5 000 kg.

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- S20:** The provisions of Chapter 8.4 concerning the supervision of vehicles shall apply when the total mass or volume of these substances in the vehicle exceeds 10 000 kg as packaged goods or 3 000 litres in tanks.
- S21:** The provisions of Chapter 8.4 concerning the supervision of vehicles shall apply to all material, in whatever mass. In addition, these goods shall be subject at all times to supervision to prevent any malicious act and to alert the driver and the competent authorities in the event of loss or fire. However, the provisions of Chapter 8.4 need not be applied where:
- (a) The loaded compartment is locked or the packages carried are otherwise protected against illicit unloading; and
 - (b) The dose rate does not exceed 5 μ Sv/h at any accessible point on the outer surface of the vehicle.
- S22:** The provisions of Chapter 8.4 concerning the supervision of vehicles shall apply when the total mass or volume of these substances in the vehicle exceeds 5 000 kg as packaged goods or 3 000 litres in tanks.
- S23:** The provisions of Chapter 8.4 concerning the supervision of vehicles shall apply when this substance is carried in bulk or in tanks and when the total mass or volume in the vehicle exceeds 3 000 kg or 3 000 litres, as applicable.
- S24:** The provisions of Chapter 8.4 concerning the supervision of vehicles shall apply when the total mass of these substances in the vehicle exceeds 100 kg.

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CHAPTER 8.6**ROAD TUNNEL RESTRICTIONS FOR THE PASSAGE OF VEHICLES
CARRYING DANGEROUS GOODS****8.6.1 General provisions**

The provisions of this Chapter apply when the passage of vehicles through road tunnels is restricted in accordance with 1.9.5.

8.6.2 Road signs or signals governing the passage of vehicles carrying dangerous goods

The tunnel category, assigned in accordance with 1.9.5.1 by the competent authority to a given road tunnel for the purpose of restricting the passage of transport units carrying dangerous goods, shall be indicated as follows by means of road signs and signals:

Sign and signal	Tunnel category
No sign	Tunnel category A
Sign with an additional panel bearing a letter B	Tunnel category B
Sign with an additional panel bearing a letter C	Tunnel category C
Sign with an additional panel bearing a letter D	Tunnel category D
Sign with an additional panel bearing a letter E	Tunnel category E

8.6.3 Tunnel restriction codes

8.6.3.1 The restrictions for the transport of specific dangerous goods through tunnels are based on the tunnel restriction code of these goods, indicated in Column (15) of Table A of Chapter 3.2. The tunnel restriction codes are put between brackets at the bottom of the cell. When '(—)' is indicated instead of one of the tunnel restriction codes, the dangerous goods are not subject to any tunnel restriction; for the dangerous goods assigned to UN Nos. 2919 and 3331, restrictions to the passage through tunnels may, however, be part of the special arrangement approved by the competent authority(ies) on the basis of 1.7.4.2.

8.6.3.2 When a transport unit contains dangerous goods to which different tunnel restriction codes have been assigned, the most restrictive of these tunnel restriction codes shall be assigned to the whole load.

8.6.3.3 Dangerous goods carried in accordance with 1.1.3 are not subject to the tunnel restrictions and shall not be taken into account when determining the tunnel restriction code to be assigned to the whole load of a transport unit, except if the transport unit is required to be marked in accordance with 3.4.13 subject to 3.4.14¹

8.6.4 Restrictions for the passage of transport units carrying dangerous goods through tunnels

The restrictions for passage through tunnels shall apply:

¹ or in accordance with 3.4.10 subject to 3.4.11 of ADR as applicable until 31 December 2010 if the transitional measures of 1.6.1.20 are applied.

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- to transport units for which marking is required by 3.4.13 subject to 3.4.14¹, through tunnels of category E; and
- to transport units for which an orange-coloured plate marking is required according to 5.3.2, in accordance with the table below once the tunnel restriction code to be assigned to the whole load of the transport unit has been determined.

Tunnel restriction code of the whole load	Restriction
B	Passage forbidden through tunnels of category B, C, D and E
B1000C	Carriage where the total net explosive mass per transport unit <ul style="list-style-type: none"> - exceeds 1000 kg: Passage forbidden through tunnels of category B, C, D and E; - does not exceed 1000 kg: Passage forbidden through tunnels of category C, D and E
B/D	Tank carriage: Passage forbidden through tunnels of category B, C, D and E; Other carriage: Passage forbidden through tunnels of category D and E
B/E	Tank carriage: Passage forbidden through tunnels of category B, C, D and E; Other carriage: Passage forbidden through tunnels of category E
C	Passage forbidden through tunnels of category C, D and E
C5000D	Carriage where the total net explosive mass per transport unit <ul style="list-style-type: none"> - exceeds 5000 kg: Passage forbidden through tunnels of category C, D and E; - does not exceed 5000 kg: Passage forbidden through tunnels of category D and E
C/D	Tank carriage: Passage forbidden through tunnels of category C, D and E; Other carriage: Passage forbidden through tunnels of category D and E
C/E	Tank carriage: Passage forbidden through tunnels of category C, D and E; Other carriage: Passage forbidden through tunnels of category E
D	Passage forbidden through tunnels of category D and E
D/E	Bulk or tank carriage: Passage forbidden through tunnels of category D and E; Other carriage: Passage forbidden through tunnels of category E
E	Passage forbidden through tunnels of category E
-	Passage allowed through all tunnels (For UN Nos. 2919 and 3331, see also 8.6.3.1).

NOTE 1: For example, the passage of a transport unit carrying UN 0161, powder, smokeless, classification code 1.3C, tunnel restriction code C5000D, in a quantity representing a total net explosive mass of 3000 kg is forbidden in tunnels of categories D and E.

NOTE 2: Dangerous goods packed in limited quantities carried in containers or transport units marked in accordance with the IMDG Code are not subject to the restrictions for passage through tunnels of category E when the total gross mass of the packages containing dangerous goods packed in limited quantities does not exceed 8 tonnes per transport unit.

¹ or in accordance with 3.4.10 subject to 3.4.11 of ADR as applicable until 31 December 2010 if the transitional measures of 1.6.1.20 are applied.

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PART 9

Requirements concerning the construction and approval of vehicles

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CHAPTER 9.1

SCOPE, DEFINITIONS AND REQUIREMENTS FOR THE APPROVAL OF VEHICLES

9.1.1 Scope and definitions

9.1.1.1 *Scope*

The requirements of Part 9 shall apply to vehicles of categories N and O, as defined in Annex 7 of the Consolidated Resolution on the Construction of Vehicles (R.E.3)¹, intended for the carriage of dangerous goods.

These requirements refer to vehicles, as regards their construction, type approval, ADR approval and annual technical inspection.

9.1.1.2 *Definitions*

For the purposes of Part 9:

"*Vehicle*" means any vehicle, whether complete, incomplete or completed, intended for the carriage of dangerous goods by road;

"*EX/II vehicle*" or "*EX/III vehicle*" means a vehicle intended for the carriage of explosive substances and articles (Class 1);

"*FL vehicle*" means:

- (a) A vehicle intended for the carriage of liquids having a flash-point of not more than 60°C (with the exception of diesel fuel complying with standard EN 590:2004, gas oil, and heating oil (light) - UN No. 1202 - with a flash-point as specified in standard EN 590:2004) in fixed tanks or demountable tanks with a capacity exceeding 1 m³ or in tank-containers or portable tanks with an individual capacity exceeding 3 m³; or
- (b) A vehicle intended for the carriage of flammable gases in fixed tanks or demountable tanks with a capacity exceeding 1 m³ or in tank-containers, portable tanks or MEGCs with an individual capacity exceeding 3 m³; or
- (c) A battery-vehicle with a total capacity exceeding 1 m³ intended for the carriage of flammable gases;

"*OX vehicle*" means a vehicle intended for the carriage of hydrogen peroxide, stabilized or hydrogen peroxide, aqueous solution stabilized with more than 60% hydrogen peroxide (Class 5.1, UN No. 2015) in fixed tanks or demountable tanks with a capacity exceeding 1 m³ or in tank-containers or portable tanks with an individual capacity exceeding 3 m³;

"*AT vehicle*" means:

- (a) A vehicle, other than EX/III, FL or OX vehicle or than a MEMU, intended for the carriage of dangerous goods in fixed tanks or demountable tanks with a capacity exceeding 1 m³ or in tank-containers, portable tanks or MEGCs with an individual capacity exceeding 3 m³; or

¹ Document of the UNECE, TRANS/WP.29/78/Rev.1, as amended.

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(b) A battery-vehicle with a total capacity exceeding 1 m³ other than a FL vehicle;

"MEMU" means a vehicle meeting the definition of mobile explosives manufacturing unit in 1.2.1.

"Complete vehicle" means any vehicle which does not need any further completion (e.g. one stage built vans, lorries, tractors, trailers);

"Incomplete vehicle" means any vehicle which still needs completion in at least one further stage (e.g. chassis-cab, trailer chassis);

"Completed vehicle" means any vehicle which is the result of a multi-stage process (e.g. chassis or chassis-cab fitted with a bodywork);

"Type-approved vehicle" means any vehicle which has been approved in accordance with ECE Regulation No. 105² or Directive 98/91/EC³;

"ADR approval" means certification by a competent authority of a Contracting Party that a single vehicle intended for the carriage of dangerous goods satisfies the relevant technical requirements of this Part as an EX/II, EX/III, FL, OX, or AT vehicle or as a MEMU.

9.1.2 Approval of EX/II, EX/III, FL, OX and AT vehicles and MEMUs

NOTE: No special certificates of approval shall be required for vehicles other than EX/II, EX/III, FL, OX and AT vehicles and MEMUs, apart from those required by the general safety regulations normally applicable to vehicles in the country of origin.

9.1.2.1 General

EX/II, EX/III, FL, OX and AT vehicles and MEMUs shall comply with the relevant requirements of this Part.

Every complete or completed vehicle shall be subjected to a first inspection by the competent authority in accordance with the administrative requirements of this Chapter to verify conformity with the relevant technical requirements of Chapters 9.2 to 9.8.

The competent authority may waive the first inspection for a tractor for a semi trailer type-approved in accordance with 9.1.2.2 for which the manufacturer, his duly accredited representative or a body recognised by the competent authority has issued a declaration of conformity with the requirements of Chapter 9.2.

The conformity of the vehicle shall be certified by the issue of a certificate of approval in accordance with 9.1.3.

When vehicles are required to be fitted with an endurance braking system, the manufacturer of the vehicle or his duly accredited representative shall issue a declaration of conformity with the relevant prescriptions of Annex 5 of ECE Regulation No. 13⁴. This declaration shall be presented at the first technical inspection.

² ECE Regulation No. 105 (Uniform provisions concerning the approval of vehicles intended for the carriage of dangerous goods with regard to their specific constructional features).

³ Directive 98/91/EC of the European Parliament and of the Council of 14 December 1998 relating to motor vehicles and their trailers intended for the transport of dangerous goods by road and amending Directive 70/156/EEC relating to the type approval of motor vehicles and their trailers (Official Journal of the European Communities No. L 011 of 16.01.1999, p. 0025 – 0036).

⁴ ECE Regulation No. 13 (Uniform provisions concerning the approval of vehicles of categories M, N and O with regards to braking).

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9.1.2.2 *Requirements for type-approved vehicles*

At the request of the vehicle manufacturer or his duly accredited representative, vehicles subject to ADR approval according to 9.1.2.1 may be type-approved by a competent authority. The relevant technical requirements of Chapter 9.2 shall be considered to be fulfilled if a type approval certificate has been issued by a competent authority in accordance with ECE Regulation No. 105² or Directive 98/91/EC³ provided that the technical requirements of the said Regulation or the said Directive correspond to those of Chapter 9.2 of this Part and provided that no modification of the vehicle alters its validity. In the case of MEMUs, the type approval mark affixed in accordance with ECE Regulation No. 105 may identify the vehicle as either MEMU or EX/III. MEMUs need only be identified as such on the certificate of approval issued in accordance with 9.1.3.

This type approval, granted by one Contracting Party, shall be accepted by the other Contracting Parties as ensuring the conformity of the vehicle when the single vehicle is submitted for inspection for ADR approval.

At the inspection for ADR approval, only those parts of the type-approved incomplete vehicle which have been added or modified in the process of completion shall be inspected for compliance with the applicable requirements of Chapter 9.2.

9.1.2.3 *Annual technical inspection*

EX/II, EX/III, FL, OX and AT vehicles and MEMUs shall be subject to an annual technical inspection in their country of registration to make sure that they conform to the relevant requirements of this Part, and to the general safety regulations (concerning brakes, lighting, etc.) in force in their country of registration.

The conformity of the vehicle shall be certified either by the extension of validity of the certificate of approval or by the issue of a new certificate of approval in accordance with 9.1.3.

9.1.3 **Certificate of approval**

9.1.3.1 Conformity of EX/II, EX/III, FL, OX and AT vehicles and MEMUs with the requirements of this Part is subject to a certificate of approval (certificate of ADR approval) issued by the competent authority of the country of registration for each vehicle whose inspection yields satisfactory results or has resulted in the issue of a declaration of conformity with the requirements of Chapter 9.2 in accordance with 9.1.2.1.

9.1.3.2 A certificate of approval issued by the competent authority of one Contracting Party for a vehicle registered in the territory of that Contracting Party shall be accepted, so long as its validity continues, by the competent authorities of the other Contracting Parties.

9.1.3.3 The certificate of approval shall have the same layout as the model shown in 9.1.3.5. Its dimensions shall be 210 mm × 297 mm (format A4). Both front and back may be used. The colour shall be white, with a pink diagonal stripe.

² ECE Regulation No 105 (Uniform provisions concerning the approval of vehicles intended for the carriage of dangerous goods with regard to their specific construction features).

³ Directive 98/91/EC of the European Parliament and of the Council of 14 December 1998 relating to motor vehicles and their trailers intended for the transport of dangerous goods by road and amending Directive 70/156/EEC relating to the type approval of motor vehicles and their trailers (Official Journal of the European Communities No L011 of 16.01.1999, p. 0025-0036).

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It shall be drawn up in the language or one of the languages of the country issuing it. If that language is not English, French or German, the title of the certificate of approval and any remarks under No. 11 shall also be drawn up in English, French or German.

The certificate of approval for a vacuum-operated waste tank-vehicle shall bear the following remark: "vacuum-operated waste tank-vehicle".

9.1.3.4

The validity of a certificate of approval shall expire not later than one year after the date of the technical inspection of the vehicle preceding the issue of the certificate. The next approval term shall, however, be related to the last nominal expiry date, if the technical inspection is performed within one month before or after that date.

However, in the case of tanks subject to compulsory periodic inspection this provision shall not mean that tightness (leakproofness) tests, hydraulic pressure tests or internal inspections of tanks have to be carried out at intervals shorter than those laid down in Chapters 6.8 and 6.9.

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9.1.3.5 Model for certificate of approval for vehicles carrying certain dangerous goods

CERTIFICATE OF APPROVAL FOR VEHICLES CARRYING CERTAIN DANGEROUS GOODS			
This certificate testifies that the vehicle specified below fulfils the conditions prescribed by the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).			
1. Certificate No.:	2. Vehicle manufacturer:	3. Vehicle Identification No.:	4. Registration number (if any):
5. Name and business address of carrier, operator or owner:			
6. Description of vehicle: ¹			
7. Vehicle designation(s) according to 9.1.1.2 of ADR: ²			
EX/II	EX/III	FL	OX AT MEMU
8. Endurance braking system: ³			
<input type="checkbox"/> Not applicable <input type="checkbox"/> The effectiveness according to 9.2.3.1.2 of ADR is sufficient for a total mass of the transport unit of ___ t ⁴			
9. Description of the fixed tank(s)/battery-vehicle (if any):			
9.1 Manufacturer of the tank:			
9.2 Approval number of the tank/battery-vehicle:			
9.3 Tank manufacturer's serial number/Identification of elements of battery-vehicle:			
9.4 Year of manufacture:			
9.5 Tank code according to 4.3.3.1 or 4.3.4.1 of ADR:			
9.6 Special provisions TC and TE according to 6.8.4 of ADR (if applicable) ⁶ :			
10. Dangerous goods authorised for carriage:			
The vehicle fulfils the conditions required for the carriage of dangerous goods assigned to the vehicle designation(s) in No. 7.			
10.1 In the case of an EX/II <input type="checkbox"/> goods of Class 1 including compatibility group J or EX/III vehicle ³ <input type="checkbox"/> goods of Class 1 excluding compatibility group J			
10.2 In the case of a tank-vehicle/battery-vehicle ³			
<input type="checkbox"/> only the substances permitted under the tank code and any special provisions specified in No. 9 may be carried ⁵ or <input type="checkbox"/> only the following substances (Class, UN number, and if necessary packing group and proper shipping name) may be carried:			
Only substances which are not liable to react dangerously with the materials of the shell, gaskets, equipment and protective linings (if applicable) may be carried.			
11. Remarks:			
12. Valid until:		Stamp of issuing service	
		Place, Date, Signature	

¹ According to the definitions for power-driven vehicles and for trailers of categories N and O as defined in Annex 7 of the Consolidated Resolution on the Construction of Vehicles (R.E.3) or in Directive 97/27/EC.

² Strike out what is not appropriate.

³ Mark the appropriate.

⁴ Enter appropriate value. A value of 44t will not limit the "registration / in-service maximum permissible mass" indicated in the registration document(s).

⁵ Substances assigned to the tank code specified in No. 9 or to another tank code permitted under the hierarchy in 4.3.3.1.2 or 4.3.4.1.2, taking account of the special provision(s), if any.

⁶ Not required when the authorized substances are listed in No. 10.2.

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13. Extensions of validity	
Validity extended until	Stamp of issuing service, place, date, signature:

NOTE: This certificate shall be returned to the issuing service when the vehicle is taken out of service; if the vehicle is transferred to another carrier, operator or owner, as specified in No. 5; on expiry of the validity of the certificate; and if there is a material change in one or more essential characteristics of the vehicle.

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CHAPTER 9.2

REQUIREMENTS CONCERNING THE CONSTRUCTION OF VEHICLES

9.2.1 Compliance with the requirements of this Chapter

9.2.1.1 EX/II, EX/III, FL, OX and AT vehicles shall comply with the requirements of this Chapter, according to the table below.

For vehicles other than of EX/II, EX/III, FL, OX and AT:

- the requirements of 9.2.3.1.1 (Braking equipment in accordance with ECE Regulation No. 13 or Directive 71/320/EEC) are applicable to all vehicles first registered (or which entered into service if the registration is not mandatory) after 30 June 1997;
- the requirements of 9.2.5 (Speed limitation device in accordance with ECE Regulation No. 89 or Directive 92/24/EEC) are applicable to all motor vehicles with a maximum mass exceeding 12 tonnes first registered after 31 December 1987 and all motor vehicles with a maximum mass exceeding 3.5 tonnes but not more than 12 tonnes first registered after 31 December 2007.

TECHNICAL SPECIFICATIONS		VEHICLES					COMMENTS
		EX/II	EX/III	AT	FL	OX	
9.2.2	ELECTRICAL EQUIPMENT						
9.2.2.2	Wiring		X	X	X	X	
9.2.2.3	Battery master switch						
9.2.2.3.1		X ^a			X ^a		^a The last sentence of 9.2.2.3.1 is applicable to vehicles first registered (or which entered into service if registration is not mandatory) as from 1 July 2005.
9.2.2.3.2		X			X		
9.2.2.3.3					X		
9.2.2.3.4		X			X		
9.2.2.4	Batteries	X			X		
9.2.2.5	Permanently energized circuits						
9.2.2.5.1					X		
9.2.2.5.2		X					
9.2.2.6	Electrical installation at rear of cab	X			X		
9.2.3	BRAKING EQUIPMENT						
9.2.3.1	General provisions	X			X	X	
	Anti-lock braking system		X ^b	X ^b	X ^b	X ^b	^b Applicable to motor vehicles (tractors and rigid vehicles) with a maximum mass exceeding 16 tonnes and motor vehicles authorized to tow trailers (i.e. full-trailers, semi-trailers and centre axle-trailers) with a maximum mass exceeding 10 tonnes. Motor vehicles shall be equipped with a category 1 anti-lock braking system. ^c Applicable to trailers (i.e. full-trailers, semi-trailers and centre axle-trailers) with a maximum mass exceeding 10 tonnes. Trailers shall be equipped with a category A anti-lock braking system.
	Endurance braking system		X ^c	X ^c	X ^c	X ^c	^c Applicable to motor vehicles with a maximum mass exceeding 16 tonnes or authorized to tow a trailer with a maximum mass exceeding 10 tonnes. The endurance braking system shall be of type IIA.

TECHNICAL SPECIFICATIONS	VEHICLES					COMMENTS
	EX/II	EX/III	AT	FL	OX	
9.2.4 PREVENTION OF FIRE RISKS						
9.2.4.2 Vehicle cab					X	
9.2.4.3 Fuel tanks	X	X		X	X	
9.2.4.4 Engine	X	X		X	X	
9.2.4.5 Exhaust system	X	X		X		
9.2.4.6 Vehicle endurance braking		X	X	X	X	
9.2.4.7 Combustion heaters						
9.2.4.7.1	X ^d	X ^d	X ^d	X ^d	X ^d	^d Applicable to motor vehicles equipped after 30 June 1999. Mandatory compliance by 1 January 2010 for vehicles equipped before 1 July 1999. If the date of equipping is not available the date of first registration of the vehicle shall be used instead.
9.2.4.7.2						
9.2.4.7.5				X ^d		^d Applicable to motor vehicles equipped after 30 June 1999. Mandatory compliance by 1 January 2010 for vehicles equipped before 1 July 1999. If the date of equipping is not available the date of first registration of the vehicle shall be used instead.
9.2.4.7.3						
9.2.4.7.4						
9.2.4.7.6	X	X				
9.2.5 SPEED LIMITATION DEVICE	X ^e	X ^e	X ^e	X ^e	X ^e	^e Applicable to motor vehicles with a maximum mass exceeding 12 tonnes first registered after 31 December 1987, and all motor vehicles with a maximum mass exceeding 3.5 tonnes but not more than 12 tonnes registered after 31 December 2007.
9.2.6 COUPLING DEVICE OF TRAILERS	X	X				

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9.2.1.2 MEMUs shall comply with the requirements of this Chapter applicable to EX/III-vehicles.

9.2.2 Electrical equipment

9.2.2.1 General provisions

The electrical installation as a whole shall meet the provisions of 9.2.2.2 to 9.2.2.6 in accordance with the table of 9.2.1.

9.2.2.2 Wiring

9.2.2.2.1 The size of conductors shall be large enough to avoid overheating. Conductors shall be adequately insulated. All circuits shall be protected by fuses or automatic circuit breakers, except for the following:

- from the battery to the cold start and stopping systems of the engine;
- from the battery to the alternator;
- from the alternator to the fuse or circuit breaker box;
- from the battery to the starter motor;
- from the battery to the power control housing of the endurance braking system (see 9.2.3.1.2), if this system is electrical or electromagnetic;
- from the battery to the electrical lifting mechanism for lifting the bogie axle.

The above unprotected circuits shall be as short as possible.

9.2.2.2.2 Cables shall be securely fastened and positioned in such a way that the conductors are adequately protected against mechanical and thermal stresses.

9.2.2.3 Battery master switch

9.2.2.3.1 A switch for breaking the electrical circuits shall be placed as close to the battery as practicable. If a single pole switch is used it shall be placed in the supply lead and not in the earth lead.

9.2.2.3.2 A control device to facilitate the disconnecting and reconnecting functions of the switch shall be installed in the driver's cab. It shall be readily accessible to the driver and be distinctively marked. It shall be protected against inadvertent operation by either adding a protective cover, by using a dual movement control device or by other suitable means. Additional control devices may be installed provided they are distinctively marked and protected against inadvertent operation. If the control device(s) are electrically operated, the circuits of the control device(s) are subject to the requirements of 9.2.2.5.

9.2.2.3.3 The switch shall have a casing with protection degree IP 65 in accordance with IEC Standard 60529.

9.2.2.3.4 The cable connections on the switch shall have protection degree IP 54. However, this does not apply if these connections are contained in a housing which may be the battery box. In this case it is sufficient to insulate the connections against short circuits, for example with a rubber cap.

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9.2.2.4 *Batteries*

The battery terminals shall be electrically insulated or covered by an insulating battery box cover. If the batteries are not located under the engine bonnet, they shall be fitted in a vented box.

9.2.2.5 *Permanently energized circuits*

9.2.2.5.1 (a) Those parts of the electrical installation including the leads which shall remain energized when the battery master switch is open, shall be suitable for use in hazardous areas. Such equipment shall meet the general requirements of IEC 60079, parts 0 and 14¹ and the additional requirements applicable from IEC 60079, parts 1, 2, 5, 6, 7, 11, 15 or 18²;

(b) For the application of IEC 60079 part 14¹, the following classification shall be used:

Permanently energized electrical equipment including the leads which is not subject to 9.2.2.3 and 9.2.2.4 shall meet the requirements for Zone 1 for electrical equipment in general or meet the requirements for Zone 2 for electrical equipment situated in the driver's cab. The requirements for explosion group IIC, temperature class T6 shall be met.

However, for permanently energized electrical equipment installed in an environment where the temperature caused by non-electrical equipment situated in that environment exceeds the T6 temperature limit, the temperature classification of the permanently energized electrical equipment shall be at least that of the T4 temperature class.

(c) The supply leads for permanently energised equipment shall either comply with the provisions of IEC 60079, part 7 ("Increased safety") and be protected by a fuse or automatic circuit breaker placed as close to the source of power as practicable or, in the case of "intrinsically safe equipment", they shall be protected by a safety barrier placed as close to the source of power as practicable.

9.2.2.5.2 Bypass connections to the battery master switch for electrical equipment which must remain energized when the battery master switch is open shall be protected against overheating by suitable means, such as a fuse, a circuit breaker or a safety barrier (current limiter).

9.2.2.6 *Provisions concerning that part of the electrical installation situated to the rear of the driver's cab*

The whole installation shall be so designed, constructed and protected such that it cannot provoke any ignition or short-circuit under normal conditions of use of vehicles and that these risks can be minimized in the event of an impact or deformation. In particular:

9.2.2.6.1 *Wiring*

The wiring located to the rear of the driver's cab shall be protected against impact, abrasion and chafing during normal vehicle operation. Examples of appropriate protection are given in figures 1, 2, 3 and 4 below. However, the sensor cables of anti-lock braking devices do not need additional protection.

¹ The requirements of IEC 60079 part 14 do not take precedence over the requirement of this Part.

² As an alternative, the general requirements of EN 50014 and the additional requirements of EN 50016, 50017, 50018, 50019, 50020, 50021 or 50028 may be used

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Figure N°1

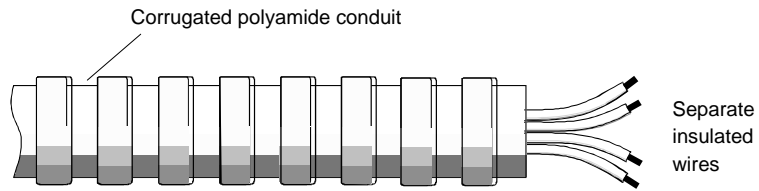


Figure N°2

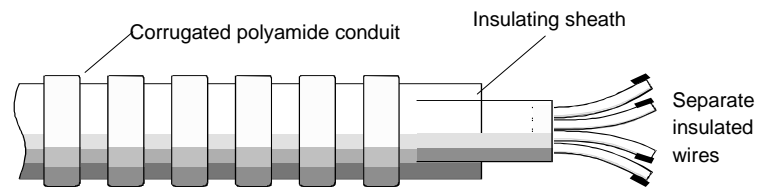


Figure N°3

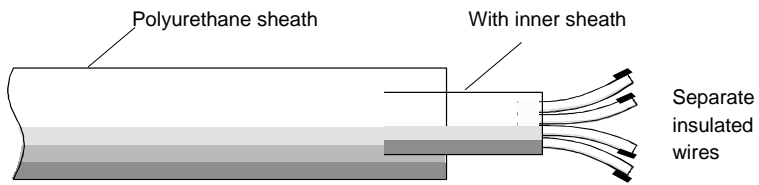
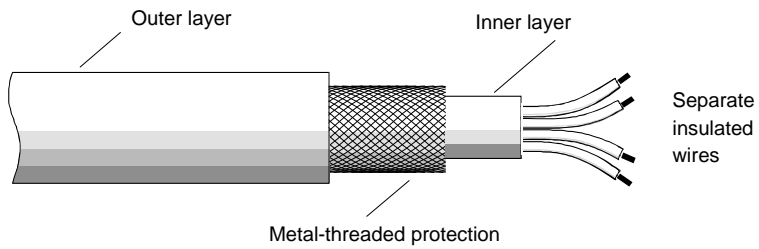


Figure N°4



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9.2.2.6.2 *Lighting*

Lamp bulbs with a screw cap shall not be used.

9.2.2.6.3 *Electrical connections*

Electrical connections between motor vehicles and trailers shall have a protection degree IP54 in accordance with IEC 60529 and be designed to prevent accidental disconnection. Connectors shall be in conformity with ISO 12098:2004³, ISO 7638:2003³ and EN 15207:2006 as appropriate.

9.2.3 **Braking equipment**

9.2.3.1 *General provisions*

9.2.3.1.1 Motor vehicles and trailers intended for use as transport units for dangerous goods shall fulfil all relevant technical requirements of ECE Regulation No.13⁴ or Directive 71/320/EEC⁵, as amended, in accordance with the dates of application specified therein.

9.2.3.1.2 EX/III, FL, OX and AT vehicles shall fulfil the requirements of ECE Regulation No.13⁴, Annex 5.

9.2.3.2 *(Deleted)*

9.2.4 **Prevention of fire risks**

9.2.4.1 *General provisions*

The following technical provisions shall apply in accordance with the table of 9.2.1.

9.2.4.2 *Vehicle cab*

Unless the driver's cab is made of materials which are not readily flammable, a shield made of metal or other suitable material of the same width as the tank shall be fitted at the rear of the cab. Any windows in the rear of the cab or in the shield shall be hermetically closed and made of fire-resistant safety glass with fire-resistant frames. Furthermore, there shall be a clear space of not less than 15 cm between the tank and the cab or the shield.

9.2.4.3 *Fuel tanks*

The fuel tanks for supplying the engine of the vehicle shall meet the following requirements:

- (a) In the event of any leakage, the fuel shall drain to the ground without coming into contact with hot parts of the vehicle or the load;
- (b) Fuel tanks containing petrol shall be equipped with an effective flame trap at the filler opening or with a closure enabling the opening to be kept hermetically sealed.

³ ISO 4009, referred to in this standard, need not be applied.

⁴ ECE Regulation No. 13 (Uniform provisions concerning the approval of vehicles of categories M, N and O with regard to braking).

⁵ Directive 71/320/EEC (originally published in the Official Journal of the European Communities No. L202 of 6.9.1971).

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9.2.4.4 *Engine*

The engine propelling the vehicle shall be so equipped and situated to avoid any danger to the load through heating or ignition. In the case of EX/II and EX/III vehicles the engine shall be of compression-ignition construction.

9.2.4.5 *Exhaust system*

The exhaust system (including the exhaust pipes) shall be so directed or protected to avoid any danger to the load through heating or ignition. Parts of the exhaust system situated directly below the fuel tank (diesel) shall have a clearance of at least 100 mm or be protected by a thermal shield.

9.2.4.6 *Vehicle endurance braking*

Vehicles equipped with endurance braking systems emitting high temperatures placed behind the rear wall of the driver's cab shall be equipped with a thermal shield securely fixed and located between this system and the tank or load so as to avoid any heating, even local, of the tank wall or the load.

In addition, the thermal shield shall protect the braking system against any outflow or leakage, even accidental, of the load. For instance, a protection including a twin-shell shield shall be considered satisfactory.

9.2.4.7 *Combustion heaters*

9.2.4.7.1 Combustion heaters shall comply with the relevant technical requirements of ECE Regulation No. 122⁶, as amended, or of Directive 2001/56/EC⁷, as amended, in accordance with the dates of application specified therein and the provisions of 9.2.4.7.2 to 9.2.4.7.6 applicable according to the table in 9.2.1.

9.2.4.7.2 The combustion heaters and their exhaust gas routing shall be designed, located, protected or covered so as to prevent any unacceptable risk of heating or ignition of the load. This requirement shall be considered as fulfilled if the fuel tank and the exhaust system of the appliance conform to provisions similar to those prescribed for fuel tanks and exhaust systems of vehicles in 9.2.4.3 and 9.2.4.5 respectively.

9.2.4.7.3 The combustion heaters shall be put out of operation by at least the following methods:

- (a) Intentional manual switching off from the driver's cab;
- (b) Stopping of the vehicle engine; in this case the heating device may be restarted manually by the driver;
- (c) Start up of a feed pump on the motor vehicle for the dangerous goods carried.

9.2.4.7.4 Afterrunning is permitted after the combustion heaters have been put out of operation. For the methods of 9.2.4.7.3 (b) and (c) the supply of combustion air shall be interrupted by suitable measures after an afterrunning cycle of not more than 40 seconds. Only heaters shall be used for which proof has been furnished that the heat exchanger is resistant to the reduced afterrunning cycle of 40 seconds for the time of their normal use.

⁶ ECE Regulation No. 122 (Regulation with regard the type approval of a heating system and of a vehicle with regard to its heating system).

⁷ Directive 2001/56/EC of the European Parliament and of the Council of 27 September 2001 relating to heating systems for motor vehicles and their trailers (initially published in the Official Journal of the European Communities No. L292 of 9 November 2001).

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9.2.4.7.5 The combustion heater shall be switched on manually. Programming devices shall be prohibited.

9.2.4.7.6 Combustion heaters with gaseous fuels are not permitted.

9.2.5 Speed limitation device

Motor vehicles (rigid vehicles and tractors for semi-trailers) with a maximum mass exceeding 3.5 tonnes, shall be equipped with a speed limitation device according to the technical requirements of ECE Regulation No. 89⁸, as amended. The device shall be set in such a way that the speed cannot exceed 90 km/h, bearing in mind the technological tolerance of the device.

9.2.6 Coupling devices of trailers

Coupling devices of trailers shall comply with the technical requirements of ECE Regulation No. 55⁹ or Directive 94/20/EC¹⁰, as amended, in accordance with the dates of application specified therein.

⁸ ECE Regulation No. 89: uniform provisions concerning the approval of:

I. Vehicles with regard to limitation of their maximum speed;

II. Vehicles with regard to the installation of a speed limitation device (SLD) of an approved type;

III. Speed limitation devices (SLD).

As an alternative, the corresponding provisions of directive 92/24/EEC of the Council of 31 March 1992 (originally published in the Official Journal of the European Communities No. L 129 of 14.05.1992), as amended, may apply provided that they have been amended in accordance with the latest amended form of ECE Regulation No. 89 applicable at the time of the vehicle approval.

⁹ ECE Regulation No. 55 (Uniform provisions concerning the approval of mechanical coupling components of combinations of vehicles).

¹⁰ Directive 94/20/EC of the European parliament and of the Council of 30 of May 1994 (originally published in the Official Journal of the European Communities No. L 195 of 29.07.1994).

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CHAPTER 9.3

ADDITIONAL REQUIREMENTS CONCERNING COMPLETE OR COMPLETED EX/II OR EX/III VEHICLES INTENDED FOR THE CARRIAGE OF EXPLOSIVE SUBSTANCES AND ARTICLES (CLASS 1) IN PACKAGES

9.3.1 Materials to be used in the construction of vehicle bodies

No materials likely to form dangerous compounds with the explosive substances carried shall be used in the construction of the body.

9.3.2 Combustion heaters

9.3.2.1 Combustion heaters may only be installed on EX/II and EX/III vehicles for heating of the driver's cab or the engine.

9.3.2.2 Combustion heaters shall meet the requirements of 9.2.4.7.1, 9.2.4.7.2, 9.2.4.7.5 and 9.2.4.7.6.

9.3.2.3 The switch of the combustion heater may be installed outside the driver's cab.

It is not necessary to prove that the heat exchanger is resistant to the reduced afterrunning cycle.

9.3.2.4 No combustion heaters or fuel tanks, power sources, combustion air or heating air intakes as well as exhaust tube outlets required for the operation of the combustion heater shall be installed in the load compartment.

9.3.3 EX/II vehicles

The vehicles shall be designed, constructed and equipped so that the explosives are protected from external hazards and the weather. They shall be either closed or sheeted. Sheeting shall be resistant to tearing and be of impermeable material, not readily flammable¹. It shall be tautened so as to cover the loading area on all sides.

All openings in the load compartment of closed vehicles shall have lockable, close-fitting doors or rigid covers. The driver's compartment shall be separated from the load compartment by a continuous wall.

9.3.4 EX/III vehicles

9.3.4.1 The vehicles shall be designed, constructed and equipped so that the explosives are protected from external hazards and the weather. These vehicles shall be closed. The driver's compartment shall be separated from the load compartment by a continuous wall. The loading surface shall be continuous. Load restraint anchorage points may be installed. All joints shall be sealed. All openings shall be capable of being locked. They shall be so constructed and placed as to overlap at the joints.

¹ In the case of flammability, this requirement will be deemed to be met if, in accordance with the procedure specified in ISO standard 3795:1989 'Road vehicles, and tractors and machinery for agriculture and forestry - Determination of burning behaviour of interior materials', samples of the sheeting have a burn rate not exceeding 100 mm/min.

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9.3.4.2 The body shall be made from heat and flame resistant materials with a minimum thickness of 10 mm. Materials classified as Class B-s3-d2 according to standard EN 13501-1: 2002 are deemed to fulfil this requirement.

If the material used for the body is metal, the complete inside of the body shall be covered with materials fulfilling the same requirement.

9.3.5 Engine and load compartment

The engine propelling an EX/II or EX/III vehicle shall be placed forward of the front wall of the load compartment; it may nevertheless be placed under the load compartment, provided this is done in such a way that any excess heat does not constitute a hazard to the load by raising the temperature on the inner surface of the load compartment above 80 °C.

9.3.6 External heat sources and load compartment

The exhaust system of EX/II and EX/III vehicles or others parts of these complete or completed vehicles shall be so constructed and situated that any excess heat shall not constitute a hazard to the load by raising the temperature on the inner surface of the load compartment above 80 °C.

9.3.7 Electrical equipment

9.3.7.1 The rated voltage of the electrical system shall not exceed 24V.

9.3.7.2 Any lighting in the load compartment of EX/II vehicles shall be on the ceiling and covered, i.e. with no exposed wiring or bulb.

In the case of Compatibility Group J, the electrical installation shall be at least IP65 (e.g. flame-proof Eex d). Any electrical equipment accessible from the inside of the load compartment shall be sufficiently protected from mechanical impact from the inside.

9.3.7.3 The electrical installation on EX/III vehicles shall meet the relevant requirements of 9.2.2.2, 9.2.2.3, 9.2.2.4, 9.2.2.5.2 and 9.2.2.6.

The electrical installation in the load compartment shall be dust-protected (at least IP54 or equivalent) or, in the case of Compatibility Group J, at least IP65 (e.g. flame-proof Eex d).

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CHAPTER 9.4

ADDITIONAL REQUIREMENTS CONCERNING THE CONSTRUCTION OF THE BODIES OF COMPLETE OR COMPLETED VEHICLES INTENDED FOR THE CARRIAGE OF DANGEROUS GOODS IN PACKAGES (OTHER THAN EX/II AND EX/III VEHICLES)

- 9.4.1 Combustion heaters shall meet the following requirements:
- (a) The switch may be installed outside the driver's cab;
 - (b) The device may be switched off from outside the load compartment; and
 - (c) It is not necessary to prove that the heat exchanger is resistant to the reduced afterrunning cycle.
- 9.4.2 If the vehicle is intended for the carriage of dangerous goods for which a label conforming to models Nos. 1, 1.4, 1.5, 1.6, 3, 4.1, 4.3, 5.1 or 5.2 is prescribed, no fuel tanks, power sources, combustion air or heating air intakes as well as exhaust tube outlets required for the operation of the combustion heater shall be installed in the load compartment. It shall be ensured that the heating air outlet cannot be blocked by cargo. The temperature to which packages are heated shall not exceed 50° C. Heating devices installed inside the load compartments shall be designed so as to prevent the ignition of an explosive atmosphere under operating conditions.
- 9.4.3 Additional requirements concerning the construction of the bodies of vehicles intended for the carriage of given dangerous goods or specific packagings may be included in Part 7, Chapter 7.2 in accordance with the indications in Column (16) of Table A of Chapter 3.2, for a given substance.

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CHAPTER 9.5

ADDITIONAL REQUIREMENTS CONCERNING THE CONSTRUCTION OF THE BODIES OF COMPLETE OR COMPLETED VEHICLES INTENDED FOR THE CARRIAGE OF DANGEROUS SOLIDS IN BULK

- 9.5.1 Combustion heaters shall meet the following requirements:
- (a) The switch may be installed outside the driver's cab;
 - (b) The device may be switched off from outside the load compartment; and
 - (c) It is not necessary to prove that the heat exchanger is resistant to the reduced afterrunning cycle.
- 9.5.2 If the vehicle is intended for the carriage of dangerous goods for which a label conforming to models Nos. 4.1, 4.3 or 5.1 is prescribed, no fuel tanks, power sources, combustion air or heating air intakes as well as exhaust tube outlets required for the operation of the combustion heater shall be installed in the load compartment. It shall be ensured that the heating air outlet cannot be blocked by cargo. The temperature to which the load is heated shall not exceed 50 °C. Heating devices installed inside the load compartments shall be designed so as to prevent the ignition of an explosive atmosphere under operating conditions.
- 9.5.3 The bodies of vehicles intended for the carriage of dangerous solids in bulk shall meet the requirements of Chapter 6.11 and 7.3, as appropriate, including those of 7.3.2 or 7.3.3 which may be applicable in accordance with the indications in columns (10) or (17) respectively of Table A of Chapter 3.2 for a given substance.

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CHAPTER 9.6

ADDITIONAL REQUIREMENTS CONCERNING COMPLETE OR COMPLETED VEHICLES INTENDED FOR THE CARRIAGE OF TEMPERATURE CONTROLLED SUBSTANCES

- 9.6.1 Insulated, refrigerated and mechanically-refrigerated vehicles intended for the carriage of temperature controlled substances shall conform to the following conditions:
- (a) the vehicle shall be such and so equipped as regards its insulation and means of refrigeration, that the control temperature prescribed in 2.2.41.1.17 and 2.2.52.1.16 and in 2.2.41.4 and 2.2.52.4 for the substance to be carried is not exceeded. The overall heat transfer coefficient shall be not more than $0.4 \text{ W/m}^2\text{K}$;
 - (b) the vehicle shall be so equipped that vapours from the substances or the coolant carried cannot penetrate into the driver's cab;
 - (c) a suitable device shall be provided enabling the temperature prevailing in the loading space to be determined at any time from the cab;
 - (d) the loading space shall be provided with vents or ventilating valves if there is any risk of a dangerous excess pressure arising therein. Care shall be taken where necessary to ensure that refrigeration is not impaired by the vents or ventilating valves;
 - (e) the refrigerant shall not be flammable; and
 - (f) the refrigerating appliance of a mechanically refrigerated vehicle shall be capable of operating independently of the engine used to propel the vehicle.
- 9.6.2 Suitable methods (see V8(3)) to prevent the control temperature from being exceeded are listed in Chapter 7.2 (R1 to R5). Depending on the method used, additional provisions concerning the construction of vehicle bodies may be included in Chapter 7.2.

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CHAPTER 9.7

ADDITIONAL REQUIREMENTS CONCERNING FIXED TANKS (TANK-VEHICLES), BATTERY-VEHICLES AND COMPLETE OR COMPLETED VEHICLES USED FOR THE CARRIAGE OF DANGEROUS GOODS IN DEMOUNTABLE TANKS WITH A CAPACITY GREATER THAN 1 M³ OR IN TANK-CONTAINERS, PORTABLE TANKS OR MEGCs OF A CAPACITY GREATER THAN 3 M³ (EX/III, FL, OX AND AT VEHICLES)

9.7.1 General provisions

- 9.7.1.1 In addition to the vehicle proper, or the units of running gear used in its stead, a tank-vehicle comprises one or more shells, their items of equipment and the fittings for attaching them to the vehicle or to the running-gear units.
- 9.7.1.2 Once the demountable tank has been attached to the carrier vehicle, the entire unit shall meet the requirements prescribed for tank-vehicles.

9.7.2 Requirements concerning tanks

- 9.7.2.1 Fixed tanks or demountable tanks made of metal shall meet the relevant requirements of Chapter 6.8.
- 9.7.2.2 Elements of battery-vehicles and of MEGCs shall meet the relevant requirements of Chapter 6.2 in the case of cylinders, tubes, pressure drums and bundles of cylinders and the requirements of Chapter 6.8 in the case of tanks.
- 9.7.2.3 Tank-containers made of metal shall meet the requirements of Chapter 6.8, portable tanks shall meet the requirements of Chapter 6.7 or, if applicable, those of the IMDG Code (see 1.1.4.2).
- 9.7.2.4 Tanks made of fibre-reinforced plastics material shall meet the requirements of Chapter 6.9.
- 9.7.2.5 Vacuum-operated waste tanks shall meet the requirements of Chapter 6.10.

9.7.3 Fastenings

Fastenings shall be designed to withstand static and dynamic stresses in normal conditions of carriage, and minimum stresses as defined in 6.8.2.1.2, 6.8.2.1.11 to 6.8.2.1.15 and 6.8.2.1.16 in the case of tank-vehicles, battery-vehicles, and vehicles carrying demountable tanks.

9.7.4 Earthing of FL vehicles

Tanks made of metal or of fibre-reinforced plastics material of FL tank-vehicles and battery elements of FL battery-vehicles shall be linked to the chassis by means of at least one good electrical connection. Any metal contact capable of causing electrochemical corrosion shall be avoided.

NOTE: See also 6.9.1.2 and 6.9.2.14.3.

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9.7.5 Stability of tank-vehicles

9.7.5.1 The overall width of the ground-level bearing surface (distance between the outer points of contact with the ground of the right-hand tyre and the left-hand tyre of the same axle) shall be at least equal to 90% of the height of the centre of gravity of the laden tank-vehicle. In an articulated vehicle the mass on the axles of the load-carrying unit of the laden semi-trailer shall not exceed 60% of the nominal total laden mass of the complete articulated vehicle.

9.7.5.2 In addition, tank-vehicles with fixed tanks with a capacity of more than 3 m³ intended for the carriage of dangerous goods in the liquid or molten state tested with a pressure of less than 4 bar, shall comply with the technical requirements of ECE Regulation No. 111¹ for lateral stability, as amended, in accordance with the dates of application specified therein. The requirements are applicable to tank-vehicles which are first registered as from 1 July 2003.

9.7.6 Rear protection of vehicles

A bumper sufficiently resistant to rear impact shall be fitted over the full width of the tank at the rear of the vehicle. There shall be a clearance of at least 100 mm between the rear wall of the tank and the rear of the bumper (this clearance being measured from the rearmost point of the tank wall or from projecting fittings or accessories in contact with the substance being carried). Vehicles with a tilting shell for the carriage of powdery or granular substances and a vacuum-operated waste tank with a tilting shell with rear discharge do not require a bumper if the rear fittings of the shell are provided with a means of protection which protects the shell in the same way as a bumper.

NOTE 1: This provision does not apply to vehicles used for the carriage of dangerous goods in tank-containers, MEGCs or portable tanks.

NOTE 2: For the protection of tanks against damage by lateral impact or overturning, see 6.8.2.1.20 and 6.8.2.1.21 or, for portable tanks, 6.7.2.4.3 and 6.7.2.4.5.

9.7.7 Combustion heaters

9.7.7.1 Combustion heaters shall meet the requirements of 9.2.4.7.1, 9.2.4.7.2, 9.2.4.7.5 and the following:

- (a) The switch may be installed outside the driver's cab;
- (b) The device may be switched off from outside the load compartment; and
- (c) It is not necessary to prove that the heat exchanger is resistant to the reduced afterrunning cycle.

In addition for FL vehicles, they shall meet the requirements of 9.2.4.7.3 and 9.2.4.7.4.

9.7.7.2 If the vehicle is intended for the carriage of dangerous goods for which a label conforming to models Nos. 1.5, 3, 4.1, 4.3, 5.1 or 5.2 is prescribed, no fuel tanks, power sources, combustion air or heating air intakes as well as exhaust tube outlets required for the operation of the combustion heater shall be installed in the load compartment. It shall be ensured that the heating air outlet cannot be blocked by cargo. The temperature to which the load is heated shall not exceed 50 °C. Heating devices installed inside the load compartments shall be designed so as to prevent the ignition of an explosive atmosphere under operating conditions.

¹ ECE Regulation No. 111: Uniform provisions concerning the approval of tank-vehicles of categories N and O with regard to rollover stability.

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9.7.8 Electrical equipment

9.7.8.1 The electrical installation on FL vehicles for which an approval according to 9.1.2 is required shall meet the requirements of 9.2.2.2, 9.2.2.3, 9.2.2.4, 9.2.2.5.1 and 9.2.2.6.

However additions to or modifications of the electrical installations of the vehicle shall meet the requirements for the electrical apparatus of the relevant group and temperature class according to the substances to be carried.

NOTE: For transitional provisions, see also 1.6.5.

9.7.8.2 Electrical equipment on FL vehicles, situated in areas where an explosive atmosphere is, or may be expected to be, present in such quantities as to require special precautions, shall be suitable for use in a hazardous area. Such equipment shall meet the general requirements of IEC 60079 parts 0 and 14 and the additional requirements applicable from IEC 60079 parts 1, 2, 5, 6, 7, 11 or 18². The requirements for the electrical apparatus of the relevant group and temperature class according to the substances to be carried shall be met.

For the application of IEC 60079 part 14², the following classification shall be used:

ZONE 0

Inside tank compartments, fittings for filling and discharge and vapour recovery lines.

ZONE 1

Inside cabinets for equipment used for filling and discharge and within 0.5 m of venting devices and pressure relief safety valves.

9.7.8.3 Permanently energized electrical equipment, including the leads, which is situated outside Zones 0 and 1 shall meet the requirements for Zone 1 for electrical equipment in general or meet the requirements for Zone 2 according to IEC 60079 part 14² for electrical equipment situated in the driver's cab. The requirements for the relevant group of electrical apparatus according to the substances to be carried shall be met.

9.7.9 Additional safety requirements concerning EX/III vehicles

9.7.9.1 EX/III vehicles shall be equipped with automatic fire extinguisher systems for the engine compartment.

9.7.9.2 Protection of the load by metal thermal shields against tyre fire shall be provided.

² As an alternative, the general requirements of EN 50014 and the additional requirements of EN 50015, 50016, 50017, 50018, 50019, 50020 or 50028 may be used.

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CHAPTER 9.8

ADDITIONAL REQUIREMENTS CONCERNING COMPLETE AND COMPLETED MEMUs

9.8.1 General provisions

In addition to the vehicle proper, or the units of running gear used in its stead, a MEMU comprises one or more tanks and bulk containers, their items of equipment and the fittings for attaching them to the vehicle or to the running-gear units.

9.8.2 Requirements concerning tanks and bulk containers

Tanks, bulk containers and special compartments for packages of explosives of MEMUs shall meet the requirements of Chapter 6.12.

9.8.3 Earthing of MEMUs

Tanks, bulk containers and special compartments for packages of explosives made of metal or of fibre-reinforced plastics material shall be linked to the chassis by means of at least one good electrical connection. Any metal contact capable of causing electro-chemical corrosion or reacting with the dangerous goods carried in the tanks and bulk containers shall be avoided.

9.8.4 Stability of MEMUs

The overall width of the ground-level bearing surface (distance between the outer points of contact with the ground of the right-hand tyre and the left-hand tyre of the same axle) shall be at least equal to 90% of the height of the centre of gravity of the laden vehicle. In an articulated vehicle the mass on the axles of the load-carrying unit of the laden semi-trailer shall not exceed 60% of the nominal total laden mass of the complete articulated vehicle.

9.8.5 Rear protection of MEMUs

A bumper sufficiently resistant to rear impact shall be fitted over the full width of the tank at the rear of the vehicle. There shall be a clearance of at least 100 mm between the rear wall of the tank and the rear of the bumper (this clearance being measured from the rearmost point of the tank wall or from protecting fittings or accessories in contact with the substance being carried). Vehicles with a tilting shell with rear discharge do not require a bumper if the rear fittings of the shell are provided with a means of protection which protects the shell in the same way as a bumper.

NOTE: This provision does not apply to MEMUs where the tanks are protected adequately against rear impact by other means, e.g. machinery or piping not containing dangerous goods.

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9.8.6 Combustion heaters

9.8.6.1 Combustion heaters shall meet the requirements of 9.2.4.7.1, 9.2.4.7.2, 9.2.4.7.5, 9.2.4.7.6 and the following:

- (a) the switch may be installed outside the driver's cab;
- (b) the device shall be switched off from outside the MEMU compartment; and
- (c) it is not necessary to prove that the heat exchanger is resistant to the reduced afterrunning cycle.

9.8.6.2 No fuel tanks, power sources, combustion air or heating air intakes as well as exhaust tube outlets required for the operation of the combustion heater shall be installed in the load compartments containing tanks. It shall be ensured that the heating air outlet cannot be blocked. The temperature to which any equipment is heated shall not exceed 50 °C. Heating devices installed inside the compartments shall be designed so as to prevent the ignition of any explosive atmosphere under operating conditions.

9.8.7 Additional safety requirements

9.8.7.1 MEMUs shall be equipped with automatic fire extinguisher systems for the engine compartment.

9.8.7.2 Protection of the load by metal thermal shields against tyre fire shall be provided.

9.8.8 Additional security requirements

Process equipment and special compartments in MEMUs shall be fitted with locks.

PŘEKLAD

EVROPSKÁ HOSPODÁŘSKÁ KOMISE
Výbor pro vnitrozemskou dopravu

ADR

platná od 1. ledna 2013

Evropská dohoda
o mezinárodní silniční přepravě
nebezpečných věcí



UNITED NATIONS
New York a Geneva, 2012

OBSAH

PŘÍLOHA A VŠEOBECNÁ USTANOVENÍ A USTANOVENÍ TÝKAJÍCÍ SE NEBEZPEČNÝCH LÁTEK A PŘEDMĚTŮ

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 - 5.5.1 (Vypuštěno)

- 5.5.2 Zvláštní ustanovení pro zaplňovaná vozidla, kontejnery a cisterny
- 5.5.3 Zvláštní ustanovení platná pro kusy a vozidla a kontejnery obsahující látky představující riziko udušení, jsou-li používány pro účely chlazení nebo kondicionování (jako jsou suchý led (UN 1845), nebo dusík, hluboce zchlazený, kapalný (UN 1977) nebo argon, hluboce zchlazený, kapalný (UN 1951))

Část 6 Požadavky na konstrukci a zkoušení obalů, velkých nádob pro volně ložené látky (IBC), velkých obalů a cisteren

- | | | |
|-----------------|------------|--|
| Kapitola | 6.1 | Požadavky na konstrukci a zkoušení obalů |
| | 6.1.1 | Všeobecně |
| | 6.1.2 | Kódování konstrukčních typů obalů |
| | 6.1.3 | Značení |
| | 6.1.4 | Požadavky na obaly |
| | 6.1.5 | Požadavky na zkoušky obalů |
| | 6.1.6 | Standardní kapaliny pro důkaz chemické snášenlivosti obalů a IBC z polyetylenu podle 6.1.5.2.6, popřípadě 6.5.6.3.5 |
| Kapitola | 6.2 | Požadavky na konstrukci a zkoušení tlakových nádob, aerosolových rozprašovačů, malých nádobek obsahujících plyn (plynových kartuší) a zásobníků do palivových článků obsahujících zkapalněný hořlavý plyn |
| | 6.2.1 | Všeobecné požadavky |
| | 6.2.2 | Požadavky na UN tlakové nádoby |
| | 6.2.3 | Všeobecné požadavky na tlakové nádoby neodpovídající UN |
| | 6.2.4 | Požadavky na tlakové láhve neodpovídající UN, zkonstruované, vyrobené a odzkoušené podle norem |
| | 6.2.5 | Požadavky na tlakové nádoby neodpovídající |

UN, které nejsou zkonstruovány, vyrobeny a odzkoušeny podle norem

6.2.6 Všeobecné požadavky na aerosolové rozprašovače, malé nádoby obsahující plyn (plynové kartuše) a zásobníky do palivových článků obsahující zkapalněný hořlavý plyn

Kapitola 6.3 Požadavky na konstrukci a zkoušení obalů pro infekční látky kategorie A třídy 6.2

6.3.1 Obecné

6.3.2 Požadavky na balení

6.3.3 Kód pro určení typu obalů

6.3.4 Značení

6.3.5 Požadavky na zkoušení obalů

Kapitola 6.4 Požadavky na konstrukci, zkoušení a schvalování kusů a látek třídy 7

6.4.1 (Vyhrazeno)

6.4.2 Všeobecné požadavky

6.4.3 (Vyhrazeno)

6.4.4 Požadavky na kusy vyňaté z platnosti

6.4.5 Požadavky na průmyslové kusy

6.4.6 Požadavky na kusy obsahující hexafluorid uranu

6.4.7 Požadavky na kusy typu A

6.4.8 Požadavky na kusy typu B(U)

6.4.9 Požadavky na kusy typu B(M)

6.4.10 Požadavky na kusy typu C

6.4.11 Požadavky na kusy obsahující štěpné látky

6.4.12 Zkušební postupy a důkaz shodnosti

6.4.13 Zkoušení celistvosti kontejmentového systému a stínění a zhodnocení podkritičnosti

- 6.4.14 Terč pro zkoušky pádem
- 6.4.15 Zkoušky pro prokázání schopnosti odolat normálním podmínkám přepravy
- 6.4.16 Dodatečné zkoušky kusů typu A konstruované pro kapaliny a plyny
- 6.4.17 Zkoušky pro prokázání schopnosti odolat nehodovým podmínkám při přepravě
- 6.4.18 Rozšířená zkouška ponořením do vody pro kusy typu B(U) a typu B(M) obsahující výše než $10^5 A_2$ a typu C
- 6.4.19 Zkouška úniku vody pro kus obsahující štěpnou látku
- 6.4.20 Zkoušky pro kusy typu C
- 6.4.21 Prohlídky obalů konstruovaných pro obsah 0,1kg nebo více hexafluoridu uranu
- 6.4.22 Typové schválení kusu a materiálů
- 6.4.23 Žádosti a povolování přepravy radioaktivní látky

Kapitola 6.5 Požadavky na konstrukci a zkoušení velkých nádob pro volně ložené látky (IBC)

- 6.5.1 Obecné požadavky
- 6.5.2 Značení UN kódem
- 6.5.3 Požadavky na konstrukci
- 6.5.4 Zkoušení, certifikace a inspekce
- 6.5.5 Zvláštní požadavky na IBC
- 6.5.6 Požadavky na zkoušky IBC

Kapitola 6.6 Požadavky na konstrukci a zkoušení velkých obalů

- 6.6.1 Všeobecné
- 6.6.2 Kód pro označení typu velkých obalů
- 6.6.3 Značení velkých obalů UN kódem

- 6.6.4 Zvláštní požadavky na velké obaly
- 6.6.5 Zkušební požadavky na velké obaly
- Kapitola 6.7 Požadavky na konstrukci, výrobu, inspekce a zkoušení přemístitelných cisteren a UN vícečlánkových kontejnerů na plyn (MEGC)**
 - 6.7.1 Platnost a všeobecné požadavky
 - 6.7.2 Požadavky na konstrukci, výrobu, inspekce a zkoušení přemístitelných cisteren určených pro přepravu látek třídy 1 a tříd 3 až 9
 - 6.7.3 Požadavky na konstrukci, výrobu, inspekce a zkoušení přemístitelných cisteren určených pro přepravu nezchlazených zkapalněných plynů
 - 6.7.4 Požadavky na konstrukci, výrobu, inspekci a zkoušení přemístitelných cisteren určených pro přepravu hluboce zchlazených zkapalněných plynů
 - 6.7.5 Požadavky na konstrukci, výrobu, inspekce a zkoušení UN vícečlánkových kontejnerů na plyn (MEGC) určených pro přepravu nezchlazených plynů
- Kapitola 6.8 Požadavky na konstrukci, výstroj, schvalování typu, inspekce a zkoušení a značení nesnímatelných cisteren, (cisternových vozidel), snímatelných cisteren a cisternových kontejnerů a cisternových výměnných nástaveb s nádržemi vyrobenými z kovových materiálů a bateriových vozidel a vícečlánkových kontejnerů na plyn (MEGC)**
 - 6.8.1 Rozsah použití
 - 6.8.2 Požadavky vztahující se na všechny třídy
 - 6.8.3 Zvláštní požadavky vztahující se na třídu 2
 - 6.8.4 Zvláštní ustanovení
 - 6.8.5 Požadavky na materiály a konstrukci svařovaných nesnímatelných cisteren, svařovaných snímatelných cisteren a svařovaných nádrží cisternových kontejnerů, pro které je požadován zkušební tlak nejméně

1 MPa (10 bar) a svařovaných nesnímatelných cisteren, svařovaných snímatelných cisteren a svařovaných nádrží cisternových kontejnerů určených pro přepravu hluboce zchlazených zkapalněných plynů třídy 2

Kapitola 6.9 Požadavky na konstrukci, výrobu, výstroj, schválování typu, zkoušení a značení cisteren nesnímatelných cisteren, (cisternových vozidel), snímatelných cisteren, cisternových kontejnerů a výměnných cisternových nástaveb z vyztužených plastů (FRP)

- 6.9.1 Všeobecně
- 6.9.2 Konstrukce
- 6.9.3 Části výstroje
- 6.9.4 Zkoušení a schválení typu
- 6.9.5 Inspekce
- 6.9.6 Značení

Kapitola 6.10 Požadavky na konstrukci, výstroj, schvalování typu, inspekci a značení cisteren pro podtlakové vyčerpávání odpadů

- 6.10.1 Všeobecně
- 6.10.2 Konstrukce
- 6.10.3 Části výstroje
- 6.10.4 Inspekce

Kapitola 6.11 Požadavky na konstrukci, výrobu, inspekce a zkoušení kontejnerů pro volně ložené látky

- 6.11.1 Definice
- 6.11.2 Platnost a všeobecné požadavky
- 6.11.3 Požadavky na konstrukci, výrobu, inspekce a zkoušení kontejnerů odpovídajících KBK používaných jako kontejnery pro volně ložené

látky

6.11.4 Požadavky na konstrukci, výrobu a schválení kontejnerů pro volně ložené látky jiných než kontejnerů odpovídajících KBK

Kapitola 6.12 Požadavky na výrobu, výstroj, schvalování typu, inspekce a zkoušení a značení cisteren, kontejnerů pro volně ložené látky a zvláštních komor pro výbušniny mobilních jednotek připravujících výbušniny (MEMU)

6.12.1 Rozsah použití

6.12.2 Všeobecná ustanovení

6.12.3 Cisterny

6.12.4 Části výstroje

6.12.5 Zvláštní komory pro výbušniny

Část 7 Ustanovení o podmínkách přepravy, nakládky, vykládky a manipulace

Kapitola 7.1 Všeobecná ustanovení

Kapitola 7.2 Ustanovení o přepravě v kusech

Kapitola 7.3 Ustanovení o přepravě ve volně loženém stavu

7.3.1 Všeobecná ustanovení

7.3.2 Dodatečná ustanovení pro přepravu ve volně loženém stavu, použijí-li se ustanovení pododdílu 7.3.1.1 (a)

7.3.3 Zvláštní ustanovení pro přepravu ve volně loženém stavu, použijí-li se ustanovení pododdílu 7.3.1.1 (b)

Kapitola 7.4 Ustanovení o přepravě v cisternách

Kapitola 7.5 Ustanovení o nakládce, vykládce a manipulaci

- 7.5.1 Všeobecná ustanovení o nakládce, vykládce a manipulaci
- 7.5.2 Zákaz společné nakládky
- 7.5.3 (Vyhrazeno)
- 7.5.4 Preventivní opatření se zřetelem na potraviny, poživatiny a krmiva
- 7.5.5 Omezení přepravovaných množství
- 7.5.6 (Vyhrazeno)
- 7.5.7 Manipulace a ukládání
- 7.5.8 Čištění po vykládce
- 7.5.9 Zákaz kouření
- 7.5.10 Preventivní opatření proti elektrickým nábojům
- 7.5.11 Dodatečná ustanovení vztahující se na určité třídy nebo věci

PŘÍLOHA B USTANOVENÍ O DOPRAVNÍCH PROSTŘEDCÍCH A O PŘEPRAVĚ

Část 8 Požadavky na osádky vozidel, jejich výbavu, provoz a průvodní doklady

- | | | |
|-----------------|------------|---|
| Kapitola | 8.1 | Všeobecné požadavky na dopravní jednotky a jejich vybavení |
| | 8.1.1 | Dopravní jednotky |
| | 8.1.2 | Průvodní doklady |
| | 8.1.3 | Označování |
| | 8.1.4 | Hasicí přístroje |
| | 8.1.5 | Další výbava a výbava pro osobní ochranu |
| Kapitola | 8.2 | Požadavky na školení a osádky vozidla |
| | 8.2.1 | Všeobecné požadavky na školení řidičů |
| | 8.2.2 | Zvláštní požadavky na školení řidičů |

- 8.2.3 Školení všech osob, kromě řidičů majících osvědčení podle oddílu 8.2.1, podílejících se na silniční přepravě nebezpečných věcí

Kapitola 8.3 Další požadavky, které musí plnit osádka vozidla

- 8.3.1 Osoby
- 8.3.2 Používání hasicích přístrojů
- 8.3.3 Zákaz otevírání kusů
- 8.3.4 Přenosná osvětlovací zařízení
- 8.3.5 Zákaz kouření
- 8.3.6 Běh motoru při nakládce nebo vykládce
- 8.3.7 Používání parkovacích brzd a zakládacích klínů
- 8.3.8 Použití kabelových spojů

Kapitola 8.4 Požadavky na dozor nad vozidly

Kapitola 8.5 Dodatečné požadavky na jednotlivé třídy nebo látky

Kapitola 8.6 Omezení průjezdu vozidel přepravujících nebezpečné věci silničními tunely

- 8.6.1 Všeobecná ustanovení
- 8.6.2 Silniční dopravní značky a signály upravující průjezd vozidel přepravujících nebezpečné věci
- 8.6.3 Kódy omezení průjezdu tunelem
- 8.6.4 Omezení průjezdu dopravních jednotek přepravujících nebezpečné věci tunely

Část 9

Požadavky na konstrukci a schvalování vozidel

Kapitola 9.1 Rozsah platností, definice a požadavky na schvalování vozidel

- 9.1.1 Rozsah platnosti a definice
 - 9.1.2 Schvalování vozidel EX/II, EX/III, FL, OX a AT a MEMU
 - 9.1.3 Osvědčení o schválení
- Kapitola 9.2 Požadavky na konstrukci vozidel**
- 9.2.1 Shoda s požadavky této kapitoly
 - 9.2.2 Elektrické vedení
 - 9.2.3 Brzdový systém
 - 9.2.4 Prevence nebezpečí požáru
 - 9.2.5 Omezovač rychlosti
 - 9.2.6 Spojovací zařízení přípojných vozidel
- Kapitola 9.3 Dodatečné požadavky na kompletní nebo zkompletovaná vozidla EX/II nebo EX/III**
- 9.3.1 Materiály používané pro konstrukci nástaveb vozidel
 - 9.3.2 Vytápěcí systémy s vnitřním spalováním
 - 9.3.3 Vozidla EX/II
 - 9.3.4 Vozidla EX/III
 - 9.3.5 Motor a ložný prostor
 - 9.3.6 Vnější zdroje tepla a ložný prostor
 - 9.3.7 Elektrické příslušenství
- Kapitola 9.4 Dodatečné požadavky na konstrukci Nástaveb kompletních nebo zkompletovaných vozidel určených pro přepravu nebezpečných věcí v kusech (kromě vozidel EX/II a EX III)**
- Kapitola 9.5 Dodatečné požadavky na konstrukci nástaveb kompletních nebo zkompletovaných vozidel určených pro přepravu volně ložených tuhých nebezpečných látek**

- Kapitola 9.6** **Dodatečné požadavky na kompletní nebo zkompleťovaná vozidla určená pro přepravu látek při řízené teplotě**
- Kapitola 9.7** **Dodatečné požadavky na nesnímatelné cisterny (cisterny), bateriová vozidla a kompletní nebo zkompleťovaná vozidla používaná pro přepravu nebezpečných věcí ve snímatelných cisternách s vnitřním objemem větším než 1 m³ nebo v cisternových kontejnerech, přemístitelných cisternách nebo MEGC s vnitřním objemem větším než 3 m³ (vozidla FL, OX a AT)**
- 9.7.1 Všeobecná ustanovení
 - 9.7.2 Požadavky na cisterny
 - 9.7.3 Upevňovací prvky
 - 9.7.4 Uzemnění vozidel FL
 - 9.7.5 Stabilita cisternových vozidel
 - 9.7.6 Ochrana vozidel proti nárazu zezadu
 - 9.7.7 Vytápěcí systémy s vnitřním spalováním
 - 9.7.8 Elektrické příslušenství
 - 9.7.9 Dodatečné bezpečnostní požadavky na vozidla EX/III
- Kapitola 9.8** **Dodatečné požadavky na kompletní a zkompleťované MEMU**
- 9.8.1 Všeobecná ustanovení
 - 9.8.2 Požadavky na cisterny a kontejnery pro volně ložené látky
 - 9.8.3 Uzemnění MEMU
 - 9.8.4 Stabilita MEMU
 - 9.8.5 Ochrana MEMU proti nárazu zezadu
 - 9.8.6 Vytápěcí systémy s vnitřním spalováním

9.8.7 Dodatečné bezpečnostní požadavky

9.8.8 Dodatečné další bezpečnostní požadavky

PŘÍLOHA A

VŠEOBECNÁ USTANOVENÍ A USTANOVENÍ TÝKAJÍCÍ SE NEBEZPEČNÝCH LÁTEK A PŘEDMĚTŮ

ČÁST 1

VŠEOBECNÁ USTANOVENÍ

KAPITOLA 1.1

ROZSAH A POUŽITÍ

1.1.1 Struktura

Přílohy A a B jsou rozděleny do devíti částí. Přílohu A tvoří části 1 až 7 a přílohu B tvoří části 8 a 9. Každá část se dělí do kapitol a každá kapitola do oddílů a pododdílů. Uvnitř každé části je číslo části zahrnuto do čísel kapitol, oddílů a pododdílů, např. část 4, kapitola 2, oddíl 1, je očíslována „4.2.1“.

1.1.2 Rozsah platnosti

1.1.2.1

Pro účely článku 2 dohody ADR příloha A uvádí:

- (a) nebezpečné věci, které jsou z mezinárodní přepravy vyloučeny;
- (b) nebezpečné věci, jejichž mezinárodní přeprava je připuštěna a požadavky, které musí být při této přepravě splněny (včetně vynětí z platnosti), zejména:
 - klasifikace věcí, včetně klasifikačních kritérií a příslušných zkušebních metod;
 - používání obalů (včetně společného balení);
 - používání cisteren (včetně jejich plnění);
 - postupy před odesláním (včetně nápisů a bezpečnostních značek na kusech, označování dopravních a přepravních prostředků, jakož i doklady a požadované informace);
 - ustanovení o konstrukci, zkoušení a schvalování obalů a cisteren;
 - používání dopravních prostředků (včetně nakládky, společné nakládky a vykládky).

1.1.2.2

Příloha A obsahuje rovněž určitá ustanovení, která se podle článku 2 dohody ADR týkají přílohy B nebo obou příloh A a B:

- 1.1.1 Struktura
- 1.1.2.3 (Rozsah platnosti přílohy B)
- 1.1.2.4
- 1.1.3.1 Vynětí z platnosti vztahující se k druhu přepravy
- 1.1.3.6 Vynětí z platnosti pro množství přepravovaná jednou dopravní jednotkou
- 1.1.4 Použitelnost jiných předpisů
- 1.1.4.5 Přeprava jinou dopravou než silniční
- Kapitola 1.2 Definice a měrové jednotky
- Kapitola 1.3 Školení osob podílejících se na přepravě nebezpečných věcí
- Kapitola 1.4 Povinnosti účastníků přepravy z hlediska bezpečnosti
- Kapitola 1.5 Odchytky
- Kapitola 1.6 Přejícná ustanovení
- Kapitola 1.8 Kontroly a jiná podpůrná opatření pro zajištění plnění bezpečnostních požadavků
- Kapitola 1.9 Dopravní omezení stanovená příslušnými orgány
- Kapitola 1.10 Bezpečnostní předpisy
- Kapitola 3.1 Všeobecně
- Kapitola 3.2 sloupce (1), (2), (14), (15) a (19) (použití ustanovení částí 8 a 9 pro jednotlivé látky nebo předměty)

1.1.2.3

Pro účely článku 2 dohody ADR příloha B uvádí požadavky na konstrukci, výbavu a provoz vozidel schválených pro přepravu nebezpečných věcí, a to:

- požadavky na osádky vozidel, jejich výbavu, provoz a doklady;
- požadavky na konstrukci a schvalování vozidel.

- 1.1.2.4** Pojem „vozidlo“ v článku 1(c) dohody ADR se nevztahuje nutně jen na jedno a totéž vozidlo. Mezinárodní přeprava může být prováděna několika různými vozidly, pokud se tato přeprava provádí po území nejméně dvou smluvních států dohody ADR mezi odesílatelem a příjemcem uvedenými v přepravním dokladu.

1.1.3 Vynětí z platnosti

1.1.3.1 Vynětí z platnosti vztahující se k druhu přepravy

Ustanovení dohody ADR se nevztahují na:

- (a) přepravu nebezpečných věcí soukromými osobami, pokud jsou dotyčné věci baleny pro maloobchodní prodej a jsou určeny pro jejich osobní nebo domácí použití nebo pro jejich aktivity ve volném čase nebo pro sportovní činnost, pokud byla učiněna opatření k zamezení úniku obsahu za normálních přepravních podmínek. Pokud jsou tyto věci hořlavými kapalinami přepravovanými v opakovaně plnitelných nádobách naplněných soukromými osobami nebo pro tyto osoby, nesmí celkové množství překročit 60 litrů na nádobu a 240 litrů na dopravní jednotku. Nebezpečné věci ve velkých nádobách IBC, velkých obalech nebo cisternách se nepovažují za věci balené pro maloobchodní prodej;
- (b) přepravu strojů nebo zařízení nevyjmenovaných v této příloze, které mohou obsahovat nebezpečné věci ve své konstrukci nebo provozní výbavě, pokud byla učiněna opatření k zamezení úniku obsahu za normálních podmínek přepravy;
- (c) přepravu prováděnou podniky jako vedlejší činnost k jejich hlavní činnosti, jako je zásobování staveníšť pozemních nebo inženýrských staveb nebo zpětné jízdy z nich, nebo přepravy související s měřičskými, opravářskými a údržbářskými pracemi, v množstvích nejvýše 450 litrů v jednom obalu a nepřekračujících nejvyšší celková množství uvedená v 1.1.3.6. Musí být učiněna opatření k zamezení úniku obsahu za normálních podmínek přepravy. Tato vynětí se nevztahují na třídu 7.

Přepravy prováděné takovými podniky pro jejich zásobování nebo vnější nebo vnitřní distribuci však nespádají do rozsahu tohoto vynětí;

- (d) přepravu prováděnou příslušnými orgány v rámci nouzových opatření nebo pod jejich dozorem, pokud je taková přeprava nutná ve vztahu k nouzovým opatřením, zejména přepravu prováděnou:
- odtahovými vozidly přepravujícími vozidla, která byla účastníky dopravní nehody nebo měla poruchu a obsahují nebezpečné věci; nebo
 - za účelem sběru nebezpečných věcí, které byly účastny mimořádné události nebo nehody, a jejich přemístění na nejbližší vhodné bezpečné místo.
- (e) nouzové přepravy určené pro záchranu lidských životů nebo ochranu životního prostředí, za podmínky, že byla učiněna všechna opatření zajišťující plnou bezpečnost takové přepravy.
- (f) přepravu nevyčištěných prázdných stabilních nebo skladovacích nádob, které obsahovaly plyny třídy 2, skupin A, O nebo F, látky třídy 3 nebo třídy 9 spadající pod obalovou skupinu II nebo III, nebo pesticidy třídy 6.1 spadající pod obalovou skupinu II nebo III, za dodržení následujících podmínek:
- všechny otvory, s výjimkou zařízení pro vyrovnávání tlaku (pokud jsou), jsou hermeticky uzavřeny;
 - byla učiněna opatření k zamezení jakéhokoli úniku obsahu za normálních podmínek přepravy; a
 - náklad je upevněn v lůžkách nebo latěních nebo jiných manipulačních prostředcích nebo ve vozidle nebo kontejneru takovým způsobem, aby se nemohl uvolnit ani posunout za normálních podmínek přepravy.

Toto vynětí se nevztahuje na stabilní nebo skladovací nádoby, které obsahovaly znečistlivěné výbušné látky nebo látky, jejichž přeprava je podle ADR zakázána.

POZNÁMKA: K radioaktivním látkám viz 1.7.1.4.

1.1.3.2 **Vynětí z platnosti pro přepravu plynů**

Ustanovení dohody ADR se nevztahují na přepravu:

- (a) plynů obsažených v nádržích vozidel provádějících přepravu, které slouží pro jejich pohon nebo provoz jejich zvláštních zařízení (např. chladicí zařízení);
- (b) plynů obsažených v palivových nádržích přepravovaných vozidel. Palivový kohout mezi plynovou nádrží a motorem musí být uzavřen a elektrické spojení přerušeno;
- (c) plynů skupin A a O (podle pododdílu 2.2.2.1), jestliže tlak plynu v nádobě nebo cisterně při teplotě 20°C nepřevyšuje 200 kPa (2 bary) a jestliže plyn není zkapalněným nebo hluboce zchazeným zkapalněným plynem. To platí pro všechny druhy nádob nebo cisteren, např. rovněž pro různé části strojů a přístrojů;
- (d) plynů obsažených v zařízeních používaných pro provoz vozidla (např. v hasicích přístrojích), včetně náhradních dílů (např. nahuštěných pneumatik); toto vynětí z platnosti se vztahuje rovněž na nahuštěné pneumatiky přepravované jako náklad;
- (e) plynů obsažených ve zvláštním zařízení vozidel a nezbytných pro provoz těchto zvláštních zařízení během přepravy (chladicí systémy, nádrže na ryby, ohříváče atd.), jakož i náhradních nádob pro taková zařízení nebo prázdných nevyčištěných výměnných nádob, přepravovaných v téže dopravní jednotce;
- (f) plynů obsažených v potravinách (kromě UN 1950), včetně sycených nápojů;
- (g) plynů obsažených v míčích určených pro použití ve sportech; a
- (h) plynů obsažených v osvětlovacích žárovkách, pokud jsou zabaleny tak, že účinky rozletu při jakémkoli prasknutí žárovky budou omezeny na vnitřek kusu.

1.1.3.3 **Vynětí z platnosti pro přepravu kapalných pohonných látek**

Ustanovení dohody ADR se nevztahují na přepravu:

- (a) pohonných látek obsažených v palivových nádržích vozidel provádějících přepravu, určených pro jejich pohon nebo pro provoz jakýchkoli jejich zařízení.

Pohonné látky smějí být přepravovány v pevných palivových nádržích, přímo propojených s motorem nebo přídatným zařízením vozidla, které splňují příslušné právní předpisy, nebo mohou být přepravovány v přenosných nádobách na pohonné látky (jako jsou kanystry).

Celkový vnitřní objem pevných palivových nádrží nesmí překročit 1500 litrů na jednu dopravní jednotku a vnitřní objem palivové nádrže připevněné na přípojně vozidlo nesmí překročit 500 litrů. V přenosných nádobách na pohonné látky smí být přepravováno nejvýše 60 litrů na jednu dopravní jednotku. Tato omezení se nevztahují na vozidla zásahových služeb;

- (b) pohonné látky v palivových nádržích vozidel nebo jiných dopravních prostředků (jako jsou lodě), které jsou přepravovány jako náklad, pokud jsou určeny pro jejich pohon nebo pro provoz jakýchkoli jejich zařízení. Všechny palivové kohouty mezi motorem nebo zařízením a palivovou nádrží musí být během přepravy uzavřeny, vyjma případu, kdy je pro zachování operativnosti zařízení nezbytné, aby zůstaly otevřené. Pokud je to možné, musí být vozidla nebo jiné dopravní prostředky uloženy na stojato a zajištěny proti spadnutí.

1.1.3.4 **Vynětí z platnosti podle zvláštních ustanovení a pro nebezpečné věci balené v omezených nebo vyňatých množstvích**

POZNÁMKA: K radioaktivním látkám viz 1.7.1.4

1.1.3.4.1

Některá zvláštní ustanovení kapitoly 3.3 vyjímají částečně nebo úplně přepravu určitých nebezpečných věcí z platnosti ustanovení ADR. Toto vynětí z platnosti platí pouze tehdy, pokud jsou ve sloupci (6) tabulky A kapitoly 3.2 uvedena zvláštní ustanovení u příslušné položky nebezpečných věcí.

- 1.1.3.4.2** Některé nebezpečné věci mohou podléhat vynětí z platnosti, pokud jsou splněny podmínky uvedené v kapitole 3.4.
- 1.1.3.4.3** Některé nebezpečné věci mohou podléhat vynětím z platnosti, pokud jsou splněny podmínky kapitoly 3.5.
- 1.1.3.5** ***Vynětí z platnosti pro prázdné nevyčištěné obaly***
- Prázdné nevyčištěné obaly (včetně IBC a velkých obalů), které obsahovaly látky tříd 2, 3, 4.1, 5.1, 6.1, 8 a 9, nepodléhají ustanovením ADR, jestliže byla provedena přiměřená opatření vylučující jakékoli nebezpečí. Nebezpečí jsou vyloučena, jestliže byla provedena opatření vylučující všechna nebezpečí tříd 1 až 9.
- 1.1.3.6** ***Vynětí z platnosti pro množství přepravovaná jednou dopravní jednotkou***
- 1.1.3.6.1** Nebezpečné věci jsou pro účely tohoto pododdílu zařazeny do přepravních kategorií 0, 1, 2, 3 nebo 4, jak je uvedeno ve sloupci (15) tabulky A kapitoly 3.2. Prázdné nevyčištěné obaly, které obsahovaly látky zařazené do přepravní kategorie „0“, jsou též zařazeny do kategorie „0“. Prázdné nevyčištěné obaly, které obsahovaly látky zařazené do přepravní kategorie jiné než „0“, jsou zařazeny do přepravní kategorie „4“.
- 1.1.3.6.2** Pokud množství nebezpečných věcí přepravovaných jednou dopravní jednotkou nepřevyšuje hodnoty uvedené ve sloupci (3) tabulky uvedené v 1.1.3.6.3 pro danou přepravní kategorii (pokud nebezpečné věci přepravované v jedné dopravní jednotce patří do téže přepravní kategorie) nebo hodnotu vypočtenou podle 1.1.3.6.4 (pokud nebezpečné věci přepravované v jedné dopravní jednotce patří do různých přepravních kategorií), mohou být přepravovány v kusech v téže dopravní jednotce, aniž se použijí tato ustanovení:
- Kapitola 1.10, kromě výbušnin třídy 1, UN čísel 0029, 0030, 0059, 0065, 0073, 0104, 0237, 0255, 0267, 0288, 0289, 0290, 0360, 0361, 0364, 0365, 0366, 0439, 0440, 0441, 0455, 0456 a 0500 a kromě vyjmutých kusů třídy 7, UN čísel 2910 a 2911, jestliže úroveň aktivity překračuje hodnotu A₂;
 - Kapitola 5.3;
 - Oddíl 5.4.3;
 - Kapitola 7.2, kromě zvláštních ustanovení V5 a V8 oddílu 7.2.4;
 - CV1 oddílu 7.5.11;
 - Část 8, kromě 8.1.2.1 (a),
8.1.4.2 až 8.1.4.5,
8.2.3,
8.3.3,
8.3.4,
8.3.5,
kapitoly 8.4,
S1(3) a (6),
S2(1),
S4,
S14 až S21 a
S24 kapitoly 8.5;
 - Část 9.
- 1.1.3.6.3** Pokud nebezpečné věci přepravované v jedné dopravní jednotce patří do stejné přepravní kategorie, je největší celkové množství na jednu dopravní jednotku uvedeno ve sloupci (3) následující tabulky.

Přepavní kategorie (1)	Látky nebo předměty obalová skupina nebo klasifikační kód /skupina nebo UN číslo (2)	Nejvyšší celkové množství na jednu dopavní jednotku (3)
0	Třída 1: 1.1A/1.1L/1.2L/1.3L a UN 0190 Třída 3: UN 3343 Třída 4.2: Látky patřící k obalové skupině I Třída 4.3: UN 1183, 1242, 1295, 1340, 1390, 1403, 1928, 2813, 2965, 2968, 2988, 3129, 3130, 3131, 3134, 3148, 3396, 3398 a 3399 Třída 5.1: UN 2426 Třída 6.1: UN 1051, 1600, 1613, 1614, 2312, 3250 a 3294 Třída 6.2: UN 2814 a 2900 Třída 7: UN 2912 až 2919, 2977, 2978 a 3321 až 3333 Třída 8: UN 2215 (MALEINANHYDRID, ROZTAVENÝ) Třída 9: UN 2315, 3151, 3152 a 3432 a zařízení obsahující takové látky nebo směsi a prázdné nevyčištěné obaly, kromě obalů zařazených pod UN číslo 2908, které obsahovaly látky zařazené do této přepravní kategorie	0
1	Látky a předměty patřící k obalové skupině I a nezařazené do přepravní kategorie 0 a látky a předměty následujících tříd: Třída 1: 1.1B až 1.1J ^a /1.2B až 1.2J/1.3C/1.3G/1.3H/1.3J/1.5D ^a Třída 2: skupiny T, TC ^a , TO, TF, TOC a TFC; aerosoly: skupiny C, CO, FC, T, TF, TC, TO, TFC a TOC chemické látky pod tlakem: UN 3502, 3503, 3504 a 3505 Třída 4.1: UN 3221 až 3224 a 3231 až 3240 Třída 5.2: UN 3101 až 3104 a 3111 až 3120	20
2	Látky a předměty patřící k obalové skupině II a nezařazené do přepravních kategorií 0, 1 nebo 4 a látky a předměty následujících tříd: Třída 1: 1.4B až 1.4G a 1.6N Třída 2: skupina F; aerosoly: skupina F chemické látky pod tlakem: UN 3501 Třída 4.1: UN 3225 až 3230 Třída 5.2: UN 3105 až 3110 Třída 6.1: látky a předměty patřící k obalové skupině III Třída 9: UN 3245	333
3	Látky a předměty patřící k obalové skupině III a nezařazené do přepravních kategorií 0, 2 nebo 4 a látky a předměty následujících tříd: Třída 2: skupiny A a O; aerosoly: skupiny A a O chemické látky pod tlakem: UN 3500 Třída 3: UN 3473 Třída 4.3: UN 3476 Třída 8: UN 2794, 2795, 2800, 3028 a 3477 Třída 9: UN 2990 a 3072	1 000
4	Třída 1: 1.4S Třída 4.1: UN 1331, 1345, 1944, 1945, 2254 a 2623 Třída 4.2: UN 1361 a 1362 obalová skupina III Třída 7: UN 2908 až 2911 Třída 9: UN 3268 a 3499 a prázdné nevyčištěné obaly, které obsahovaly nebezpečné věci, kromě věcí zařazených do přepravní kategorie 0	bez omezení

Ve výše uvedené tabulce se "nejvyšším celkovým množstvím na dopavní jednotku" rozumí:

- pro předměty celková (bto) hmotnost v kilogramech (pro předměty třídy 1 čistá (netto) hmotnost výbušné látky v kilogramech); pro nebezpečné věci ve strojích a zařízeních

a Pro UN 0081, 0082, 0084, 0241, 0331, 0332, 0482, 1005 a 1017 je nejvyšší celkové množství na dopavní jednotku 50 kg.

vyjmenovaných v této příloze celkové množství nebezpečných věcí v nich obsažených v kilogramech nebo litrech, jak je to vhodné;

- pro tuhé látky, zkapalněné plyny, hluboce zchlazené zkapalněné plyny a rozpuštěné plyny čistá (netto) hmotnost v kilogramech;
- pro kapaliny a stlačené plyny jmenovitý vnitřní objem nádob (viz definici v oddílu 1.2.1) v litrech.

1.1.3.6.4 Pokud jsou v jedné dopravní jednotce přepravovány nebezpečné věci různých přepravních kategorií, pak součet

- množství látek a předmětů přepravní kategorie 1 vynásobený "50";
 - množství látek a předmětů přepravní kategorie 1 uvedených v poznámce a) k tabulce v 1.1.3.6.3 vynásobený "20";
 - množství látek a předmětů přepravní kategorie 2 vynásobený "3"; a
 - množství látek a předmětů přepravní kategorie 3
- nesmí překročit číslo "1000".

1.1.3.6.5 Pro účely tohoto pododdílu se nebezpečné věci, které jsou vyňaty podle pododdílů 1.1.3.2 až 1.1.3.5, neberou v úvahu.

1.1.3.7 *Vynětí z platnosti pro přepravu lithiových baterií*

Ustanovení uvedená v ADR se nevztahují na:

- (a) Lithiové baterie instalované ve vozidle provádějícím přepravu a určené pro jeho pohon nebo pro provoz kteréhokoli z jeho zařízení;
- (b) Lithiové baterie obsažené ve výbavě pro provoz tohoto zařízení, používané nebo určené k použití během přepravy (např. laptop).

1.1.3.8 *(Vyhrazeno)*

1.1.3.9 *Vynětí z platnosti vztahující se na nebezpečné věci používané pro chlazení nebo kondicionování během přepravy*

Jsou-li ve vozidlech nebo kontejnerech používány pro účely chlazení nebo kondicionování nebezpečné věci, které jsou jen dusivé (které ředí nebo nahrazují kyslík normálně v ovzduší), podléhají pouze ustanovením oddílu 5.5.3.

1.1.4 *Použitelnost jiných předpisů*

1.1.4.1 *(Vyhrazeno)*

1.1.4.2 *Přeprava v přepravním řetězci zahrnujícím námořní nebo leteckou dopravu*

1.1.4.2.1 Kusy, kontejnery, přemístitelné cisterny a cisternové kontejnery, které neodpovídají plně ustanovením ADR pro balení, společné balení, označení a bezpečnostní značky na kusech nebo označení velkými bezpečnostními značkami a oranžovými výstražnými tabulkami, ale odpovídají ustanovením IMDG Code (pro námořní dopravu) nebo ICAO Technical Instructions (pro leteckou dopravu) musí být připuštěny k přepravě v přepravním řetězci zahrnujícím námořní nebo leteckou dopravu, pokud splňují následující podmínky:

- (a) pokud kusy nejsou opatřeny nápisy a bezpečnostními značkami podle dohody ADR, musí být označeny nápisy a bezpečnostními značkami podle IMDG Code pro námořní nebo podle ICAO Technical Instructions pro leteckou přepravu;

- (b) pro společné balení v jednom kusu platí předpisy IMDG Code nebo ICAO Technical Instructions;
- (c) jestliže kontejnery, přemístitelné cisterny nebo cisternové kontejnery nejsou pro přepravu v dopravním řetězci zahrnujícím námořní přepravu označeny velkými bezpečnostními značkami a výstražnými oranžovými tabulkami podle kapitoly 5.3 této přílohy, musí být opatřeny velkými bezpečnostními značkami a označením podle kapitoly 5.3 IMDG Code. V tomto případě se vztahuje na označení vozidla samého pouze ustanovení uvedené v 5.3.2.1.1 této přílohy. Toto ustanovení se vztahuje i na prázdné nevyčištěné přemístitelné cisterny a cisternové kontejnery a též na jejich následnou přepravu do čistící stanice.

Tato odchylka se nevztahuje na věci, které jsou zařazeny jako nebezpečné věci tříd 1 až 9 ADR a nejsou považovány za nebezpečné podle příslušných ustanovení IMDG Code nebo ICAO Technical Instructions.

1.1.4.2.2 Dopravní jednotky složené z vozidla nebo vozidel jiných než těch, která přepravují kontejnery, přemístitelné cisterny nebo cisternové kontejnery, jak je stanoveno v 1.1.4.2.1 (c), které nejsou označeny velkými bezpečnostními značkami podle ustanovení 5.3.1 ADR, avšak které jsou označeny podle kapitoly 5.3 IMDG Code, jsou připuštěny k přepravě v dopravním řetězci zahrnujícím námořní dopravu za podmínky, že jsou dodržena ustanovení o označení oranžovými tabulkami v 5.3.2 ADR.

1.1.4.2.3 Pro přepravu v dopravním řetězci zahrnujícím námořní nebo leteckou přepravu směji být informace vyžadované podle oddílů 5.4.1 a 5.4.2 a podle kteréhokoli zvláštního ustanovení kapitoly 3.3 nahrazeny přepravním dokladem a informacemi vyžadovanými podle IMDG Code, popřípadě podle ICAO Technical Instructions, za předpokladu, že některé dodatečné informace vyžadovány podle ADR jsou také uvedeny.

POZNÁMKA: K přepravě podle 1.1.4.2.1 viz též 5.4.1.1.7. K přepravě v kontejnerech viz též 5.4.2.

1.1.4.3 *Používání přemístitelných cisteren typu IMO schválených pro námořní dopravu*

Přemístitelné cisterny typu IMO (typy 1,2,5 a 7), které neodpovídají předpisům kapitol 6.7 nebo 6.8, ale které byly vyrobeny a schváleny před 1. lednem 2003 podle ustanovení IMDG Code (Změna 29-98), směji být dále používány za podmínky, že odpovídají příslušným ustanovením IMDG Code o periodických inspekcích a zkouškách.¹ Kromě toho musí splňovat ustanovení odpovídající pokynům uvedeným ve sloupcích (10) a (11) tabulky A kapitoly 3.2 a ustanovením kapitoly 4.2 ADR. Viz též 4.2.0.1 IMDG Code.

1.1.4.4 *(Vyhrazeno)*

1.1.4.5 *Přeprava jinou dopravou než silniční*

1.1.4.5.1 Jestliže vozidlo, jímž se provádí přeprava, na kterou se vztahují předpisy ADR, je přepravováno v části dopravní cesty jiným druhem dopravy než silniční dopravou, platí pro tuto část cesty výhradně vnitrostátní nebo mezinárodní předpisy, jimiž se řídí v této části dopravní cesty přeprava nebezpečných věcí tím druhem dopravy, jehož bylo použito k přepravě silničního vozidla.

1.1.4.5.2 V případech výše uvedených v 1.1.4.5.1 se dotčené smluvní strany ADR mohou dohodnout, že dodatečně uplatní, pokud to považují za nezbytné, předpisy ADR na tu část dopravní cesty, po které je vozidlo přepravováno jinou dopravou než silniční, pokud takové dohody mezi dotčenými smluvními stranami ADR neodporují ustanovením mezinárodních úmluv upravujících přepravu nebezpečných věcí druhem dopravy použitým pro přepravu silničního vozidla v dané části dopravní cesty, např. Mezinárodní úmluvě o bezpečnosti života na moři – International Convention for the Safety of Life at Sea (SOLAS), jichž jsou tyto dotčené smluvní strany ADR též smluvními stranami.

¹ Mezinárodní námořní organizace (IMO) vydala oběžníkem DSC.1/Circ.12 a korigendem „Směrnici pro další používání existujících přemístitelných cisteren a silničních cisternových vozidel typu IMO pro přepravu nebezpečných věcí“. Text směrnice je možno nalézt na webových stránkách IMO: www.imo.org.

Tyto dohody musí zaslat smluvní strana, jež byla jejich iniciátorem, Sekretariátu Evropské hospodářské komise Organizace spojených národů, který s nimi seznámí všechny smluvní strany ADR.

1.1.4.5.3

Jestliže pro přepravu, na niž se vztahují ustanovení ADR, platí pro celou silniční dopravní cestu nebo její část rovněž ustanovení mezinárodní úmluvy upravující přepravu nebezpečných věcí jiným druhem dopravy než silniční dopravou, podle ustanovení uvedené smlouvy, která rozšiřují její platnost na některé přepravy silničními motorovými vozidly, pak ustanovení této mezinárodní úmluvy platí pro tuto dopravní cestu současně s ustanoveními ADR, které jim neodporují; ostatní ustanovení ADR se pro dotyčnou dopravní cestu nepoužijí.

1.1.5

Použití norem

Pokud se vyžaduje použití normy a existuje rozpor mezi touto normou a ustanoveními ADR, mají ustanovení ADR přednost.

KAPITOLA 1.2

DEFINICE A MĚROVÉ JEDNOTKY

1.2.1 Definice

POZNÁMKA: Tento oddíl obsahuje všechny všeobecné a zvláštní definice.

Pro účely ADR se pod následujícími pojmy rozumějí:

A

„**ADN**“ Evropská dohoda o mezinárodní přepravě nebezpečných věcí po vnitrozemských vodních cestách;

„**Aerosol**“ nebo „**Aerosolový rozprašovač**“ nádoba pro jedno použití splňující ustanovení oddílu 6.2.6, vyrobená z kovu, skla nebo plastu a obsahující plyn, stlačený, zkapalněný nebo rozpuštěný pod tlakem, s kapalinou nebo bez kapaliny, pastu nebo prášek, a vybavená rozprašovacími zařízeními umožňujícími rozprášení obsahu ve formě tuhých nebo kapalných částic ve směsi s plynem ve formě pěny, pasty nebo prášku nebo v kapalném nebo plynném stavu;

„**ASTM**“ American Society for Testing and Materials (Americká společnost pro zkoušení a materiály) (ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959, USA);

B

„**Balič**“ podnik, který balí nebezpečné věci do obalů, včetně velkých obalů a IBC, a, pokud je to nutné, připravuje kusy k přepravě;

„**Bateriové vozidlo**“ vozidlo se souborem článků vzájemně propojených sběrným potrubím, stabilně upevněných na tomto vozidle. Následující články jsou považovány za články bateriového vozidla: láhve, trubkové nádoby, svazky lahví (označované také jako rámy), tlakové sudy, jakož i cisterny určené pro přepravu plynů, jak jsou definovány v 2.2.2.1.1, s vnitřním objemem větším než 450 litrů;

„**Bedna**“ pravoúhlý nebo mnohoúhelníkový plnostěnný obal z kovu, dřeva, překližky, rekonstituovaného dřeva, lepenky, plastu nebo jiného vhodného materiálu. Malé otvory pro usnadnění manipulace nebo otevírání nebo pro splnění klasifikačních požadavků jsou dovoleny, pokud nejsou v rozporu v požadavkem neporušenosti obalu během přepravy;

„**Běžná údržba flexibilních IBC**“ viz „**IBC**“;

„**Běžná údržba tuhých IBC**“ viz „**IBC**“;

„**Bod vzplanutí**“ nejnižší teplota kapaliny, při které její páry tvoří se vzduchem hořlavou směs;

C

„**CGA**“ Compressed Gas Association (Sdružení pro stlačené plyny) (CGA, 4221 Walney Road, 5th Floor, Chantilly VA 20151-2923, USA);

„**CIM**“ Jednotné právní předpisy pro smlouvu o mezinárodní železniční přepravě zboží (Přípojek B Úmluvy o mezinárodní železniční přepravě (COTIF)), se změnami;

„**Cisterna**“ nádrž včetně své provozní a konstrukční výstroje. Pokud je používán tento pojem samostatně, označuje cisternový kontejner, přemístitelnou cisternu, snímatelnou cisternu nebo nesnímatelnou cisternu, jak jsou definovány v této části, včetně cisteren tvořících články bateriových vozidel nebo MEGC;

POZNÁMKA: K přemístitelným cisternám viz 6.7.4.1.

„**Cisterna nesnímatelná**“ cisterna s vnitřním objemem větším než 1000 litrů, která je konstrukčně trvale připevněna k vozidlu (které se tím stává cisternovým vozidlem) nebo tvoří nedílnou část rámu takového vozidla;

„**Cisterna pro podtlakové vyčerpávání odpadů**“ nesnímatelná cisterna, snímatelná cisterna, cisternový kontejner nebo cisternová výměnná nástavba používané zejména pro přepravu nebezpečných odpadů, se zvláštními konstrukčními vlastnostmi a/nebo zařízením usnadňujícím nakládku (plnění) a vykládku (vyprazdňování) odpadů, jak je uvedeno v kapitole 6.10. Cisterna, která plně odpovídá požadavkům kapitol 6.7 nebo 6.8 se nepovažuje za cisternu pro podtlakové vyčerpávání odpadů;

„**Cisterna přemístitelná**“ multimodální cisterna mající, je-li použita pro přepravu plynů, jak jsou definovány v 2.2.2.1.1, vnitřní objem větší než 450 litrů v souladu s definicemi v kapitole 6.7 nebo v IMDG Code a uvedená pokynem pro přemístitelné cisterny (T-kódem) ve sloupci (10) tabulky A kapitoly 3.2;

„**Cisterna snímatelná**“ cisterna, kromě nesnímatelné cisterny, přemístitelné cisterny, cisternového kontejneru nebo článku bateriového vozidla nebo MEGC, která má vnitřní objem větší než 450 litrů, není konstruována pro přepravu věcí beze změny nákladu a může s ní být normálně manipulováno pouze, když je prázdná;

„**Cisternová výměnná nástavba**“ se považuje za cisternový kontejner;

„**Cisternové vozidlo**“ vozidlo určené pro přepravu kapalin, plynů nebo práškových nebo zrnitých látek a zahrnující jednu nebo více nesnímatelných cistern. Kromě vlastního vozidla nebo je nahrazujících částí podvozku cisternové vozidlo zahrnuje jednu nebo více nádrží, jejich výstroj a upevňovací prvky pro jejich připevnění na vozidlo nebo na části podvozku;

„**Cisternový kontejner**“ přepravní prostředek odpovídající definici kontejneru a zahrnující nádrž a její výstroj včetně zařízení umožňujícího přemístění cisternového kontejneru bez významné změny rovnovážné polohy, používaný pro přepravu plynů, kapalin, práškových nebo zrnitých látek a, je-li použit pro přepravu plynů, jak jsou definovány v 2.2.2.1.1, mající vnitřní objem větší než 0,45 m³ (450 litrů);

POZNÁMKA: Velké nádoby pro volně ložené látky (IBC), které odpovídají požadavkům kapitoly 6.5, se nepovažují za cisternové kontejnery.

„**Cívka**“ (třída 1) zařízení vyrobené z plastu, dřeva, lepenky, kovu nebo jiného vhodného materiálu tvořené centrálním větvením s nebo bez postranních stěn na každém konci větve. Předměty a látky mohou být navinuty na větve a mohou být zadržovány postranními stěnami;

„**CMR**“ Úmluva o přepravní smlouvě v mezinárodní silniční nákladní dopravě (Ženeva, 19. května 1956), se změnami;

„**CSC**“ (International Convention for Safe Containers, Ženeva 1972) viz „**KBK**“

Č

„**Čistá hmotnost výbušniny (NEM)**“ celková hmotnost výbušných látek, bez obalů, pouzder atd. (Čisté množství výbušniny (NEQ), čistý obsah výbušniny (NEC), čistá váha výbušniny (NEW) nebo čistá hmotnost výbušného obsahu se často používají ke sdělení stejného významu);

„**Člen osádky vozidla**“ řidič nebo jakákoliv jiná osoba doprovázející řidiče z bezpečnostních, zabezpečovacích, výcvikových nebo provozních důvodů;

D

„**Dávková intenzita**“ pro přepravu látek třídy 7 je odpovídající velikost dávky vyjádřená v milisievertch za hodinu;

„**Dokumentace cisterny**“ složka obsahující všechny důležité technické informace týkající se cisterny, bateriového vozidla nebo MEGC, jako jsou osvědčení zmíněná v 6.8.2.3, 6.8.2.4 a 6.8.3.4;

„**Dopravce**“ podnik, který provádí přepravu podle nebo bez přepravní smlouvy;

„**Dopravní jednotka**“ motorové vozidlo bez přípojného vozidla nebo jízdní souprava tvořená motorovým a přípojným vozidlem;

„**Dopravní prostředek**“ pro přepravu po silnici nebo po železnici vozidlo nebo železniční vůz;

„**Dřevěná IBC**“ viz „**IBC dřevěná**“

„**Dřevěný sud**“ obal vyrobený z přírodního dřeva, kruhového průřezu, mající vypouklé stěny, tvořený dužinami a víky a opatřený obručemi;

E

„**EN**“ (norma) evropská norma uveřejněná Evropským výborem pro normalizaci (CEN) (CEN, Avenue Marnix 17, B-1000 Brusel);

F

„**Fixační podložka**“ (třída 1) plát kovu, plastu, lepenky nebo jiného vhodného materiálu, který je uložen ve vnitřním obalu, meziobalu nebo vnějším obalu a dosahuje těsného uložení v takovém obalu. Povrch takové fixační podložky může být vytvarován tak, že obaly nebo předměty mohou být vloženy dovnitř, zajištěny a odděleny od sebe navzájem;

„**Flexibilní IBC**“ viz „**IBC flexibilní**“

G

„**GHS**“ (**Globally Harmonized System of Classification and Labelling of Chemicals**) Čtvrté revidované vydání Globálního harmonizovaného systému klasifikace a označování chemických látek, uveřejněného Spojenými národy jako dokument ST/SG/AC.10/30/Rev.4;

H

„**Hermeticky uzavřená cisterna**“ cisterna, určená pro přepravu kapalin, s výpočtovým tlakem nejméně 4 bary, nebo cisterna určená pro přepravu tuhých látek (práškových nebo zrnitých) bez ohledu na její výpočtový tlak, jejíž otvory jsou hermeticky uzavřeny a která:

- není vybavena pojistnými ventily, průtržnými kotouči, jinými podobnými bezpečnostními zařízeními ani podtlakovými ventily; nebo
- není vybavena pojistnými ventily, průtržnými kotouči, jinými podobnými bezpečnostními zařízeními, ale je vybavena podtlakovými ventily, podle požadavků v 6.8.2.2.3
- je vybavena pojistnými ventily s předřazeným průtržným kotoučem podle 6.8.2.2.10, ale není vybavena podtlakovými ventily; nebo
- je vybavena pojistnými ventily s předřazeným průtržným kotoučem podle 6.8.2.2.10 a podtlakovými ventily, podle požadavků v 6.8.2.2.3.

„**Hmotnost kusu**“ Pokud není stanoveno jinak, je to celková (brutto) hmotnost kusu. Hmotnost kontejnerů a cisteren používaných pro přepravu věcí se do celkové hmotnosti nezahrnuje;

„**Hořlavá složka**“ (pro aerosoly) hořlavé kapaliny, hořlavé tuhé látky nebo hořlavé plyny a směsi plynů, jak jsou definovány v poznámkách 1 až 3 pododdílu 31.1.3 části III Příručky zkoušek a kritérií. Tento pojem nezahrnuje pyroforní látky, látky schopné samoohřevu ani látky reagující s vodou. Chemické spalné teplo se určí jednou z následujících metod ASTM D 240, ISO/FDIS 13943: 1999 (E/F) 86.1 až 86.3 nebo NFPA 30B;

„**Hromadná položka**“ položka pro definovanou skupinu látek nebo předmětů (viz pododíl 2.1.1.2, B, C a D);

CH

„**Chráněná IBC**“ viz „**IBC chráněná**“

I

„IAEA“ (International Atomic Energy Agency) Mezinárodní agentura pro atomovou energii (IAEA), (IAEA, P.O. Box 100 – A-1400 Vídeň);

„IBC“ (Intermediate bulk container) tuhý nebo flexibilní přepravní obalový prostředek, který není uveden v kapitole 6.1 a který:

- (a) má vnitřní objem:
 - (i) nejvýše 3 m³ pro tuhé a kapalné látky obalových skupin II a III;
 - (ii) nejvýše 1,5 m³ pro tuhé látky obalové skupiny I, jestliže jsou baleny ve flexibilních IBC, v IBC z tuhého plastu, v kompozitních, lepenkových nebo dřevěných IBC;
 - (iii) nejvýše 3 m³ pro tuhé látky obalové skupiny I, jestliže jsou baleny v kovových IBC;
 - (iv) nejvýše 3 m³ pro radioaktivní látky třídy 7;
- (b) je zkonstruován pro mechanickou manipulaci;
- (c) odolává namáháním při manipulaci a přepravě ověřovacími zkouškami uvedenými v kapitole 6.5 ;

POZNÁMKA 1: Přemístitelné cisterny nebo cisternové kontejnery splňující požadavky kapitoly 6.7 nebo 6.8 se nepovažují za velké nádoby pro volně ložené látky (IBC).

POZNÁMKA 2: Velké nádoby pro volně ložené látky (IBC) splňující požadavky kapitoly 6.5 se nepovažují za kontejnery pro účely ADR.

„IBC dřevěná“ tuhé nebo skládací dřevěné těleso společně s vnitřní vložkou (avšak nikoli s vnitřním obalem) a příslušnou provozní a konstrukční výstrojí;

„IBC flexibilní“ těleso nádoby tvořené fólií, tkaninou nebo jiným flexibilním materiálem nebo kombinací těchto materiálů, a v nezbytném případě vnitřním povlakem nebo vložkou, spolu s příslušnou provozní výstrojí a manipulačním zařízením;

„IBC flexibilní - běžná údržba“ běžné provádění pracovních úkonů na plastových nebo textilních IBC, jako jsou:

- a) čištění; nebo
- b) náhrada neintegrálních součástí, jako jsou neintegrální vložky a uzávěrové pásy, součástmi podle původních specifikací výrobce,

za podmínky, že tyto úkony nepříznivě neovlivní zádržnou funkci flexibilní IBC ani nezmění konstrukční typ;

„IBC chráněná“ (pro kovové IBC) IBC vybavená dodatečnou ochranou proti nárazu mající formu např. vícevrstvé (sendvičové) konstrukce nebo konstrukce s dvojitou stěnou nebo rámu s kovovým mřížovým opláštěním;

„IBC kompozitní s vnitřní nádobou z plastu“ IBC sestávající z konstrukční výstroje tvořené tuhým vnějším pláštěm obklopujícím vnitřní plastovou nádobu s jakoukoliv provozní výstrojí nebo další konstrukční výstrojí. Je provedena tak, že vnitřní nádoba a vnější plášť tvoří po sestavení nedělitelnou jednotku, která se jako taková plní, skladuje, přepravuje nebo vyprazdňuje.

POZNÁMKA: „Plast“, pokud je použit ve spojení s vnitřními nádobami pro kompozitní IBC, zahrnuje jiné polymerní materiály, takové jako je guma.

„IBC kovová“ kovové těleso společně s příslušnou provozní a konstrukční výstrojí;

„IBC lepenková“ lepenkový plášť s nebo bez oddělených horních a dolních vík, popřípadě s vnitřní vložkou (avšak bez vnitřního obalu), a s příslušnou provozní výstrojí a konstrukční výbavou;

„IBC opravená“ kovová IBC, IBC z tuhého plastu nebo kompozitní IBC, která je v důsledku nárazu nebo jakékoli jiné příčiny (např. koroze, zkrhnutí nebo jiného projevu snížené pevnosti ve srovnání s konstrukčním typem) obnovena tak, aby odpovídala konstrukčnímu typu a byla schopna odolat

zkouškám konstrukčního typu. Pro účely ADR se náhrada tuhé vnitřní nádoby kompozitní IBC nádobou, odpovídající původnímu konstrukčnímu typu téhož výrobce, považuje za opravu. Avšak běžné opravy a údržba tuhých IBC se nepovažují za opravu. Tělesa IBC z tuhého plastu ani vnitřní nádoby kompozitních IBC nejsou opravitelné. Flexibilní IBC nejsou opravitelné, ledaže by to schválil příslušný orgán;

„IBC z tuhého plastu“ tuhé těleso z plastu, které může mít konstrukční výstroj společně s příslušnou provozní výstrojí;

„IBC tuhé - běžná údržba“ běžné provádění pracovních úkonů na kovových IBC, IBC z tuhého plastu a na kompozitních IBC, jako jsou:

- a) čištění;
- b) demontáž a nová montáž nebo výměna uzávěrů tělesa (včetně jejich těsnění) nebo provozní výstroje podle původních specifikací výrobce, za podmínky, že se ověří těsnost IBC; nebo
- c) obnova konstrukční výstroje, která nemá přímou zádržnou funkci vzhledem k nebezpečným věcem a vyprazdňovacímu tlaku, tak, aby odpovídala konstrukčnímu typu (např. zesílení noh nebo úchytů pro zvedání), za podmínky, že nebude ovlivněna zádržná funkce IBC;

„IBC rekonstruovaná“ kovová IBC, IBC z tuhého plastu nebo kompozitní IBC, která

- (a) je vyrobena jako typ UN z typu jiného než typ UN;
- (b) je přestavěna z jednoho konstrukčního typu UN na jiný konstrukční typ UN.

Na rekonstruované IBC se vztahují stejné předpisy ADR jako na nové IBC téhož typu (viz definici konstrukčního typu v 6.5.6.1.1);

„ICAO“ International Civil Aviation Organization (Mezinárodní organizace pro civilní letectví) (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada);

„ICAO Technické pokyny“ *Technical Instructions for the Safe Transport of Dangerous Goods by Air*, které doplňují Přílohu 18 Chicagské úmluvy o mezinárodním civilním letectví (Chicago 1944), uveřejněné Mezinárodní organizací pro civilní letectví (ICAO) v Montrealu;

„IMDG Code“ (International Maritime Dangerous Goods Code) předpisy pro mezinárodní námořní přepravu nebezpečných věcí naplňující kapitulu VII, část A Mezinárodní úmluvy o bezpečnosti života na moři – International Convention for the Safety of Life at Sea (SOLAS), vydané Mezinárodní námořní organizací (IMO), Londýn;

„IMO“ International Maritime Organization (Mezinárodní námořní organizace) (IMO, 4 Albert Embankment, London SE1 7SR, United Kingdom);

„Index kritické bezpečnosti (CSI)“ přidělený kusu, přepravnímu obalovému souboru nebo kontejneru se štěpnými látkami pro přepravu látek třídy 7 je číslo, pomocí kterého se omezuje nahromadění kusů, přepravních obalových souborů nebo kontejnerů obsahujících štěpné látky;

„Inspekční organizace“ nezávislá inspekční a zkušební organizace schválená příslušným orgánem;

„ISO“ (norma) mezinárodní norma uveřejněná Mezinárodní organizací pro standardizaci (ISO) (ISO - 1, rue de Varembé, CH-1204 Ženeva 20);

J

„J.N. položka (jinde nejmenovaná položka)“ hromadná položka, k níž mohou být látky, směsi, roztoky nebo předměty přiřazeny, jestliže:

- (a) nejsou jmenovitě uvedeny v tabulce A kapitoly 3.2; a
- (b) vykazují chemické, fyzikální a/nebo nebezpečné vlastnosti odpovídající třídě, klasifikačnímu kódu, obalové skupině a pojmenování a popisu položky j.n.;

„**Jmenovitý (nominální) vnitřní objem nádoby**“ jmenovitý objem nebezpečné látky obsažené v nádobě vyjádřený v litrech. Pro láhve na stlačený plyn musí být jmenovitý vnitřní objem stanoven jako objem vody v láhvi (hydraulický vnitřní objem láhve);

K

„**Kanistr**“ obal z kovu nebo plastu, pravoúhelníkového nebo mnohoúhelníkového průřezu s jedním nebo více otvory;

„**Kapalina**“ látka mající při 50 °C tenzi par nejvýše 300 kPa (3 bary), která není kompletně v plynném stavu při 20 °C a 101,3 kPa a která

- (a) má bod tání nebo bod počátku tání nejvýše 20 °C při tlaku 101,3 kPa nebo
- (b) je kapalná podle zkušební metody ASTM D 4359-90 nebo
- (c) není kašovitá podle kritérií vztahujících se na zkoušku pro stanovení tekutosti (penetrometrická zkouška) popsanou v 2.3.4;

POZNÁMKA: „Přeprovou v kapalném stavu“ ve smyslu požadavků na cisterny se rozumí:

- přeprava kapalin podle výše uvedené definice, nebo
- přeprava tuhých látek podaných k přepravě v roztaveném stavu.

„**KBK**“ Mezinárodní úmluva o bezpečných kontejnerech (International Convention for Safe Containers) (Ženeva, 1972) se změnami, uveřejněná Mezinárodní námořní organizací (International Maritime Organization – IMO), Londýn;

„**Kompozitní IBC s vnitřní nádobou z plastu**“ viz „**IBC kompozitní s vnitřní nádobou z plastu**“

„**Kompozitní obal**“ viz „**Obal kompozitní**“

„**Kompozitní obal (plast)**“ viz „**Obal kompozitní (plast)**“

„**Konstrukční výstroj**“ znamená:

- (a) pro cisterny cisternového vozidla nebo snímatelnou cisternu vnější nebo vnitřní výztužné, upevňovací, ochranné a stabilizační prvky nádrže;
- (b) pro cisterny cisternového kontejneru vnější nebo vnitřní výztužné, upevňovací, ochranné a stabilizační prvky nádrže;
- (c) pro články bateriového vozidla nebo MEGC vnější nebo vnitřní výztužné, upevňovací, ochranné a stabilizační prvky nádrže nebo nádoby;
- (d) pro IBC, kromě flexibilních IBC, výztužné, upevňovací, manipulační, ochranné a stabilizační prvky tělesa (včetně základní palety pro kompozitní IBC s vnitřní nádobou z plastu);

POZNÁMKA: K přemístitelným cisternám viz kapitolu 6.7.

„**Kontejner**“ přepravní prostředek (výměnná skříň nebo jiná podobná konstrukce):

- určený ke stálému používání a dostatečně dimenzovaný pro opakované použití;
- speciálně zkonstruovaný pro usnadnění přepravy věcí jedním nebo více druhy dopravy beze změny nákladu;
- opatřený zařízením pro usnadnění manipulace, zvláště při jeho překládce z jednoho dopravního prostředku na jiný;
- zkonstruovaný tak, aby mohl být lehce naplněn a vyprázdněn;
- mající vnitřní objem nejméně 1 m³, s výjimkou kontejnerů pro přepravu radioaktivních látek.

Výměnná nástavba je kontejner, který má podle Evropské normy EN 283 (vydání 1991) následující charakteristiky:

- z hlediska mechanického namáhání je zkonstruován pouze pro pozemní přepravu na železničním voze nebo silničním vozidle nebo na lodi v systému roll-on roll-off;
- nemůže být stohován;
- může být přemístěn ze silničního vozidla na podpěry a naložen zpět pomocí zařízení vozidla

POZNÁMKA: Pojem „kontejner“ nezahrnuje obvyklé obaly, IBC, cisternové kontejnery ani vozidla. Kontejner však smí být použit jako obal pro přepravu radioaktivních látek.

„**Kontejner malý**“ kontejner, který má buď kterýkoli celkový vnější rozměr (délku, šířku nebo výšku) menší než 1,5 m, nebo vnitřní objem nejvýše 3 m³.

POZNÁMKA: (Vypuštěno)

„**Kontejner MEGC**“ viz „**Vícečlánkový kontejner na plyn (MEGC)**“;

„**Kontejner nekrytý**“ kontejner beze střechy nebo plošinový kontejner;

„**Kontejner pro volně ložené látky**“ přepravní prostředek (včetně všech vložek nebo vyložení) určený pro přepravu tuhých látek, které jsou v přímém styku s tímto přepravním prostředkem. Tento pojem nezahrnuje obaly, IBC, velké obaly ani cisterny;

Kontejner pro volně ložené látky je:

- trvalé povahy a dostatečně pevný, aby byl vhodný pro opakované používání;
- speciálně zkonstruovaný pro usnadnění přepravy věcí jedním nebo více dopravními prostředky bez překládky nákladu;
- opatřený prostředky dovolujícími jejich snadnou manipulaci;
- o vnitřním objemu nejméně 1,0 m³.

Příklady kontejnerů pro volně ložené látky jsou kontejnery, kontejnery pro přepravu volně ložených látek v systému off shore, skipové nádoby, zásobníky na volně ložené látky, výměnné nástavby, násypné kontejnery, valivé kontejnery, ložné komory vozidel.

„**Kontejner pro přepravu volně ložených látek v systému off shore**“ kontejner pro přepravu volně ložených látek, speciálně zkonstruovaný pro opakované použití k přepravě z přibřežních zařízení, do těchto zařízení a mezi nimi navzájem. Kontejner pro přepravu volně ložených látek je zkonstruován a vyroben podle předpisů pro schvalování kontejnerů manipulovaných na širých mořích vypracovaných Mezinárodní námořní organizací (IMO) v dokumentu MSC/Circ.860;

Kontejner s plachtou“ nekrytý kontejner opatřený plachtou pro ochranu nákladu;

„**Kontejner uzavřený**“ plně uzavřený kontejner s pevnou střechou, pevnými bočními stěnami, pevnými koncovými stěnami a podlahou. Tento pojem zahrnuje kontejner s otevíratelnou střechou, pokud je během přepravy uzavřena;

„**Kontejner velký**“

- (a) kontejner, který nespĺňuje definici *malého kontejneru*;
- (b) ve smyslu dohody KBK (CSC) kontejner s takovými rozměry, že ložná plocha mezi čtyřmi vnějšími dolními rohy je buď;
 - (i) nejméně 14 m² (150 čtverečných stop) nebo
 - (ii) nejméně 7 m² (75 čtverečných stop), pokud je vybaven horními rohovými prvky;

„**Kontejmentový systém**“ pro přepravu látek třídy 7 je soubor částí obalu specifikovaný konstruktérem, který má zabránit unikání radioaktivních látek během přepravy;

„**Koš**“ vnější obal s neplnými stěnami;

„**Kovová IBC**“ viz „**IBC kovová**“

„**Kritická teplota**“ teplota, nad níž se nemůže látka vyskytovat v kapalném stavu;

„**Kryogenní nádoba**“ viz „**Nádoba kryogenní**“

„**Kus**“ konečný produkt balení sestávající z obalu nebo velkého obalu nebo IBC a z jejich obsahu, připravený k přepravě. Pojem zahrnuje nádoby na plyny, jak jsou definovány v tomto oddílu, jakož i předměty, které vzhledem k jejich rozměrům, hmotnosti nebo tvaru mohou být přepravovány bez obalu nebo v lůžkách, latěních nebo manipulačních přípravcích. S výjimkou přepravy radioaktivních látek se tento pojem nevztahuje na věci, které se přepravují volně ložené, ani na látky přepravované v cisternách.

POZNÁMKA: K radioaktivním látkám viz 2.2.7.2, 4.1.9.1.1 a 6.4.

L

„**Láhev**“ přemístitelná tlaková nádoba s hydraulickým vnitřním objemem nejvýše 150 litrů (viz též „**Svazek lahví**“).

„**Latění**“ vnější obal s neplnými stěnami;

„**Lepenková IBC**“ viz „**IBC lepenková**“

M

„**Malá nádobka obsahující plyn (plynová kartuše)**“ nádoba pro jedno použití, odpovídající příslušným požadavkům v 6.2.6, obsahující plyn nebo směs plynů pod tlakem. Může být vybavena ventilem.

„**Malý kontejner**“ viz „**Kontejner malý**“

„**Manipulační prvky**“ (pro flexibilní IBC) nosné pásy, popruhy, oka, poutka nebo rámy, které jsou připevněny k tělesu nádoby IBC nebo vytvořeny z materiálu tělesa nádoby;

„**Materiál živočišného původu**“ jsou mrtvá těla zvířat (kadávery), části zvířecích těl nebo krmiva pro zvířata;

„**MEGC**“ viz „**Vícečlánekový kontejner na plyn**“;

„**Měkká ocel**“ ocel s nejnižší pevností v tahu mezi 360 N/mm² a 440 N/mm²;

POZNÁMKA: K přemístitelným cisternám viz kapitulu 6.7.

„**MEMU**“, viz „**Mobilní jednotka připravující výbušniny**“

„**Mobilní jednotka připravující výbušniny**“ jednotka, nebo vozidlo smontované s jednotkou, pro přípravu a nabíjení výbušnin z nebezpečných věcí, které nejsou výbušninami. Jednotka sestává z různých cisteren a kontejnerů pro volně ložené látky a provozní výstroje, jakož i čerpadel a příslušného zařízení. MEMU může mít zvláštní komory pro balené výbušniny;

POZNÁMKA: I když definice MEMU zahrnuje výraz „**příprava a nabíjení výbušnin**“ vztahují se požadavky na MEMU pouze na přepravu a nikoli na přípravu a nabíjení výbušnin.“

„**Motor na palivové články**“ prostředek používaný k pohonu zařízení, který sestává z palivového článku a jeho zásoby paliva, ať už je tato zásoba paliva s palivovým článkem integrována, nebo je od něj oddělena, a zahrnuje veškeré příslušenství nutné k plnění své funkce;

„**Meziobal**“ obal umístěný mezi vnitřními obaly nebo předměty a vnějším obalem;

N

„**Nádoba**“ prostředek pro naplnění a udržení látek nebo předmětů, včetně všech uzávěrů. Tato definice se nevztahuje na nádrže cisteren;

„**Nádoba**“ (třída 1) zahrnuje bedny, láhve, plechovky, sudy, konve nebo pouzdra, včetně jakýchkoli uzávěrů, používané jako vnitřní obal nebo meziobal;

„**Nádoba kryogenní**“ přemístitelná tepelně izolovaná tlaková nádoba pro hluboce zchlazené zkapalněné plyny s hydraulickým vnitřním objemem nejvýše 1000 litrů „(viz též „**Nádoba kryogenní, otevřená**“);

„**Nádoba kryogenní, otevřená**“ přepravitelná tepelně izolovaná nádoba na hluboce zchlazené zkapalněné plyny udržovaná při atmosférickém tlaku průběžným odvětráváním hluboce zchlazeného zkapalněného plynu;

„**Nádoba tlaková**“ společný název, který zahrnuje láhve, trubkové nádoby, tlakové sudy, uzavřené kryogenní nádoby, zásobníkové systémy s hydridem kovu, svazky lahví a záchranné tlakové nádoby;

„**Nádoba trubková**“ (třída 2) přepravitelná bezešvá tlaková nádoba s hydraulickým vnitřním objemem větším než 150 litrů, nejvýše však 3.000 litrů;

„**Nádoba tuhá vnitřní**“ (pro kompozitní IBC) nádoba, která zachovává svůj původní tvar, když je prázdná, bez svých uzávěrů a bez podpory vnějšího pouzdra. Jakákoli vnitřní nádoba, která není „tuhá“, je považována za „flexibilní“;

„**Nádoba vnitřní**“ nádoba vyžadující vnější obal, aby mohla plnit svoji obalovou funkci;

„**Nádrž**“ plášť obsahující látku (včetně otvorů a jejich uzávěrů);

POZNÁMKA 1: Tato definice se nevztahuje na nádoby.

POZNÁMKA 2: K přemístitelným cisternám viz kapitoly 6.7.

„**Nakládce**“ podnik, který

(a) nakládá balené nebezpečné věci, malé kontejnery nebo přemístitelné cisterny do vozidla nebo na vozidlo, nebo do kontejneru; nebo

(b) nakládá kontejner, kontejner pro volně ložené látky, MEGC, cisternový kontejner nebo přemístitelnou cisternu na vozidlo.

„**Nákladní dopravní (přepravní) jednotka**“ vozidlo, kontejner, cisternový kontejner, přemístitelná cisterna nebo MEGC;

POZNÁMKA: Tato definice se vztahuje pouze na aplikaci zvláštního ustanovení 302 kapitoly 3.3 a kapitoly 5.5.2.

„**Nebezpečné reakce**“ jsou

- hoření nebo vývin značného tepla;
- vývin hořlavých, dusivých, hoření podporujících nebo toxických plynů;
- tvoření žíravých látek;
- tvoření nestabilních látek; nebo
- nebezpečné zvýšení tlaku (pouze pro cisterny);

„**Nebezpečné věci**“ látky a předměty, jejichž přeprava je podle dohody ADR vyloučena, nebo připuštěna pouze za podmínek v ní stanovených;

„**Nejvyšší čistá (netto) hmotnost**“ nejvyšší čistá hmotnost obsahu v samostatném obalu nebo nejvyšší součtová hmotnost vnitřních obalů a jejich obsahu vyjádřená v kilogramech;

„Nejvyšší dovolená celková hmotnost“

- (a) (pro IBC) hmotnost IBC a její provozní a konstrukční výstroje a nejvyšší čistá (netto) hmotnost;
- (b) (pro cisterny) vlastní hmotnost cisterny a nejvyšší dovolená užitečná hmotnost;

POZNÁMKA: K přemístitelným cisternám viz kapitolu 6.7.

„Nejvyšší normální provozní tlak“ pro přepravu látek třídy 7 je nejvyšší přetlak při průměrné výšce nad hladinou moře, který může vzniknout v kontejnmentovém systému v průběhu jednoho roku za teplotních podmínek a slunečního záření odpovídajících okolním podmínkám, bez odvětrávání, vnějšího chlazení pomocným systémem nebo provozních kontrol během přepravy;

„Nejvyšší provozní tlak (přetlak)“ nejvyšší z následujících tří hodnot:

- (a) nejvyšší účinný tlak dovolený v cisterně během jejího plnění (nejvyšší dovolený plnicí tlak);
- (b) nejvyšší účinný tlak dovolený v cisterně během jejího vyprazdňování (nejvyšší dovolený vyprazdňovací tlak); a
- (c) účinný přetlak, kterému je cisterna vystavena svým obsahem (včetně cizích plynů, které může obsahovat) při nejvyšší provozní teplotě.

Pokud zvláštní požadavky předepsané v kapitole 4.3 nestanoví jinak, číselná hodnota tohoto provozního tlaku (přetlaku) nesmí být nižší než tenze par (absolutní tlak) plnicí látky při 50 °C.

Pro cisterny vybavené pojistnými ventily (s nebo bez průtržného kotouče) se však nejvyšší provozní tlak (přetlak) musí rovnat předepsanému otevíracímu tlaku takových pojistných ventilů. Tento požadavek se nevztahuje na cisterny pro přepravu stlačených, zkapalněných nebo rozpuštěných plynů třídy 2 ;

POZNÁMKA 1: K přemístitelným cisternám viz kapitolu 6.7.

POZNÁMKA 2: K uzavřeným kryogenním nádobám viz poznámku k 6.2.1.3.6.5.

„Nejvyšší vnitřní objem“ nejvyšší vnitřní objem nádob nebo obalů včetně IBC a velkých obalů, vyjádřený v krychlových metrech nebo litrech;

„Nekryté vozidlo“ vozidlo, jehož ložná plocha je tvořena jen plošinou nebo je opatřena pouze bočnicemi a zadním čelem;

„Nekrytý kontejner“ viz „Kontejner nekrytý“

„Nesnímatelná cisterna“ viz „Cisterna nesnímatelná“

O

„Obal“ jedna nebo více nádob a všechny jiné součásti nebo materiály nezbytné k tomu, aby nádoby mohly plnit svou obalovou funkci a jiné bezpečnostní funkce;

„Obal kompozitní (sklo, porcelán nebo kamenina)“ obal sestávající z vnitřní nádoby ze skla, porcelánu nebo kameniny a z vnějšího obalu (z kovu, dřeva, lepenky, plastu, pěnového plastu atd.). Po sestavení tvoří tento obal nedělitelnou jednotku, která se jako taková plní, skladuje, přepravuje a vyprazdňuje;

POZNÁMKA: „Vnitřní část kompozitního obalu“ je běžně nazývána „vnitřní nádobou“. Například „vnitřní část“ 6HA1 (kompozitní obal, plast) je takovou „vnitřní nádobou“, neboť není konstruována, aby plnila obalovou funkci bez svého „vnějšího obalu“, a není proto vnitřním obalem.

„Obal kompozitní (plast)“ sestává z vnitřní nádoby z plastu a vnějšího obalu (z kovu, lepenky, překližky atd.). Po sestavení tvoří tento obal nedělitelnou jednotku, která se jako taková plní, skladuje, přepravuje a vyprazdňuje;

POZNÁMKA: Viz poznámka u „Kompozitní obal (sklo, porcelán nebo kamenina)“.

„**Obal obnovený (rekondiciovaný obal)**“ znamená zejména

- (a) kovové sudy, které jsou:
 - (i) vyčištěny až na původní materiál jejich konstrukce, zbaveny všech svých předchozích obsahů, vnější a vnitřní koroze a je z nich odstraněn vnější nátěr a bezpečnostní značky;
 - (ii) obnoveny do původního tvaru a obrysů, s přehyby, pokud jsou, vyrovnanými a utěsněnými a s vyměněnými všemi porušenými těsněními, která nejsou nedílnou součástí obalu; a
 - (iii) zkontrolovány po vyčištění, avšak před opětovným nátěrem, s vyřazením obalů, které jsou viditelně poškozeny, mají značně zmenšenou tloušťku materiálu, jeví únavu materiálu, mají poškozené závity nebo uzávěry nebo jiné závažné závady.
- (b) plastové sudy nebo kanystry, které:
 - (i) jsou vyčištěny až na původní materiál jejich konstrukce, zbaveny všech svých předchozích obsahů a je z nich odstraněn vnější nátěr a bezpečnostní značky;
 - (ii) mají vyměněna všechna porušená těsnění, která nejsou nedílnou součástí obalu; a
 - (iii) jsou zkontrolovány po vyčištění s vyřazením obalů s viditelným poškozením, jako trhlinami, průhyby nebo prasklinami, nebo poškozenými závity nebo uzávěry nebo jinými závažnými závadami;

„**Obal opakovaně použitelný**“ obal, který byl prohlédnut a shledán bez závad, které by mohly ovlivnit jeho schopnost podrobit se funkčním zkouškám. Tento pojem zahrnuje zejména ty obaly, které se znovu naplňují stejným nebo podobným snášenlivým obsahem a jsou přepravovány v distribučním řetězci řízeném odesilatelem produktu;

„**Obal prachotěsný**“ nepropustný obal pro udržení suchého obsahu včetně jemné tuhé látky (prášku) vznikající během přepravy.

„**Obal rekonstruovaný**“ znamená zejména

- (a) kovové sudy, které jsou:
 - (i) vyrobeny jako typ UN odpovídající požadavkům kapitoly 6.1 z typu jiného než typ UN;
 - (ii) rekonstruovány z jednoho typu UN odpovídajícího požadavkům kapitoly 6.1 na jiný typ UN; nebo
 - (iii) podrobny výměně komponentů, které jsou jejich nedílnou konstrukční součástí (takových jako jsou neodnímatelná víka);
- (b) plastové sudy, které jsou:
 - (i) rekonstruovány z jednoho typu UN na jiný typ UN (např. 1H1 na 1H2); nebo
 - (ii) podrobny výměně komponentů, které jsou jejich nedílnou konstrukční součástí.

Na rekonstruované sudy se vztahují požadavky kapitoly 6.1, které se vztahují na nové sudy téhož typu.

„**Obal skupinový**“ kombinace obalů vytvořená pro účely přepravy, sestávající z jednoho nebo více vnitřních obalů, které jsou vloženy do jednoho vnějšího obalu podle pododdílu 4.1.1.5;

POZNÁMKA: „Vnitřky skupinových obalů“ jsou vždy nazývány „vnitřní obaly“ a nikoli „vnitřní nádoby“. Skleněná láhev je příkladem takového „vnitřního obalu“.

„**Obal velký**“ obal tvořený vnějším obalem, který obsahuje předměty nebo vnitřní obaly a který

- (a) je zkonstruován pro mechanickou manipulaci;

- (b) převyšuje 400 kg čisté (netto) hmotnosti nebo 450 litrů vnitřního objemu, ale má objem nejvýše 3 m³;

„Obal velký, opakovaně použitelný“ velký obal k opakovanému plnění, který byl prohlédnut a shledán bez závad, které by mohly ovlivnit jeho schopnost vyhovět provozním zkouškám; tento pojem zahrnuje zejména ty velké obaly, které se znovu plní stejným nebo podobným snášenlivým obsahem a jsou přepravovány v distribučním řetězci řízeném odesílatelem produktu;

„Obal velký, rekonstruovaný“ velký obal z kovu nebo z tuhého plastu, který

- (a) je vyroben jako typ UN z typu jiného než typu UN; nebo
(b) je rekonstruován z jednoho konstrukčního typu UN na jiný konstrukční typ UN.

Na rekonstruované velké obaly se vztahují tytéž požadavky ADR, které se vztahují na nové velké obaly téhož typu (viz též definici konstrukčního typu v 6.6.5.1.2);

„Obal vnější“ vnější ochrana kompozitního nebo skupinového obalu včetně absorpčních a fixačních materiálů a všech ostatních součástí, které jsou nutné, aby obklopile a chránily vnitřní nádoby nebo vnitřní obaly;

„Obal vnitřní“ obal, pro jehož přepravu se vyžaduje vnější obal;

„Obal z jemného plechu“ obal s kruhovým, elipsovitým, pravoúhlým nebo mnohoúhelníkovým průřezem (také kónický), jakož i obal s hrdlem kuželového tvaru nebo obal kelímkovitého tvaru z jemného plechu o tloušťce stěny menší než 0,5 mm (např. pocínovaného), s plochým nebo vypouklým dnem, s jedním nebo více otvory, který nespadá pod definici sudu nebo kanystru;

„Obal záchranný“ zvláštní obal, do kterého se ukládají poškozené, vadné nebo netěsnící kusy nebo kusy neodpovídající předpisům obsahující nebezpečné věci, nebo nebezpečné věci, které se rozsypaly nebo unikly, za účelem jejich přepravy k obnově nebo likvidaci;

„Obalová skupina“ skupina, ke které mohou být pro účely balení přiřazeny určité látky podle jejich stupně nebezpečnosti. Obalové skupiny mají následující významy, které jsou podrobně vysvětleny v části 2:

Obalová skupina I:	látky velmi nebezpečné;
Obalová skupina II:	látky středně nebezpečné;
Obalová skupina III:	látky málo nebezpečné.

POZNÁMKA: *Určité předměty obsahující nebezpečné věci jsou rovněž přiřazeny k obalové skupině.*

„Obnovený obal“ viz „Obal obnovený“

„Odesílatel“ podnik, který odesílá nebezpečné věci buď pro sebe, nebo pro třetí stranu. Pokud je přeprava prováděna na základě přepravní smlouvy, odesílatelem je odesílatel uvedený v této smlouvě;

„Odpady“ látky, roztoky, směsi nebo předměty, které nemohou být používány jako takové, které se však přepravují pro další zpracování, uložení na skládce nebo likvidaci spálením nebo jinými dostupnými metodami;

„Opakovaně použitelný obal“ viz „Obal opakovaně použitelný“

„Opravená IBC“ viz „IBC opravená“

P

„Palivový článek“ elektrochemický prostředek, který přeměňuje chemickou energii paliva na elektrickou energii, teplo a produkty reakce;

„Plastová tkanina“ (pro flexibilní IBC) materiál vyrobený z pásků nebo vláken vhodného plastu;

„Plnicí tlak“ nejvyšší tlak skutečně vyvinutý v cisterně při jejím plnění pod tlakem;

„**Plnič**“ jakýkoliv podnik, který nakládá (plní) nebezpečné věci do cisterny (cisternového vozidla, snímatelné cisterny, přemístitelné cisterny nebo cisternového kontejneru) a/nebo do vozidla, velkého kontejneru nebo malého kontejneru pro volně ložené látky, nebo do bateriového vozidla nebo MEGC;

„**Plyn**“ látka, která:

- (a) při 50 °C má tenzi par větší než 300 kPa (3 bary); nebo
- (b) je kompletně v plynném stavu při 20 °C při normálním tlaku 101,3 kPa;

„**Plynová kartuše**“ viz „**Malá nádobka obsahující plyn**“;

„**Podnik**“ jakákoli fyzická nebo právnická osoba, ať již zisková nebo nezisková, sdružení nebo skupina osob bez právní subjektivity, ať již ziskové nebo neziskové, nebo instituce s vlastní právní subjektivitou nebo závislá na správním orgánu, který má právní subjektivitu;

„**Podtlakový ventil**“ pružinové zařízení, které je uváděno automaticky v činnost tlakem a jehož účelem je ochrana cisterny proti nežádoucímu vnitřnímu podtlaku;

„**Pojistný ventil**“ pružinové zařízení automaticky ovládané tlakem, jehož účelem je chránit cisternu proti nežádoucímu zvýšení vnitřního tlaku;

„**Posuzování shody**“ je proces ověřování shody výrobku podle ustanovení oddílů 1.8.6 a 1.8.7 vztahujících se na schvalování konstrukčního typu, dohled nad výrobou a na první inspekci a zkoušení;

„**Prachotěsný obal**“ viz „**Obal prachotěsný**“

„**Přemístitelná cisterna**“ viz „**Cisterna přemístitelná**“

„**Přepravní index (TI)**“ přidělený kusu, přepravnímu obalovému souboru nebo kontejneru, nebo nezabalené látce LSA-I nebo nezabalenému předmětu SCO-I pro přepravu látek třídy 7 je číslo, kterého se používá ke kontrole expozice záření;

„**Přes nebo do**“ pro přepravu látek třídy 7 znamená přes zemi nebo do zemi, v níž nebo do nichž je zásilka přepravována, ale výslovně vylučuje země, „nad“ nimiž je zásilka přepravována letecky, pokud nejsou v těchto zemích podle letového řádu žádné zastávky;

„**Provozní tlak**“ stabilizovaný tlak stlačeného plynu při vztažné teplotě 15 °C v naplněné tlakové nádobě;

POZNÁMKA: K cisternám viz „**Nejvyšší provozní tlak**“.

„**Provozní výstroj**“

- (a) cisteren znamená plnicí a vyprazdňovací, větrací, bezpečnostní, ohřívací a tepelně izolační zařízení a měřicí přístroje;
- (b) článků bateriového vozidla nebo MEGC znamená plnicí a vyprazdňovací zařízení, včetně propojovacího potrubí, bezpečnostní zařízení a měřicí přístroje;
- (c) IBC znamená plnicí a vyprazdňovací zařízení a jakékoli tlak vyrovnávající nebo větrací, bezpečnostní, ohřívací a tepelně izolační zařízení a měřicí přístroje;

POZNÁMKA: K přemístitelným cisternám viz kapitola 6.7.

„**Provozovatel cisternového kontejneru nebo přemístitelné cisterny**“ podnik, na jehož jméno je registrován nebo připuštěn k provozu cisternový kontejner nebo přemístitelná cisterna;

„**Předpis EHK**“ předpis tvořící přílohu k dohodě o přijetí jednotných podmínek pro homologaci (ověřování shodnosti) a vzájemné uznávání homologace výstroje a součástí motorových vozidel (Dohoda 1958, v úplném znění, jak vyplývá z pozdějších změn a doplnění);

„**Přeprava**“ přemístění nebezpečných věcí, včetně zastávek nezbytných vzhledem k dopravním podmínkám a včetně všech dob, po které jsou nebezpečné věci uloženy ve vozidlech, cisternách

nebo v kontejnerech a které jsou nezbytné vzhledem k provozním podmínkám před, během a po přemístění.

Tato definice zahrnuje též krátké dočasné skladování nebezpečných věcí za účelem změny druhu dopravního prostředku (překládku). Tato definice se vztahuje na překládku, pokud jsou přepravní doklady, v nichž je uvedeno místo odeslání a místo určení, předloženy na požádání a pokud kusy a cisterny nejsou otevřeny během krátkodobého skladování, kromě kontroly provedené příslušnými orgány;

„Přeprava ve volně loženém stavu“ přeprava tuhých látek nebo předmětů bez obalů ve vozidlech nebo kontejnerech. Tento pojem se nevztahuje na věci, které se přepravují jako kusy, ani na látky přepravované v cisternách;

„Přepravní obalový soubor“ vnější obalový prostředek používaný jedním odesilatelem v případě třídy 7 obsahující jeden nebo více kusů pevně spojených do jedné manipulační jednotky pro usnadnění manipulace a uložení při přepravě;

Příklady přepravních obalových souborů:

- (a) úložná plošina, jako je paleta, na které jsou uloženy nebo navrstveny jeden nebo více kusů a zajištěny plastovou stahovací páskou, smršťovací nebo průtažnou fólií nebo jinými vhodnými prostředky; nebo
- (b) vnější ochranný obal jako bedna nebo latění;

„Příjemce“ příjemce uvedený v přepravní smlouvě. Jestliže příjemce určí třetí osobu v souladu s ustanoveními platnými pro přepravní smlouvu, je tato osoba považována za příjemce ve smyslu ADR. Pokud je přeprava prováděna bez přepravní smlouvy, podnik, který přebírá nebezpečné věci po příjezdu, se považuje za příjemce;

„Příručka zkoušek a kritérií“ páté revidované vydání "United Nations Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, publikované Organizací spojených národů (ST/SG/AC.10/11/Rev.5 se změnami uvedenými v dokumentu ST/SG/AC.10/11/Rev.5/Amend. 1);

„Příslušný orgán“ úřad nebo jiné instituce určené v každém státě a pro každý jednotlivý případ v souladu s jeho vnitrostátním právním řádem;

„Pytel“ poddajný obal z papíru, plastové fólie, textilu, tkaniny nebo jiných vhodných materiálů;

R

„Radioaktivní obsah“ pro přepravu látek třídy 7 jsou radioaktivní látky spolu se všemi kontaminovanými nebo aktivovanými tuhými látkami, kapalinami a plyny uvnitř obalu;

„Recyklovaný plast“ materiál získaný z použitých průmyslových obalů, který byl vycištěn a připraven pro výrobu nových obalů;

„Referenční ocel“ ocel s mezí pevnosti 370 N/mm² a prodloužením při přetržení o 27 %;

„Rekonstruovaná IBC“ viz **„IBC rekonstruovaná“**

„Rekonstruovaný obal“ viz **„Obal rekonstruovaný“**

„RID“ Řád pro mezinárodní železniční přepravu nebezpečných věcí [příloha 1 k přípojkou B (Jednotné právní předpisy pro Smlouvu o mezinárodní železniční přepravě zboží - CIM) Úmluvy o mezinárodní železniční přepravě - COTIF];

Ř

„Řízená teplota“ nejvyšší teplota, při které může být bezpečně přepravován organický peroxid nebo samovolně se rozkládající látka;

S

„**SADT**“ viz „*Teplota samourchujícího se rozkladu*“;

„**Schválení**“

„**Vícestranné schválení**“ pro přepravu látek třídy 7 je schválení, které bylo uděleno příslušným orgánem buď země původu vzoru, nebo země odeslání, podle toho, co je relevantní, a také příslušným orgánem každého státu, přes který nebo do kterého má být příslušná zásilka přepravena.

„**Jednostranné schválení**“ pro přepravu látek třídy 7 je schválení vzoru, které uděluje jen příslušný orgán země původu vzoru. Není-li země původu smluvním státem ADR, musí být toto schválení uznáno příslušným orgánem prvního členského státu ADR, který přijde se zásilkou do styku (viz 6.4.22.6).

„**Skupinový obal**“ viz „**Obal skupinový**“

„**Směrnice ES**“ rozhodnutí příslušných orgánů Evropského společenství, která jsou závazná, pokud se týče dosažených výsledků, pro všechny členské státy, jimž jsou adresována, avšak volba formy a metod je ponechána národním orgánům;

„**Snímatelná cisterna**“ viz „**Cisterna snímatelná**“

„**Stabilizovaný tlak**“ tlak obsahu tlakové nádoby v tepelné a difúzní rovnováze;

„**Stupeň plnění**“ poměr hmotnosti plynu k hmotnosti vody při 15°C, která by zcela naplnila tlakovou nádobu připravenou pro použití;

„**Sud**“ válcovitý obal z kovu, lepenky, plastu, překližky nebo jiných vhodných materiálů s plochými nebo oblými víky a dny (základnami). Pod tento pojem patří též obaly jiných tvarů, např. oblé obaly s hrdlem kuželovitého tvaru nebo obaly kelímkovitého tvaru. Pod tento pojem nepatří dřevěné sudy a kanystry.

„**Svazek lahví**“ soubor lahví, které jsou navzájem pevně spojeny a propojeny sběrným potrubím a jsou přepravovány jako jeden celek. Celkový hydraulický vnitřní objem nesmí přesáhnout 3 000 litrů, u svazku lahví určených pro přepravu toxických plynů třídy 2 (skupin začínajících písmenem T podle 2.2.2.1.3) je tento hydraulický vnitřní objem omezen na 1.000 litrů;

T

„**Technický název**“ uznávaný chemický, popřípadě biologický název nebo jiný název běžně používaný ve vědeckých a technických příručkách, časopisech a textech (viz 3.1.2.8.1.1);

„**Těleso nádoby**“ (pro všechny druhy IBC kromě kompozitních IBC) vlastní nádoba, včetně otvorů a jejich uzávěrů, avšak bez provozní výstroje;

„**Teplota samourchujícího se rozkladu**“ (SADT) nejnižší teplota, při níž může nastat samourchující se rozklad látky v obalu použitém při přepravě. Ustanovení pro určení SADT a účinků zahřátí pod uzavřením jsou uvedeny v části II Příručky zkoušek a kritérií (Manual of Tests and Criteria);

„**Tlaková nádoba**“ viz „**Nádoba tlaková**“

„**Tlakový sud**“ svařovaná přemístitelná tlaková nádoba s hydraulickým vnitřním objemem větším než 150 litrů, nejvýše však 1000 litrů (např. válcová nádoba vybavená obručemi pro válení a nádoba na lyžínách nebo v rámu);

„**Trubková nádoba**“ viz „**Nádoba trubková**“

„**Tuhá látka**“:

(a) látka s bodem tání nebo bodem počátku tání vyšším než 20°C při tlaku 101,3 kPa; nebo

- (b) látka, která není kapalná podle zkušební metody ASTM D 4359-90 nebo která je pastovitá podle kritérií vztahujících se na zkoušku tekutosti (penetrometrická zkouška) popsanou v oddílu 2.3.4.;

„**Tuhá vnitřní nádoba**“ viz „**Nádoba tuhá vnitřní**“

U

„**UIC**“ International Union of Railways (Mezinárodní železniční unie) (UIC, 16 rue Jean Rey, F-75015 Paris, France);

„**UN číslo**“ čtyřmístné identifikační číslo látky nebo předmětu převzaté ze Vzorových předpisů OSN;

„**UNECE**“ United Nations Economic Commission for Europe (Evropská hospodářská komise OSN – EHK OSN) (UNECE, Palais des Nations, 8-14 avenue de la Paix, CH-1211 Geneve 10, Suisse);

„**Uzávěr**“ zařízení uzavírající otvor v nádobě;

„**Uzavírající systém**“ pro přepravu látek třídy 7 je konstruktérem specifikovaný a příslušným orgánem uznávaný soubor štěpných látek a částí obalů, který je určen pro udržení kritické bezpečnosti;

„**Uzavřené vozidlo**“ vozidlo s uzavíratelnou nástavbou;

„**Uzavřený kontejner**“ viz „**Kontejner uzavřený**“

V

„**Velká nádoba pro volně ložené látky (IBC)**“ viz „**IBC**“

„**Velký obal**“ viz „**Obal velký**“

„**Velký kontejner**“ viz „**Kontejner velký**“

„**Vícečlankový kontejner na plyn**“ (MEGC) přepravní prostředek obsahující články, které jsou navzájem propojeny spojovacím potrubím a namontovány na rámu. Následující články se považují za články vícečlankového kontejneru na plyn: láhve, trubkové nádoby, tlakové sudy a svazky lahví, jakož i cisterny pro přepravu plynů, jak jsou definovány v 2.2.2.1.1, s vnitřním objemem větším než 450 litrů;

POZNÁMKA: K UN MEGC viz kapitola 6.7.

„**Vložka**“ hadice nebo pytel vložený do obalu, včetně velkých obalů nebo IBC, které však netvoří jeho nedílnou součást, včetně uzávěrů jeho otvorů;

„**Vnější obal**“ viz „**Obal vnější**“

„**Vnitřní nádoba**“ viz „**Nádoba vnitřní**“

„**Vnitřní obal**“ viz „**Obal vnitřní**“

„**Vnitřní objem nádrže nebo komory nádrže**“ cisterny je celkový vnitřní objem *nádrže* nebo komory *nádrže* vyjádřený v litrech nebo kubických metrech. Není-li možno *nádrž* nebo komoru *nádrže* z důvodů jejího tvaru nebo konstrukce zcela naplnit, musí se pro určení stupně plnění a pro značení cisterny použít tento snížený vnitřní objem“;

„**Vozidlo s plachtou**“ nekryté vozidlo opatřené plachtou pro ochranu nákladu;

„**Vozidlo**“ viz „**Bateriové vozidlo**“, „**Uzavřené vozidlo**“, „**Nekryté vozidlo**“, „**Vozidlo s plachtou**“ a „**Cisternové vozidlo**“;

„**Vozová zásilka**“ každá zásilka od jednoho odesílatele, pro kterou je výlučně vyhrazeno použití vozidla nebo velkého kontejneru, přičemž všechny úkony spojené s nakládkou a vykládkou se vykonávají podle příkazů odesílatele nebo příjemce;

POZNÁMKA: Odpovídající pojem pro třídu 7 je „výlučné použití“.

„**Vykládce**“ podnik, který

- (a) snímá kontejner, kontejner pro volně ložené látky, MEGC, cisternový kontejner nebo přemístitelnou cisternu z vozidla; nebo
- (b) vykládá balené nebezpečné věci, malé kontejnery nebo přemístitelné cisterny z vozidla nebo kontejneru; nebo
- (c) vyprazdňuje nebezpečné věci z cisterny (cisternového vozidla, snímatelné cisterny, přemístitelné cisterny nebo cisternového kontejneru) nebo z bateriového vozidla, MEMU nebo MEGC nebo z vozidla, velkého kontejneru nebo malého kontejneru pro přepravu ve volně loženém stavu nebo z kontejneru pro volně ložené látky;

„**Výlučné použití**“ pro přepravu látek třídy 7 je výhradní použití vozidla nebo velkého kontejneru jediným odesílatelem, přičemž všechny postupy nakládky a vykládky před přepravou, během přepravy a po přepravě jsou prováděny podle pokynů odesílatele nebo příjemce;

„**Výměnná nástavba**“ viz „**Kontejner**“;

„**Výpočtový tlak**“ teoretický tlak rovný nejméně zkušebnímu tlaku, který může více nebo méně překročit provozní tlak podle stupně nebezpečnosti představovaného přepravovanou látkou. Slouží výhradně pro určení tloušťky stěn nádrže, nezávisle na jakémkoli vnitřním nebo vnějším výtuzňem zařízením;

POZNÁMKA: K přemístitelným cisternám viz kapitolu 6.7.

„**Vyprazdňovací tlak**“ nejvyšší tlak skutečně vyvinutý v cisterně při jejím vyprazdňování pod tlakem;

„**Vytápěcí systém s vnitřním spalováním**“ zařízení používající přímo kapalné nebo plynné palivo a nepoužívající odpadní teplo z hnacího motoru vozidla;

„**Vzor**“ pro přepravu látek třídy 7 je popis radioaktivní látky zvláštní formy, nízkodisperzní radioaktivní látky, kusu nebo obalu, který umožňuje jejich úplnou identifikaci. Popis může obsahovat specifikace, konstrukční výkresy, zprávy, ze kterých je zřejmý soulad s právními předpisy, a jinou relevantní dokumentaci;

„**Vzorové předpisy OSN**“ vzorové předpisy v příloze k sedmáctému revidovanému vydání Doporučení pro přepravu nebezpečných věcí OSN, vydaného Organizací spojených národů (ST/SG/AC.10/1/Rev.17);

Z

„**Záchranná tlaková nádoba**“ tlaková nádoba s hydraulickým vnitřním objemem nejvýše 1000 litrů, do které se ukládají poškozené, vadné nebo netěsnící tlakové nádoby nebo tlakové nádoby neodpovídající předpisům pro jejich přepravu, např. za účelem jejich obnovy nebo likvidace;

„**Záchranný obal**“ viz „**Obal záchranný**“

„**Zajištění kvality**“ systematický program inspekce a kontrol uplatňovaný jakoukoli organizací nebo institucí, jehož cílem je poskytnout přiměřenou záruku, že bezpečnostní požadavky ADR jsou v praxi plněny;

„**Zásobníkový systém s hydridem kovu**“ samostatný kompletní systém pro akumulaci vodíku, včetně nádoby, hydridu kovu, zařízení pro vyrovnávání tlaku, uzavíracího ventilu, provozní výstroje a vnitřních komponentů, používaný pouze pro přepravu vodíku;

„**Záruka plnění předpisů**“ (radioaktivní látky) systematický program opatření uplatňovaných příslušným orgánem, jehož cílem je zajistit plnění požadavků ADR v praxi;

„**Zásilka**“ jakýkoli kus nebo více kusů, nebo náklad nebezpečných věcí předaný odesilatelem k přepravě;

„**Zkapalněný ropný plyn (LPG)**“ nízkotlaký zkapalněný plyn složený z jednoho nebo více lehkých uhlovodíků, které jsou přiřazeny jen k UN číslům 1011, 1075, 1965, 1969 nebo 1978 a které se skládají hlavně z propanu, propenu, butanu, izomerů butanu, butenu se stopami jiných uhlovodíkových plynů;

POZNÁMKA 1: *Hořlavé plyny přiřazené k jiným UN číslům se nepovažují za LPG.*

POZNÁMKA 2: *K UN 1075 viz POZNÁMKU 2 pod 2F, UN 1965, v tabulce pro zkapalněné plyny ve 2.2.2.3.*

„**Zkouška těsnosti**“ zkouška pro ověření těsnosti cisterny, obalu nebo IBC, jakož i výstroje a uzávěrů;

POZNÁMKA: *K přemístitelným cisternám viz kapitolu 6.7.*

„**Zkušební tlak**“ tlak, který se musí použít během první a periodické tlakové zkoušky.;

POZNÁMKA : *K přemístitelným cisternám viz kapitolu 6.7.*

Ž

„**Žadatel**“ je v případě posuzování shody výrobce nebo jeho oprávněný zástupce ve státě smluvní strany. V případě periodických inspekcí, meziperiodických inspekcí a mimořádných kontrol se žadatelem rozumí zkušebna, provozovatel nebo jejich oprávněný zástupce ve státě smluvní strany.

POZNÁMKA: *Výjimečně smí o posouzení shody požádat třetí strana (např. provozovatel cisternového kontejneru podle definice v oddílu 1.2.1).*

1.2.2 Měrové jednotky

1.2.2.1 V dohodě ADR se používá těchto měrových jednotek^a

Veličina	Jednotka SI ^b	Přípustná doplňková (vedlejší) jednotka	Vztah mezi jednotkami
Délka	m (metr)	-	-
Plošný obsah	m ² (čtverečný metr)	-	-
Objem	m ³ (krychlový metr)	l ^c (litr)	1 l = 10 ⁻³ m ³
Čas	s (sekunda)	min. (minuta) h (hodina) d (den)	1 min. = 60 s 1 h = 3 600 s 1 d = 86 400 s
Hmotnost	kg (kilogram)	g (gram) t (tuna)	1 g = 10 ⁻³ kg 1 t = 10 ³ kg
Hustota	kg/m ³	kg/l	1 kg/l = 10 ³ kg/m ³
Teplota	K (kelvin)	°C (stupeň Celsia)	0 °C = 273.15 K
Teplotní rozdíl	K (kelvin)	°C (stupeň Celsia)	1 °C = 1 K
Síla	N (newton)	-	1 N = 1 kg.m/s ²
Tlak	Pa (pascal)	-	1 Pa = 1 N/m ²
Mechanické napětí	N/m ²	bar (bar)	1 bar = 10 ⁵ Pa
Práce	J (joule)	N/mm ² kWh (kilowatthodina)	1 N/mm ² = 1 MPa 1 kWh = 3,6 MJ
Energie	J (joule)	eV (elektronvolt)	1 J = 1 N.m = 1 W.s 1 eV = 0,1602 . 10 ⁻¹⁸ J
Teplota	-	-	1 W = 1 J/s = 1 N.m/s
Výkon	W (watt)	-	1 mm ² /s = 10 ⁻⁶ m ² /s
Viskozita kinematická	m ² /s	mm ² /s	1 mPa.s = 10 ⁻³ Pa.s
Viskozita dynamická	Pa.s	mPa.s	
Aktivita	Bq (bequerel)		
Ekvivalent dávkové intenzity	Sv (sievert)		

^a Pro přepočítání dosud používaných jednotek na jednotky SI platí následující zaokrouhlené hodnoty:

<u>Síla</u>		<u>Napětí</u>	
1 kg	= 9,807 N	1 kg/mm ²	= 9,807 N/mm ²
1 N	= 0,102 kg	1 N/mm ²	= 0,102 kg/mm ²
<u>Tlak</u>			
1 Pa	= 1 N/m ²	= 10 ⁻⁵ bar	= 1,02 x 10 ⁻⁵ kg/cm ² = 0,75 x 10 ⁻² torr
1 bar	= 10 ⁵ Pa	= 1,02 kg/cm ²	= 750 torr
1 kg/cm ²	= 9,807 x 10 ⁴ Pa	= 0,9807 bar	= 736 torr
1 torr	= 1,33 x 10 ² Pa	= 1,33 x 10 ⁻³ bar	= 1,36 x 10 ⁻³ kg/cm ²
<u>Práce, energie, teplo</u>			
1 J	= 1 N.m	= 0,278 x 10 ⁻⁶ kWh	= 0,102 kgm = 0,239 x 10 ⁻³ kcal
1 kWh	= 3,6 x 10 ⁶ J	= 367 x 10 ³ kgm	= 860 kcal
1 kgm	= 9,807 J	= 2,72 x 10 ⁻⁶ kWh	= 2,34 x 10 ⁻³ kcal
1 kcal	= 4,19 x 10 ³ J	= 1,16 x 10 ⁻³ kWh	= 427 kgm
<u>Výkon</u>		<u>Kinematická viskozita</u>	
1 W	= 0,102 kgm/s	= 0,86 kcal/h	1 m ² /s = 10 ⁴ St (stoků)
1 kgm/s	= 9,807 W	= 8,43 kcal/h	1 St = 10 ⁻⁴ m ² /s
1 kcal/h	= 1,16 W	= 0,119 kgm/s	
<u>Dynamická viskozita</u>			
1 Pa.s	= 1 N.s/m ²	= 10 P (poise)	= 0,102 kg.s/m ²
1 P	= 0,1 N.s/m ²	= 0,1 N.s/m ²	= 1,02 x 10 ⁻² kg.s/m ²
1 kg.s/m ²	= 9,807 Pa.s	= 9,807 N.s/m ²	= 98,07 P

- b) *Mezinárodní soustava měrových jednotek SI je výsledkem usnesení Generální konference pro míry a váhy (Adresa: Pavillon de Breteuil, Parc de St-Cloud, F-92 310 Sèvres).*
- c) *Namísto zkratky "l" pro litr při použití psacího stroje, u něhož není rozdíl mezi písmenem „l“ a číslicí „1“, je dovoleno používat zkratky "L".*

Desetinné násobky a díly jednotky mohou být tvořeny těmito předponami nebo značkami umístěnými před názvem nebo před značkou jednotky:

<u>Činitel</u>			<u>Předpona</u>	<u>Značka</u>
1 000 000 000 000 000 000	= 10^{18}	trilion	exa	E
1 000 000 000 000 000	= 10^{15}	biliarda	peta	P
1 000 000 000 000	= 10^{12}	bilion	tera	T
1 000 000 000	= 10^9	miliarda	giga	G
1 000 000	= 10^6	milión	mega	M
1 000	= 10^3	tisíc	kilo	K
100	= 10^2	sto	hekto	H
10	= 10^1	deset	deka	da
0.1	= 10^{-1}	desetina	deci	d
0.01	= 10^{-2}	setina	centi	c
0.001	= 10^{-3}	tisícina	milli	m
0.000 001	= 10^{-6}	miliónovina	mikro	μ
0.000 000 001	= 10^{-9}	miliardtina	nano	n
0.000 000 000 001	= 10^{-12}	bilióntina	piko	p
0.000 000 000 000 001	= 10^{-15}	biliardtina	femto	f
0.000 000 000 000 000 001	= 10^{-18}	trilióntina	atto	a

POZNÁMKA: $10^9 = 1$ billion je použití násobku měrových jednotek Spojenými národy v angličtině. Analogicky je pak $10^9 = 1$ biliontina.

1.2.2.2

Není-li výslovně stanoveno jinak, značí znaménko "%" v ADR:

- (a) u směsí tuhých nebo kapalných látek, jakož i u roztoků a u tuhých látek zvlhčených kapalinou, část hmotnosti z celkové hmotnosti směsi, roztoku nebo zvlhčené látky vyjádřená v procentech;
- (b) u směsí stlačených plynů, jsou-li plněny tlakově, část objemu z celkového objemu plynné směsi vyjádřená v procentech, nebo, jsou-li plněny podle hmotnosti, část hmotnosti z celkové hmotnosti plynné směsi vyjádřená v procentech;
- (c) u směsí zkapalněných plynů a rozpuštěných plynů část hmotnosti z celkové hmotnosti směsi vyjádřená v procentech.

1.2.2.3

Tlaky všeho druhu, týkající se nádob (např. zkušební tlak, vnitřní tlak, tlak, při němž se otevírá pojistný ventil) jsou vždy udány jako přetlak (tlak převyšující atmosférický tlak); naproti tomu tenze par je vždy vyjádřena jako absolutní tlak.

1.2.2.4

Pokud ADR stanoví stupeň plnění nádob, vztahuje se tento stupeň vždy na základní teplotu látek 15 °C, není-li udána jiná teplota.

KAPITOLA 1.3

ŠKOLENÍ OSOB PODÍLEJÍCÍCH SE NA PŘEPRAVĚ NEBEZPEČNÝCH VĚCÍ

1.3.1 Rozsah a uplatnění

Osoby, které jsou zaměstnanci účastníků přepravy nebezpečných věcí uvedených v kapitole 1.4 a jejichž pracovní povinnosti se týkají přepravy nebezpečných věcí, musí být vyškoleny o předpisech pro dopravu takových věcí podle své odpovědnosti a pracovní náplně. Před převzetím odpovědnosti musí být zaměstnanci vyškoleni podle 1.3.2 a činnosti, pro které, dosud neabsolvovali vyžadované školení, smějí vykonávat pouze pod přímým dohledem vyškolené osoby. Školení se musí zaměřit také na specifická ustanovení vztahující se na bezpečnost při přepravě nebezpečných věcí, uvedená v kapitole 1.10.

POZNÁMKA 1: O školení bezpečnostního poradce viz 1.8.3 namísto tohoto oddílu.

POZNÁMKA 2: O školení osádky vozidla viz kapitolu 8.2 namísto tohoto oddílu.

POZNÁMKA 3: O školení ke třídě 7, viz též 1.7.2.5.

1.3.2 Forma školení

Školení musí mít následující obsah odpovídající odpovědnosti a pracovní činnosti dotyčné osoby.

1.3.2.1 Všeobecné bezpečnostní školení

Personál musí být seznámen se všeobecnými ustanoveními předpisů o přepravě nebezpečných věcí.

1.3.2.2 Specifické školení

Personál musí být vyškolen přiměřeně ke svým povinnostem a odpovědnostem o ustanoveních předpisů týkajících se dopravy nebezpečných věcí.

Pokud je přeprava nebezpečných věcí prováděna kombinovanou (multimodální) dopravou, personál musí být seznámen s předpisy ostatních druhů dopravy zúčastněných na přepravním procesu .

1.3.2.3 Bezpečnostní školení

Personál musí být proškolen o rizicích a nebezpečích, které představují nebezpečné věci, přiměřeně stupni rizika zranění nebo ozáření při nehodě při přepravě těchto věcí, včetně jejich nakládky a vykládky.

Školení musí být provedeno tak, aby se personál seznámil s bezpečnou manipulací a nouzovými postupy.

1.3.2.4 Školení musí být periodicky doplňováno obnovovacím školením s ohledem na změny předpisů.

1.3.3 Dokumentace

Záznamy o školeních absolvovaných podle této kapitoly musí být uchovávány zaměstnavatelem a musí být na požádání k dispozici zaměstnanci nebo příslušnému orgánu. Záznamy musí být zaměstnavatelem uchovávány po dobu stanovenou příslušným orgánem. Záznamy o školeních musí být zkontrolovány při nástupu do nového zaměstnání.

KAPITOLA 1.4

POVINNOSTI ÚČASTNÍKŮ PŘEPRAVY Z HLEDISKA BEZPEČNOSTI

1.4.1 Všeobecná bezpečnostní opatření

1.4.1.1 Účastníci přepravy nebezpečných věcí musí učinit přiměřená opatření podle povahy a rozsahu předvídatelných nebezpečí tak, aby se zabránilo vzniku škod nebo zranění a, popřípadě, aby se minimalizovaly jejich následky. Musí však ve všech případech splnit požadavky ADR vztahující se na jejich činnost.

1.4.1.2 Pokud se vyskytuje bezprostřední riziko, že může být přímo ohrožena bezpečnost veřejnosti, účastníci přepravy musí neprodleně uvědomit zásahové jednotky a musí jim sdělit všechny informace potřebné pro jejich činnost.

1.4.1.3 ADR může stanovit určité povinnosti různých účastníků.

Jestliže smluvní strana usoudí, že to nezpůsobí zhoršení bezpečnosti, může ve své vnitrostátní legislativě přesunout povinnosti týkající se jednoho uvedeného účastníka na jednoho nebo několik jiných účastníků, pokud jsou splněny povinnosti uvedené v oddílech 1.4.2 a 1.4.3. Tyto odchylky musí být sděleny smluvní stranou sekretariátu Evropské hospodářské komise Organizace spojených národů, který je dá na vědomí smluvním stranám.

Ustanovení oddílů 1.2.1, 1.4.2 a 1.4.3 týkající se definic účastníků a jejich příslušných povinností se nedotýkají ustanovení vnitrostátních předpisů týkajících se právních důsledků (trestnost, odpovědnost atd.) vznikajících ze skutečnosti, že dotyčný účastník je např. právnická osoba, samostatně výdělečná osoba, zaměstnavatel nebo zaměstnanec.

1.4.2 Povinnosti hlavních účastníků

POZNÁMKA 1: Někteří účastníci, kterým jsou v této kapitole ukládány bezpečnostní povinnosti, mohou být jedním a tímž podnikem. Činnosti a odpovídající bezpečnostní povinnosti účastníka mohou být převzaty více podniky.

POZNÁMKA 2: K radioaktivním látkám viz též 1.7.6.

1.4.2.1 Odesílatel

1.4.2.1.1 Odesílatel nebezpečných věcí je povinen předat k přepravě jen zásilky, které odpovídají požadavkům ADR. V rámci oddílu 1.4.1 musí zejména:

- (a) přesvědčit se, že nebezpečné věci jsou zařazeny a připuštěny k přepravě podle ADR;
- (b) předat dopravci ve sledovatelné formě informace a údaje a popřípadě požadované přepravní a průvodní doklady (povolení, schválení, oznámení, osvědčení atd.), zejména s ohledem na ustanovení kapitoly 5.4 a tabulek v části 3;
- (c) použít pouze obaly, velké obaly, velké nádoby pro volně ložené látky (IBC) a cisterny (cisternová vozidla, snímatelné cisterny, bateriová vozidla, MEGC, přemístitelné cisterny a cisternové kontejnery) schválené a vhodné pro přepravu dotyčných látek a označené podle ADR;
- (d) splnit požadavky týkající se způsobu odeslání a omezení přepravy;
- (e) zajistit aby i prázdné nevyčištěné a neodplyněné cisterny (cisternová vozidla, snímatelné cisterny, bateriová vozidla, MEGC, přemístitelné cisterny a cisternové kontejnery) nebo prázdná nevyčištěná vozidla a prázdné nevyčištěné velké nebo malé kontejnery pro volně ložené látky byly příslušně označeny a opatřeny bezpečnostními značkami a aby prázdné

nevycházející cisterny byly uzavřeny a poskytovaly stejné záruky těsnosti, jako kdyby byly plné.

1.4.2.1.2 Jestliže odesílatel používá služby jiných účastníků (balič, nakládky, plnič atd.), musí učinit přiměřená opatření, aby bylo zajištěno, že zásilka splňuje předpisy ADR. Může se však v případech uvedených v 1.4.2.1.1 a), b), c) a e) spolehnout na informace a údaje poskytnuté mu jinými účastníky.

1.4.2.1.3 Pokud odesílatel jedná z pověření třetí osoby, pak tato musí odesílatele písemně upozornit, že se jedná o nebezpečné věci a poskytnout mu všechny informace a doklady potřebné ke splnění jeho povinností.

1.4.2.2 Dopravce

1.4.2.2.1 V souvislosti s oddílem 1.4.1, kde je to vhodné, dopravce musí zejména:

- (a) ověřit si, že nebezpečné věci, které se mají přepravovat, je dovoleno přepravovat podle ADR;
- (b) přesvědčit se, že všechny informace předepsané v ADR ve vztahu k nebezpečným věcem, které se mají přepravovat, byly před přepravou odesílatelem poskytnuty, že je v dopravní jednotce předepsaná dokumentace, nebo pokud je namísto papírové dokumentace používán systém elektronického zpracování dat (EDP) nebo systém elektronické výměny dat (EDI), že jsou během přepravy k dispozici údaje způsobem, který je alespoň rovnocenný papírové dokumentaci;
- (c) vizuálně se přesvědčit, že vozidla a náklad jsou bez viditelných závad, netěsností nebo trhlin, že nechybí výbava atd.;
- (d) přesvědčit se, že neprošel termín příští zkoušky cisternových vozidel, bateriových vozidel, snímatelných cisteren, přemístitelných cisteren, cisternových kontejnerů a MEGC;

POZNÁMKA: Cisterny, bateriová vozidla a MEGC však smějí být přepravovány po uplynutí tohoto termínu za podmínek uvedených v 4.1.6.10 (v případě bateriových vozidel a MEGC obsahujících jako články tlakové nádoby), 4.2.4.4, 4.3.2.4.4, 6.7.2.19.6, 6.7.3.15.6 nebo 6.7.4.14.6 .

- (e) přesvědčit se, že vozidla nejsou přetížena;
- (f) přesvědčit se, že byly připevněny bezpečnostní značky a označení předepsané pro vozidla;
- (g) přesvědčit se, že je ve vozidle výbava předepsaná v písemných pokynech pro řidiče.

Pokud je to vhodné, toto všechno musí být provedeno na základě přepravních dokladů a průvodních dokladů vizuální prohlídkou vozidla nebo kontejnerů a popřípadě nákladu.

1.4.2.2.2 Dopravce však se může v případech uvedených v 1.4.2.2.1 a), b), e), a f) spolehnout na informace a údaje poskytnuté mu jinými účastníky.

1.4.2.2.3 Pokud dopravce zjistí podle 1.4.2.2.1 porušení předpisů ADR, nesmí přepravit zásilku, pokud nedošlo k odstranění nedostatků.

1.4.2.2.4 Pokud je během cesty zjištěna závada, která by mohla ohrozit bezpečnost přepravy, pak se musí zásilka pokud možno co nejrychleji zadržet s ohledem na požadavky bezpečnosti silničního provozu, bezpečného odstavení zásilky a bezpečnosti veřejnosti. V přepravě se může pokračovat až tehdy, až zásilka splňuje platné předpisy. Příslušný(é) orgán(y) může (mohou) pro zbytek cesty vydat povolení pro pokračování přepravy.

Pokud nemůže být dosaženo splnění předpisů a není vydáno povolení pro zbytek cesty, příslušný(é) orgán(y) musí dopravci poskytnout nezbytnou administrativní podporu. Totéž se vztahuje i na případ, kdy dopravce informuje tento/tyto příslušný(é) orgán(y), že nebezpečná povaha přepravovaných věcí mu nebyla odesílatelem oznámena, a že by si přál v souladu s právním předpisem vztahujícím se zejména na přepravní smlouvu tyto věci vyložit, zničit nebo je učinit neškodnými.

1.4.2.2.5 (Vyhrazeno)

1.4.2.3 Příjemce

1.4.2.3.1 Příjemce má povinnost nezdržovat bez pádných důvodů převzetí věci a po vykládce ověřit, že jsou dodrženy předpisy ADR, které se ho týkají.

1.4.2.3.2 Pokud se při kontrole u kontejneru zjistí porušení předpisů ADR, příjemce nesmí vrátit kontejner dopravci, dokud zjištěné závady nebyly odstraněny.

1.4.2.3.3 Jestliže příjemce používá služeb jiných účastníků (provádějících vykládku, čištění, dekontaminaci atd.), musí provést náležitá opatření k tomu, aby byly dodrženy požadavky uvedené v 1.4.2.3.1 a 1.4.2.3.2 ADR.

1.4.3 Povinnosti ostatních účastníků

Nevyčerpávající seznam ostatních účastníků a jejich příslušných povinností je uveden dále. Povinnosti těchto ostatních účastníků vyplývají z oddílu 1.4.1 uvedeného výše, pokud vědí nebo by měli vědět, že jejich činnost tvoří část přepravního procesu podléhajícího ADR.

1.4.3.1 Nakládce

1.4.3.1.1. V souvislosti s oddílem 1.4.1 nakládce má zejména následující povinnosti:

- (a) smí předat nebezpečné věci dopravci pouze tehdy, je-li jejich přeprava podle ADR povolena;
- (b) musí, pokud předává k přepravě balené nebezpečné věci nebo nevyčištěné prázdné obaly, zkontrolovat, zda obal není poškozen. Nesmí předat k přepravě kus, jehož obal je poškozen, zejména není-li těsný, a jsou úniky nebo možnost úniku nebezpečných látek, dokud závada není odstraněna; tato povinnost se vztahuje též na prázdné nevyčištěné obaly;
- (c) musí, pokud nakládá nebezpečné věci do vozidla nebo velkého nebo malého kontejneru, splnit zvláštní předpisy pro nakládku a manipulaci.
- (d) musí po nakládce nebezpečných věcí do kontejneru splnit předpisy týkající se označení nebezpečnosti podle kapitoly 5.3;
- (e) musí při nakládce kusů dodržet zákazy společné nakládky rovněž s přihlédnutím k nebezpečným věcem, které jsou již ve vozidle nebo velkém kontejneru, jakož i předpisy týkající se oddělení potravin, poživatin a krmiv.

1.4.3.1.2 Nakládce se však může v případech uvedených v 1.4.3.1.1 a), d) a e) spolehnout na informace a údaje poskytnuté mu jinými účastníky.

1.4.3.2 Balič

V souvislosti s oddílem 1.4.1 balič musí splnit zejména:

- (a) předpisy týkající se podmínek balení nebo podmínek společného balení, a
- (b) pokud připravuje kusy pro přepravu, předpisy týkající se nápisů a bezpečnostních značek na kusech.

1.4.3.3 Plnič

V souvislosti s oddílem 1.4.1 plnič musí splnit zejména následující povinnosti:

- (a) musí ověřit před plněním cisteren, že tyto cisterny a jejich výstroj jsou v dobrém technickém stavu;

- (b) musí se přesvědčit, že neprošlo datum příští zkoušky cisternových vozidel, bateriových vozidel, snímatelných cisteren, přemístitelných cisteren, cisternových kontejnerů a MEGC;
- (c) smí plnit cisterny pouze nebezpečnými věcmi, které je dovoleno v těchto cisternách přepravovat;
- (d) musí při plnění cisterny dodržet ustanovení týkající se nebezpečných věcí v sousedních komorách;
- (e) musí během plnění cisterny dodržet nejvyšší dovolený stupeň plnění nebo nejvyšší dovolenou hmotnost obsahu na litr jejího vnitřního objemu pro plněnou látku;
- (f) musí po naplnění cisterny zajistit, aby všechny uzávěry byly v uzavřené poloze a nedocházelo k žádnému úniku;
- (g) musí zajistit, aby žádné nebezpečné zbytky naplněné látky neulpívaly na vnějším povrchu jím naplněných cisteren;
- (h) musí při přípravě nebezpečných věcí k přepravě zajistit, aby předepsané oranžové tabulky, bezpečnostní značky nebo bezpečnostní značky, jakož i značky pro zahřáté látky a značky pro látky ohrožující životní prostředí byly připevněny na cisterny, na vozidla a na velké a malé kontejnery pro volně ložené látky v souladu s příslušnými předpisy.
- (i) (Vyhrazeno)
- (j) musí se při plnění vozidel nebo kontejnerů volně loženými nebezpečnými věcmi ujistit, že jsou dodržena příslušná ustanovení kapitoly 7.3.

1.4.3.4 Provozovatel cisternového kontejneru nebo přemístitelné cisterny

V souvislosti s oddílem 1.4.1 provozovatel cisternového kontejneru nebo přemístitelné cisterny musí zejména:

- (a) zajistit dodržení předpisů pro konstrukci, výstroj, zkoušky a značení;
- (b) zajistit, aby údržba nádrží a jejich výstroje byla prováděna způsobem, který zaručí, že cisternový kontejner nebo přemístitelná cisterna bude za normálních provozních podmínek odpovídat předpisům ADR až do své příští inspekce;
- (c) zajistit provedení mimořádné kontroly, jestliže může být bezpečnost nádrže nebo její výstroje snížena opravou, změnou nebo nehodou.

1.4.3.5 (Vyhrazeno)

1.4.3.6 (Vyhrazeno)

1.4.3.7 Vykládce

POZNÁMKA: Vykládka v tomto pododdílu zahrnuje snímání, vykládku a vyprazdňování, jak je uvedeno v definici vykládce v 1.2.1.

1.4.3.7.1 V souvislosti s oddílem 1.4.1 vykládce musí zejména:

- (a) přesvědčit se, že jsou vykládány správné věci srovnáním příslušných informací v přepravním dokladu s informacemi na kusu, kontejneru, cisterně, MEMU, MEGC nebo vozidle;
- (b) před vykládkou a během ní překontrolovat, zda obaly, cisterna, vozidlo nebo kontejner nejsou poškozeny do té míry, že by to ohrozilo vykládku. V tomto případě zajistit, aby vykládka nebyla provedena, dokud nebudou učiněna náležitá opatření;
- (c) dodržet všechny příslušné předpisy týkající se vykládky;

- (d) ihned po vykládce cisterny, vozidla nebo kontejneru:
 - (i) odstranit všechny nebezpečné zbytky, které ulpěly na vnější straně cisterny, vozidla nebo kontejneru během vykládky; a
 - (ii) zajistit uzavření ventilů a kontrolních otvorů;
- (e) zajistit, aby bylo provedeno předepsané vyčištění a dekontaminace vozidel nebo kontejnerů; a
- (f) zajistit, aby kontejnery po jejich úplném vyložení, vyčištění a dekontaminaci už nebyly označeny podle kapitoly 5.3.

1.4.3.7.2 Jestliže vykládce používá služeb jiných účastníků (provádějících čištění, dekontaminaci atd.), musí provést náležitá opatření k tomu, aby byly dodrženy předpisy ADR.

KAPITOLA 1.5

ODCHYLKY

1.5.1 Dočasné odchylky

1.5.1.1 Podle článku 4, odstavce 3 ADR se mohou příslušné orgány smluvních stran dohodnout přímo mezi sebou, že určité přepravy po jejich území se budou dočasně provádět odchylně od předpisů ADR, za podmínky, že tím není snížena bezpečnost. Orgán, který byl iniciátorem této dočasné odchylky, musí takové odchylky oznámit sekretariátu Evropské hospodářské komise Organizace spojených národů, který je dá na vědomí smluvním stranám¹.

POZNÁMKA: „Zvláštní ujednání“ podle oddílu 1.7.4 se nepovažuje za dočasnou odchylku podle tohoto oddílu.

1.5.1.2 Doba platnosti dočasné odchylky nesmí být delší než pět let od data jejího vstupu v platnost. Dočasná odchylka automaticky pozbývá platnosti datem vstupu v platnost příslušné změny ADR.

1.5.1.3 Přepravy na základě dočasných odchylek jsou přepravami podle ADR.

1.5.2 (Vyhrazeno)

¹ **Poznámka Sekretariátu:** Odchylky dohodnuté podle tohoto pododdílu jsou k nahlédnutí na webové stránce UNECE: <http://www.unece.org/trans/danger/danger.htm>

KAPITOLA 1.6

PŘECHODNÁ USTANOVENÍ

1.6.1 Všeobecná ustanovení

1.6.1.1 Pokud není stanoveno jinak, látky a předměty ADR mohou být přepravovány do 30. června 2013 podle předpisů ADR platných do 31. prosince 2012.

1.6.1.2 (Vypuštěno)

1.6.1.3 Látky a předměty třídy 1 patřící ozbrojeným silám smluvní strany, které byly zabaleny před 1. lednem 1990 podle předpisů ADR platných v této době, mohou být přepravovány po 31. prosinci 1989, pokud jsou obaly nepoškozeny a jsou uvedeny v přepravním dokladu jako vojenské věci zabalené před 1. lednem 1990. Ostatní ustanovení platná od 1. ledna 1990 pro tuto třídu musí být dodržena.

1.6.1.4 Látky a předměty třídy 1, které byly zabaleny mezi 1. lednem 1990 a 31. prosincem 1996 podle předpisů ADR platných v této době, mohou být přepravovány po 31. prosinci 1996, pokud jsou obaly nepoškozeny a jsou uvedeny v přepravním dokladu jako věci třídy 1 zabalené mezi 1. lednem 1990 a 31. prosincem 1996.

1.6.1.5 (Vyhrazeno)

1.6.1.6 Velké nádoby pro volně ložené látky (IBC) vyrobené před 1. lednem 2003 podle předpisů bodu 3612 (1) platných do 30. června 2001, které však nesplňují předpisy týkající se výšky písmen, číslic a symbolů v 6.5.2.1.1 platné od 1. července 2001, smějí být dále používány.

1.6.1.7 Typová schválení pro sudy, kanystry a kompozitní obaly vyrobené z polyetylénu o vysoké nebo střední molekulární hmotnosti vydaná před 1. červencem 2005 podle ustanovení 6.1.5.2.6 platných do 31. prosince 2004, které však nesplňují ustanovení pododdílu 4.1.1.21, budou dále platná až do 31. prosince 2009. Každý takový obal vyrobený a označený na základě těchto typových schválení může být používán až do konce své dovolené doby používání stanovené v pododdílu 4.1.1.15.

1.6.1.8 Stávající oranžové tabulky, které splňují požadavky pododdílu 5.3.2.2 platné do 31. prosince 2004, smějí být dále používány, pokud jsou splněny požadavky uvedené v 5.3.2.2.1 a 5.3.2.2.2, že tabulka, čísla a písmena musí zůstat upevněny bez ohledu na orientaci vozidla.

1.6.1.9 (Vypuštěno)

1.6.1.10 Lithiové články a baterie vyrobené před 1. červencem 2003, které byly vyzkoušeny podle předpisů platných do 31. prosince 2002, avšak nebyly vyzkoušeny podle předpisů platných od 1. ledna 2003, jakož i zařízení obsahující takové lithiové články nebo baterie, mohou být dále přepravovány až do 30. června 2013, pokud jsou splněna všechna ostatní platná ustanovení.

1.6.1.11 Schválení typu pro sudy, kanystry a kompozitní obaly vyrobené z polyetylénu o vysoké nebo střední molekulární hmotnosti a pro IBC z polyetylénu o vysoké molekulární hmotnosti, vydaná před 1. červencem 2007 podle požadavků v oddílu 6.1.6.1 (a) platných do 31. prosince 2006, které však neodpovídají požadavkům v oddílu 6.1.6.1 (a) platným od 1. ledna 2007, jsou nadále platná.

1.6.1.12 (Vypuštěno)

1.6.1.13 (Vypuštěno)

- 1.6.1.14** IBC vyrobené před 1. lednem 2011 a odpovídající konstrukčnímu typu, který neprošel vibrační zkouškou podle 6.5.6.13, nebo který nemusel splňovat kritéria odstavce 6.5.6.9.5 (d) v době, kdy byl podroben zkoušce volným pádem, mohou být dále používány.
- 1.6.1.15** IBC vyrobené, rekonstruované nebo opravené před 1. lednem 2011 nemusí být označeny nejvyšším dovoleným stohovacím zatížením podle 6.5.2.2.2. Takové IBC, které nejsou označeny podle 6.5.2.2.2, smějí být dále používány po 31. prosinci 2010, avšak musí být označeny podle 6.5.2.2.2, jsou-li rekonstruovány nebo opraveny po tomto datu.
- 1.6.1.16** Zvířecí materiál napadený původci nemocí zařazenými do kategorie B, jinými než jsou ti, kteří by byli přiřazeni ke kategorii A, pokud by byli v kulturách (viz 2.2.62.1.12.2), smí být přepravován podle předpisů stanovených příslušným orgánem až do 31. prosince 2014¹.
- 1.6.1.17** *(Vypuštěno)*
- 1.6.1.18** *(Vypuštěno)*
- 1.6.1.19** Ustanovení v 2.2.9.1.10.3 a 2.2.9.1.10.4 týkající se klasifikace látek ohrožujících životní prostředí platná do 31. prosince 2010 smějí být používána až do 31. prosince 2013.
- 1.6.1.20** Bez ohledu na předpisy kapitoly 3.4 platné od 1. ledna 2011, nebezpečné věci balené v omezených množstvích, jiné než ty, jimž je ve sloupci (7a) tabulky A kapitoly 3.2 přiřazena číslice „0“, smějí být dále přepravovány až do 30. června 2015 podle předpisů kapitoly 3.4 platných do 31. prosince 2010. Avšak v takovém případě smějí být ustanovení v 3.4.12 až 3.4.15 platná od 1. ledna 2011 používána od 1. ledna 2011. Pro účely použití poslední věty v 3.4.13 (b), je-li přepravovaný kontejner označen značkou vyžadovanou v oddílu 3.4.12 platném do 31. prosince 2010, smí být dopravní jednotka označena značkou vyžadovanou v oddílu 3.4.15 platném od 1. ledna 2011.
- 1.6.1.21** Osvědčení o školení pro řidiče odpovídající vzoru platnému do 31. prosince 2010, vydaná smluvními stranami do 31. prosince 2012 namísto osvědčení odpovídajících požadavkům odstavce 8.2.2.8.5, se smějí dále používat až do konce své pětileté platnosti.
- 1.6.1.22** Vnitřní nádoby kompozitních IBC vyrobené před 1. červencem 2011 a značené podle předpisů v 6.5.2.2.4 platných do 31. prosince 2010 mohou být dále používány.
- 1.6.1.23** Hasicí přístroje vyrobené před 1. červencem 2011 v souladu s požadavky pododdílu 8.1.4.3 platných do 31. prosince 2010 mohou být dále používány.
- 1.6.1.24** Lithiové články a baterie vyrobené před 1. lednem 2014, které byly vyzkoušeny podle předpisů platných do 31. prosince 2012, avšak nebyly vyzkoušeny podle předpisů platných od 1. ledna 2013, jakož i zařízení obsahující takové lithiové články nebo baterie, smějí být dále přepravovány, jestliže jsou dodrženy všechny ostatní platné předpisy.
- 1.6.1.25** Kusy a přepravní obalové soubory označené UN číslem podle ustanovení ADR platných do 31. prosince 2012 a které neodpovídají požadavkům uvedeným v 5.2.1.1, pokud jde o velikost UN čísla a písmen „UN“, platným od 1. ledna 2013, smějí být dále používány až do 31. prosince 2013, a pokud jde o láhve s hydraulickým vnitřním objemem nejvýše 60 litrů, až do příští periodické inspekce, nejdéle však do 30. června 2018.
- 1.6.1.26** Velké obaly vyrobené nebo rekonstruované před 1. lednem 2014 a které neodpovídají požadavkům uvedeným v 6.6.3.1, pokud jde o velikost písmen, číslic a symbolů, platným od 1. ledna 2013, smějí být dále používány. Velké obaly vyrobené nebo rekonstruované před 1. lednem 2015 nemusí být označeny nejvyšší dovolenou stohovací zátěží podle 6.6.3.3. Takové velké obaly, které nejsou označeny podle 6.6.3.3, smějí být používány i po 31. prosinci 2014, ale musí být označeny podle 6.6.3.3, pokud byly rekonstruovány po tomto datu.

¹ Předpisy pro mrtvá infikovaná zvířata jsou obsaženy např. v nařízení (ES) č. 1774/2002 Evropského parlamentu a Rady ze 3. října 2002 stanovícím zdravotní pravidla týkající se živočišných vedlejších produktů, které nejsou určeny pro lidskou spotřebu (Úředník Evropských společenství, č. L 273 z 10. října 2002, str. 1).

1.6.1.27 Nádrže jako integrální součásti zařízení nebo strojů, obsahující kapalná paliva UN čísel 1202, 1203, 1223, 1268, 1863 a 3475, vyrobené před 1. červencem 2013, které neodpovídají požadavkům odstavce (a) zvláštního ustanovení 363 kapitoly 3.3 platným od 1. ledna 2013, smějí být dále používány.

1.6.2 Tlakové nádoby a nádoby pro třídu 2

1.6.2.1 Nádoby vyrobené před 1. lednem 1997, které neodpovídají předpisům ADR platným od 1. ledna 1997, ale jejichž přeprava byla povolena podle předpisů ADR platných do 31. prosince 1996, mohou být používány i po tomto datu, jestliže splňují předpisy pro periodické zkoušky podle pokynů pro balení P200 a P203.

1.6.2.2 *(Vypuštěno)*

1.6.2.3 Nádoby určené pro přepravu látek třídy 2, vyrobené před 1. lednem 2003, smějí být nadále opatřeny, po 1. lednu 2003, značením podle předpisů platných do 31. prosince 2002.

1.6.2.4 Tlakové nádoby zkonstruované a vyrobené podle technických předpisů, které již nejsou uznávány podle 6.2.5, mohou být dále používány.

1.6.2.5 Tlakové nádoby a jejich uzávěry zkonstruované a vyrobené podle norem platných v době jejich výroby, (viz. 6.2.4) podle ustanovení ADR, která platila v té době, mohou být dále používány, pokud to není omezeno zvláštním přechodným ustanovením.

1.6.2.6 Tlakové nádoby pro jiné látky, než jsou látky třídy 2, vyrobené před 1. červencem 2009 podle ustanovení pododdílu 4.1.4.4 platných do 31. prosince 2008, které však neodpovídají ustanovením pododdílu 4.1.3.6 platným od 1. ledna 2009, smějí být dále používány, pokud jsou dodržena ustanovení pododdílu 4.1.4.4 platná do 31. prosince 2008.

1.6.2.7 *(Vypuštěno)*

1.6.2.8 *(Vypuštěno)*

1.6.2.9 Ustanovení pokynu pro balení P200 (10), zvláštního ustanovení pro balení (v) ve 4.1.4.1 platná do 31. prosince 2010 smějí být smluvními stranami ADR používána pro láhve vyrobené před 1. lednem 2015.

1.6.2.10 Opakovaně plnitelné svařované ocelové láhve pro přepravu plynů UN čísel 1011, 1075, 1965, 1969 nebo 1978, kterým byl podle pokynu pro balení P200 (10), zvláštního ustanovení pro balení (v) ve 4.1.4.1 platného do 31. prosince 2010 příslušným orgánem státu (států) přepravy povolen interval mezi periodickými inspekcemi 15 let, smějí být dále podrobovány periodickým inspekcím podle těchto ustanovení.

1.6.2.11 Plynové kartuše vyrobené a připravené k přepravě před 1. lednem 2013, pro které nebyly použity předpisy uvedené v 1.8.6, 1.8.7 nebo 1.8.8 pro posuzování shody plynových kartuší, smějí být dále přepravovány po tomto datu, pokud jsou dodržena všechna ostatní příslušná ustanovení ADR.

1.6.2.12 Záchranné tlakové nádoby smějí být dále vyráběny a schvalovány podle vnitrostátních předpisů až do 31. prosince 2013. Záchranné tlakové nádoby vyrobené a schválené podle vnitrostátních předpisů před 1. lednem 2014 smějí být dále používány se schválením příslušných orgánů zemí používání.

1.6.3 Nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla

1.6.3.1 Nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla vyrobené před vstupem v platnost předpisů platných od 1. října 1978, smějí být dále používány, jestliže výstroj

nádrží odpovídá požadavkům kapitoly 6.8. Tloušťka stěny nádrží, kromě nádrží určených pro přepravu hluboce zchlazených zkapalněných plynů třídy 2, musí odpovídat výpočtovému tlaku nejméně 0,4 MPa (4 bary) (přetlak) v případě měkké oceli, nebo nejméně 200 kPa (2 bary) (přetlak) v případě hliníku nebo hliníkových slitin. Pro cisterny s jiným než kruhovým průřezem se musí vzít za základ výpočtu průměr, z něhož vypočtený plošný obsah kruhu je roven skutečnému plošnému obsahu průřezu cisterny.

- 1.6.3.2** Periodické zkoušky nesnímatelných cisteren (cisternových vozidel), snímatelných cisteren a bateriových vozidel ponechaných v provozu podle těchto přechodných ustanovení musí být prováděny podle požadavků uvedených v pododdílech 6.8.2.4 a 6.8.3.4 a podle zvláštních požadavků pro jednotlivé třídy. Pokud dřívější ustanovení nepředepisovala vyšší zkušební tlak, pak je pro nádrže z hliníku a hliníkových slitin postačující zkušební tlak 200 kPa (2 bary) (přetlak).
- 1.6.3.3** Nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla, které splňují přechodná ustanovení uvedená v pododdílech 1.6.3.1 a 1.6.3.2, mohou být používány až do 30. září 1993 pro přepravu nebezpečných věcí, pro které byly schváleny. Toto přechodné období se nevztahuje na nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla určené pro přepravu látek třídy 2, ani na nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla, jejichž tloušťka stěny a části výstroje splňují požadavky kapitoly 6.8.
- 1.6.3.4** (a) Nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla vyrobené před 1. květnem 1985 podle předpisů ADR platných od 1. října 1978 do 30. dubna 1985, avšak nespĺňující ustanovení platná od 1. května 1985, smějí být dále používány po tomto datu.
- (b) Nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla vyrobené mezi 1. květnem 1985 a datem vstupu v platnost ustanovení platných od 1. ledna 1988, které tato ustanovení nespĺňují, ale byly vyrobeny podle ustanovení ADR platných do tohoto data, smějí být dále používány ještě po tomto datu.
- 1.6.3.5** Nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla vyrobené před 1. lednem 1993 podle předpisů platných do 31. prosince 1992, které však nespĺňují předpisy platné od 1. ledna 1993, smějí být dále používány.
- 1.6.3.6** (a) Nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla vyrobené mezi 1. lednem 1978 a 31. prosincem 1984 musí, pokud budou používány po 31. prosinci 2004, splňovat ustanovení bodu 211 127 (5) platná od 1. ledna 1990 týkající se tloušťky nádrží a ochrany proti poškození;
- (b) Nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla vyrobené mezi 1. lednem 1985 a 31. prosincem 1989 musí, pokud budou používány po 31. prosinci 2010, splňovat ustanovení bodu 211 127 (5) platná od 1. ledna 1990 týkající se tloušťky nádrží a ochrany proti poškození.
- 1.6.3.7** Nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla vyrobené před 1. lednem 1999 podle předpisů platných do 31. prosince 1998, které však nespĺňují předpisy platné od 1. ledna 1999, smějí být dále používány.
- 1.6.3.8** Jestliže byla v důsledku změn ADR některá oficiální pojmenování plynů pozměněna, není nutno měnit pojmenování na štítku nebo na vlastní nádrži (viz 6.8.3.5.2 nebo 6.8.3.5.3), pokud se pojmenování plynů na nesnímatelných cisternách (cisternových vozidlech), snímatelných cisternách a bateriových vozidlech nebo na štítcích /viz 6.8.3.5.6 (b) nebo (c)/ upraví při nejbližší periodické zkoušce.
- 1.6.3.9 a 1.6.3.10** (Vyhrazeno)
- 1.6.3.11** Nesnímatelné cisterny (cisternová vozidla) a snímatelné cisterny vyrobené před 1. lednem 1997 podle předpisů platných do 31. prosince 1996, které však nespĺňují požadavky bodů 211 332 a 211 333 platné od 1. ledna 1997, smějí být dále používány.
- 1.6.3.12** (Vyhrazeno)

- 1.6.3.13** (Vypuštěno)
- 1.6.3.14** (Vyhrazeno)
- 1.6.3.15** (Vypuštěno)
- 1.6.3.16** Pro nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla vyrobené před 1.červencem 2007, které nesplňují ustanovení oddílu 4.3.2, jakož i pododdílů, 6.8.2.4 a 6.8.3.4, co se týče složky dokladů k cisterně, musí být uchovávání dokladů pro složku dokladů k cisterně zahájeno nejpozději při příští periodické inspekci.
- 1.6.3.17** Nesnímatelné cisterny (cisternová vozidla) a snímatelné cisterny určené pro přepravu látek třídy 3, obalové skupiny I s tenzí par při 50 °C nejvýše 175 kPa (1,75 baru) (absolutní), vyrobené před 1. červencem 2007 podle předpisů platných do 31. prosince 2006, kterým byl přiřazen kód cisterny L1,5BN podle předpisů platných do 31. prosince 2006, smějí být dále používány pro přepravu výše uvedených látek až do 31. prosince 2018.
- 1.6.3.18** Nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla vyrobené před 1. lednem 2003 podle předpisů platných do 30. června 2001, které však nesplňují předpisy platné od 1. července 2001, smějí být dále používány, pokud bylo provedeno přiřazení k příslušnému kódu cisterny.
- 1.6.3.19** Nesnímatelné cisterny (cisternová vozidla) a snímatelné cisterny vyrobené před 1.lednem 2003 podle ustanovení uvedených v 6.8.2.1.21 platných do 31.prosince 2002, které však nesplňují předpisy platné od 1.ledna 2003, smějí být dále používány.
- 1.6.3.20** Nesnímatelné cisterny (cisternová vozidla) a snímatelné cisterny vyrobené před 1.červencem 2003 podle předpisů platných do 31.prosince 2002, které však nesplňují požadavky 6.8.2.1.7, platné od 1. ledna 2003 a zvláštní ustanovení TE15 oddílu 6.8.4 (b) platné od 1. ledna 2003 do 31. prosince 2006, mohou být dále používány.
- 1.6.3.21** (Vypuštěno)
- 1.6.3.22 až 1.6.3.24** (Vyhrazeno)
- 1.6.3.25** (Vypuštěno)
- 1.6.3.26** Nesnímatelné cisterny (cisternová vozidla) a snímatelné cisterny vyrobené před 1.lednem 2007 podle předpisů platných do 31.prosince 2006, které však nesplňují předpisy platné od 1. ledna 2007 týkající se vyznačení vnějšího výpočtového tlaku podle 6.8.2.5.1, mohou být dále používány.
- 1.6.3.27 až 1.6.3.29** (Vyhrazeno)
- 1.6.3.30** Nesnímatelné cisterny (cisternová vozidla) pro podtlakové vyčerpávání odpadů a snímatelné cisterny vyrobené před 1.červencem 2005 podle ustanovení platných do 31.prosince 2004, které však nevyhovují ustanovením pododdílu 6.10.3.9 platným od 1.ledna 2005, smějí být dále používány.
- 1.6.3.31** Nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a cisterny tvořící prvky bateriových vozidel zkonstruované a vyrobené podle technických předpisů, které byly uznávány v době jejich výroby podle ustanovení 6.8.2.7, která platila v té době, smějí být dále používány.
- 1.6.3.32** Nesnímatelné cisterny (cisternová vozidla) a snímatelné cisterny vyrobené před 1. červencem 2007 podle předpisů platných do 31. prosince 2006, vybavené víky průlezů podle ustanovení normy EN 13317:2002, zmíněné v tabulce odstavce 6.8.2.6 platného do 31. prosince 2006, včetně ustanovení obrázku a tabulky B.2 přílohy B uvedené normy, která již nejsou od 1. ledna 2007

akceptována, nebo jejichž materiál nesplňuje požadavky normy EN 13094:2004, odstavce 5.2, směji být dále používány.

- 1.6.3.33** Pokud byla nádrž nesnímatelné cisterny (cisternového vozidla) nebo snímatelné cisterny již před 1. lednem 2009 rozdělena přepážkami nebo peřejníky na oddíly o vnitřním objemu nejvýše 7 500 litrů, nemusí být vnitřní objem nádrže doplněn symbolem „S“ v údajích vyžadovaných odstavcem 6.8.2.5.1 až do provedení příští periodické inspekce podle 6.8.2.4.2.
- 1.6.3.34** Bez ohledu na ustanovení odstavce 4.3.2.2.4, nesnímatelné cisterny (cisternová vozidla) a snímatelné cisterny určené pro přepravu zkapalněných plynů nebo hluboce zchlazených zkapalněných plynů, které splňují platné konstrukční požadavky ADR, ale byly před 1. červencem 2009 rozděleny přepážkami nebo peřejníky na oddíly o vnitřním objemu větším než 7.500 litrů, směji být dále plněny do více než 20 % a méně než 80 % svého vnitřního objemu.
- 1.6.3.35** *(Vypuštěno)*
- 1.6.3.36** Nesnímatelné cisterny (cisternová vozidla) určené pro přepravu zkapalněných netoxických hořlavých plynů a vyrobené před 1. červencem 2011, které jsou vybaveny zpětnými ventily namísto vnitřních uzavíracích ventilů a které neodpovídají požadavkům uvedeným v 6.8.3.2.3, směji být dále používány.
- 1.6.3.37** *(Vypuštěno)*
- 1.6.3.38** Nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla zkonstruované a vyrobené podle norem platných v době jejich výroby (viz 6.8.2.6 a 6.8.3.6) podle ustanovení ADR, která platila v té době, směji být dále používány, pokud to není omezeno zvláštním přechodným ustanovením.
- 1.6.3.39** Nesnímatelné cisterny (cisternová vozidla) a snímatelné cisterny vyrobené před 1. červencem 2011 podle požadavků uvedených v 6.8.2.2.3, platných do 31. prosince 2010, které však neodpovídají požadavkům uvedeným v 6.8.2.2.3, třetí odstavec, týkajícím se umístění vhodné pojistky proti prošlehnutí plamene nebo ochrany proti prošlehnutí plamene, směji být dále používány.
- 1.6.3.40** Pro látky toxické při vdechování UN čísel 1092, 1238, 1239, 1244, 1251, 1510, 1580, 1810, 1834, 1838, 2474, 2486, 2668, 3381, 3383, 3385, 3387 a 3389 smí být kód cisteren uvedený ve sloupci (12) tabulky A kapitoly 3.2, platný do 31. prosince 2010, dále používán až do 31. prosince 2016 pro nesnímatelné cisterny (cisternová vozidla) a snímatelné cisterny vyrobené před 1. červencem 2011.
- 1.6.3.41** Nesnímatelné cisterny (cisternová vozidla) a snímatelné cisterny vyrobené před 1. červencem 2013 podle předpisů platných do 31. prosince 2012, které však neodpovídají požadavkům na značení uvedeným v 6.8.2.5.2 nebo 6.8.3.5.6 platným od 1. ledna 2013, směji být dále označeny podle předpisů platných do 31. prosince 2012 až do příští periodické inspekce po 1. červenci 2013.
- 1.6.3.42** Pro UN 2381 smí být kód cisteren udaný ve sloupci (12) tabulky A kapitoly 3.2, platný do 31. prosince 2012, dále používán až do 31. prosince 2018 pro nesnímatelné cisterny (cisternová vozidla) a snímatelné cisterny vyrobené před 1. červencem 2013.
- 1.6.3.43** Nesnímatelné cisterny (cisternová vozidla) a snímatelné cisterny vyrobené před 1. lednem 2012 podle předpisů platných do 31. prosince 2012, které však neodpovídají požadavkům uvedeným v 6.8.2.6, týkajícím se norem EN 14432:2006 a EN 14433:2006, platným od 1. ledna 2011, směji být dále používány.
- 1.6.3.50** **Cisterny z vyztužených plastů (FRP)**
- Cisterny z vyztužených plastů (FRP) vyrobené před 1.červencem 2002 podle konstrukčního typu schváleného před 1.červencem 2001 podle předpisů dodatku B.1c, které byly v platnosti do 30.června 2001, mohou být dále používány až ukončení jejich životnosti, pokud všechny předpisy platné do 30.června 2001 byly a jsou nadále plněny.

Avšak od 1.července 2001 nebude moci být již žádný nový konstrukční typ schválen podle předpisů platných do 30.června 2001.

1.6.4 Cisternové kontejnery, přemístitelné cisterny a MEGC

1.6.4.1 Cisternové kontejnery vyrobené před 1. lednem 1988 podle předpisů platných do 31.prosince 1987, které však nesplňují předpisy platné od 1.ledna 1988, mohou být dále používány.

1.6.4.2 Cisternové kontejnery vyrobené před 1.lednem 1993 podle předpisů platných do 31.prosince 1992, které však nesplňují předpisy platné od 1.ledna 1993, mohou být dále používány.

1.6.4.3 Cisternové kontejnery vyrobené před 1.lednem 1999 podle předpisů platných do 31.prosince 1998, které však nesplňují předpisy platné od 1.ledna 1999, mohou být dále používány.

1.6.4.4 (Vyhrazeno)

1.6.4.5 Jestliže byla v důsledku změn ADR některá oficiální pojmenování plynů pozměněna, není nutno měnit pojmenování na štítku nebo na vlastní nádrži (viz 6.8.3.5.2 nebo 6.8.3.5.3), pokud se pojmenování plynů na cisternových kontejnerech a MEGC nebo na štítcích /viz 6.8.3.5.6 (b) nebo (c)/ upraví při nejbližší periodické zkoušce.

1.6.4.6 Cisternové kontejnery vyrobené před 1. lednem 2007 podle předpisů platných do 31.prosince 2006, které však nesplňují předpisy platné od 1.ledna 2007, které se týkají vyznačení vnějšího výpočtového tlaku podle 6.8.2.5.1, mohou být dále používány.

1.6.4.7 Cisternové kontejnery vyrobené před 1.lednem 1997 podle předpisů platných do 31. prosince 1996, které však nesplňují požadavky bodů 212 332 a 212 333 platné od 1.ledna 1997, smějí být dále používány.

1.6.4.8 (Vyhrazeno)

1.6.4.9 Cisternové kontejnery a MEGC zkonstruované a vyrobené podle technických předpisů, které byly uznávány v době jejich výroby podle ustanovení 6.8.2.7, která platila v té době, smějí být dále používány.

1.6.4.10 (Vypuštěno)

1.6.4.11 (Vyhrazeno)

1.6.4.12 Cisternové kontejnery a MEGC vyrobené před 1.lednem 2003 podle předpisů platných do 30.června 2001, které však nesplňují předpisy platné od 1.července 2001, smějí být dále používány. Avšak musí být označeny příslušným kódem cisterny a, pokud je to nutné, příslušnými alfanumerickými kódy zvláštních ustanovení TC a TE podle 6.8.4.

1.6.4.13 Cisternové kontejnery vyrobené před 1.červencem 2003 podle předpisů platných do 31.prosince 2002, které však nesplňují požadavky 6.8.2.1.7, platné od 1. ledna 2003 a zvláštní ustanovení TE15 oddílu 6.8.4 (b) platné od 1. ledna 2003 do 31. prosince 2006, smějí být dále používány.

1.6.4.14 (Vyhrazeno)

1.6.4.15 Druh zkoušky („P“ nebo „L“) vyžadovaný podle 6.8.2.5.1 je třeba doplnit na štítek cisterny teprve při první předepsané zkoušce po 1.lednu 2007.

1.6.4.16 (Vypuštěno)

1.6.4.17 (Vypuštěno)

- 1.6.4.18** Pro cisternové kontejnery a MEGC vyrobené před 1.lednem 2007, které nesplňují ustanovení oddílu 4.3.2, jakož i pododdílů 6.8.2.4 a 6.8.3.4 co se týče složky dokladů k cisterně, musí být uchovávány dokladů pro složku dokladů k cisterně zahájeno nejpozději při příští periodické inspekci.
- 1.6.4.19** Cisternové kontejnery určené pro přepravu látek třídy 3, obalové skupiny I s tenzí par při 50 °C nejvýše 175 kPa (1,75 baru) (absolutní), vyrobené před 1. červencem 2007 podle předpisů platných do 31. prosince 2006, kterým byl přiřazen kód cisterny L1,5BN podle předpisů platných do 31. prosince 2006, smějí být dále používány pro přepravu výše uvedených látek až do 31. prosince 2016.
- 1.6.4.20** Cisternové kontejnery pro podtlakové vyčerpávání odpadů vyrobené před 1.červencem 2005 podle požadavků platných do 31.prosince 2004, které však neodpovídají požadavkům pododdílu 6.10.3.9 platným od 1.ledna 2005, smějí být dále používány.
- 1.6.4.21 až 1.6.4.29** (Vyhrazeno)
- 1.6.4.30** Přemístitelné cisterny a UN MEGC, které nesplňují konstrukční požadavky platné od 1.ledna 2007, ale které byly vyrobeny podle osvědčení o schválení typu, které bylo vydáno před 1.lednem 2008, smějí být dále používány.
- 1.6.4.31** Pro látky, u nichž je ve sloupci (11) tabulky A kapitoly 3.2 uvedeno zvláštní ustanovení TP 35, smí být až do 31. prosince 2014 dále používán pokyn pro přemístitelné cisterny T 14 předepsaný v ADR platné do 31. prosince 2008.
- 1.6.4.32** Pokud byla nádrž cisternového kontejneru již před 1. lednem 2009 rozdělena přepážkami nebo peřejníky na oddíly o vnitřním objemu nejvýše 7.500 litrů, nemusí být vnitřní objem nádrže doplněn symbolem „S“ v údajích vyžadovaných odstavcem 6.8.2.5.1 až do provedení příští periodické inspekce podle odstavce 6.8.2.4.2.
- 1.6.4.33** Bez ohledu na ustanovení odstavce 4.3.2.2.4, cisternové kontejnery určené pro přepravu zkapalněných plynů nebo hluboce zchlazených zkapalněných plynů, které splňují platné konstrukční požadavky ADR, ale byly před 1. červencem 2009 rozděleny přepážkami nebo peřejníky na oddíly o vnitřním objemu větším než 7 500 litrů, smějí být dále plněny do více než 20 % a méně než 80 % svého vnitřního objemu.
- 1.6.4.34** (Vypuštěno)
- 1.6.4.35** (Vypuštěno)
- 1.6.4.36** Pro látky, u nichž je ve sloupci (11) tabulky A kapitoly 3.2 uvedeno TP37, smí být pokyn pro přemístitelné cisterny předepsaný v ADR platné do 31. prosince 2010 dále používán až do 31. prosince 2016.
- 1.6.4.37** Přemístitelné cisterny a MEGC vyrobené před 1. lednem 2012, které vyhovují požadavkům na značení v 6.7.2.20.1, 6.7.3.16.1, 6.7.4.15.1 nebo 6.7.5.13.1 platným do 31. prosince 2010, jak je to náležitě, smějí být dále používány, jestliže splňují všechny ostatní příslušné požadavky ADR platné od 1. ledna 2011, včetně, pokud je to aplikovatelné, požadavku uvedeného v 6.7.2.20.1 (g) na značení symbolem „S“ na štítku, pokud je nádrž nebo komora rozdělena peřejníky na oddíly o vnitřním objemu nejvýše 7.500 litrů. Pokud byla nádrž nebo komora rozdělena peřejníky na oddíly o vnitřním objemu nejvýše 7.500 litrů již před 1. lednem 2012, nemusí být vnitřní objem nádrže nebo popřípadě komory doplněn symbolem „S“ až do provedení příští periodické inspekce nebo zkoušky podle 6.7.2.19.5.
- 1.6.4.38** Přemístitelné cisterny vyrobené před 1. lednem 2014 nemusí být označeny pokynem pro přemístitelné cisterny, jak je vyžadováno v 6.7.2.20.2, 6.7.3.16.2 a 6.7.4.15.2, až do příští periodické inspekce a zkoušky.

- 1.6.4.39** Cisternové kontejnery a MEGC zkonstruované a vyrobené podle norem platných v době jejich výroby (viz 6.8.2.6 a 6.8.3.6) podle ustanovení ADR, která platila v té době, smějí být dále používány, pokud to není omezeno zvláštním přechodným ustanovením.
- 1.6.4.40** Cisternové kontejnery vyrobené před 1. červencem 2011 podle požadavků uvedených v 6.8.2.2.3, platných do 31. prosince 2010, které však neodpovídají požadavkům uvedeným v 6.8.2.2.3, třetí odstavec, týkající se umístění pojistky proti prošlehnutí plamene nebo ochrany proti prošlehnutí plamene, smějí být dále používány.
- 1.6.4.41** Pro látky toxické při vdechování UN čísel 1092, 1238, 1239, 1244, 1251, 1510, 1580, 1810, 1834, 1838, 2474, 2486, 2668, 3381, 3383, 3385, 3387 a 3389 smí být kód cisteren uvedený ve sloupci (12) tabulky A kapitoly 3.2, platný do 31. prosince 2010, dále používán až do 31. prosince 2016 pro cisternové kontejnery vyrobené před 1. červencem 2011.
- 1.6.4.42** Cisternové kontejnery vyrobené před 1. červencem 2013 podle předpisů platných do 31. prosince 2012, které však neodpovídají požadavkům na značení uvedeným v 6.8.2.5.2 nebo 6.8.3.5.6 platným od 1. ledna 2013, smějí být dále označeny podle předpisů platných do 31. prosince 2012 až do příští periodické inspekce po 1. červenci 2013.
- 1.6.4.43** Přemístitelné cisterny a MEGC vyrobené před 1. lednem 2014 nemusí vyhovovat požadavkům uvedeným v 6.7.2.13.1 (f), 6.7.3.9.1 (e), 6.7.4.8.1 (e) a 6.7.5.6.1 (d) týkajícím se značení zařízení pro vyrovnávání tlaku.
- 1.6.4.44** Pro látky, u nichž je ve sloupci (11) tabulky A kapitoly 3.2 uvedeno TP38 nebo TP39, smí být pokyn pro přemístitelné cisterny předepsaný v ADR platné do 31. prosince 2012 dále používán až do 31. prosince 2018.
- 1.6.4.45** Pro UN 2381 smí být kód cisteren udaný ve sloupci (12) tabulky A kapitoly 3.2, platný do 31. prosince 2012, dále používán až do 31. prosince 2018 pro cisternové kontejnery vyrobené před 1. červencem 2013.
- 1.6.4.46** Cisternové kontejnery vyrobené před 1. lednem 2012 podle předpisů platných do 31. prosince 2012, které však neodpovídají požadavkům uvedeným v 6.8.2.6, týkajícím se norem EN 14432:2006 a EN 14433:2006, platným od 1. ledna 2011, smějí být dále používány.

1.6.5 Vozidla

1.6.5.1 až 1.6.5.2 (Vyhrazeno)

1.6.5.3 (Vypuštěno)

1.6.5.4 Pokud se týče konstrukce vozidel EX/II, EX/III, FL, OX a AT, mohou se předpisy části 9 platné do 31. prosince 2012 používat až do 31. března 2014.

1.6.5.5 Vozidla registrovaná nebo uvedená do provozu před 1. lednem 2003, jejichž elektrické příslušenství nespĺňuje požadavky oddílů 9.2.2, 9.3.7 nebo 9.7.8, avšak splňuje předpisy platné do 30. června 2001, mohou být dále používána.

1.6.5.6 (Vypuštěno)

1.6.5.7 Kompletní nebo zkompletovaná vozidla, která byla typově schválena před 31. prosincem 2002 podle Předpisu EHK č. 105² pozměněného sérií změn 01, nebo podle příslušných ustanovení Směrnice 98/91/ES³ a která nespĺňují požadavky kapitoly 9.2, ale splňují požadavky na konstrukci základních

² Předpis č. 105 (Jednotná ustanovení pro schvalování vozidel určených pro přepravu nebezpečných věcí s ohledem na jejich specifické konstrukční vlastnosti).

³ Směrnice 98/91/ES Evropského parlamentu a Rady ze dne 14. prosince 1998 o motorových vozidlech a jejich přípojných vozidlech určených pro silniční přepravu nebezpečných věcí, pozměňující Směrnici 70/156/EES o schválení typu motorových vozidel a jejich přípojných vozidel (Official Journal of the European Communities No. L 011 ze dne 16.1.1999, str. 0025 – 0036).

vozidel (body 220 100 až 220 540 dodatku B.2) platné do 30.června 2001, mohou být dále schvalována a používána, za podmínky, že byla poprvé registrována nebo uvedena do provozu před 1. červencem 2003.

1.6.5.8 Vozidla EX/II a EX/III, která byla poprvé schválena před 1.červencem 2005 a která splňují požadavky části 9 platné do 31.prosince 2004, ale nesplňují požadavky platné od 1.ledna 2005, mohou být dále používána

1.6.5.9 Cisternová vozidla s nesnímatelnými cisternami o vnitřním objemu větším než 3 m³, určená pro přepravu nebezpečných látek v kapalném nebo roztaveném stavu, zkušena tlakem nižším než 4 bary, která nesplňují požadavky pododdílu 9.7.5.2 a byla poprvé registrována nebo uvedena do provozu, není-li registrace povinná před 1. červencem 2004, mohou být dále používána.

1.6.5.10 Osvědčení o schválení, která odpovídají vzoru uvedenému v 9.1.3.5, platnému do 31. prosince 2006 a osvědčení o schválení, která odpovídají vzoru uvedenému v 9.1.3.5, platnému od 1. ledna 2007 do 31. prosince 2008, mohou být dále používána.

1.6.5.11 MEMU, které byly vyrobeny a schváleny před 1. lednem 2009 podle ustanovení vnitrostátních právních předpisů, které však neodpovídají konstrukčním a schvalovacím předpisům platným od 1. ledna 2009, smějí být používány se schválením příslušných orgánů v zemích, v nichž se používají.

1.6.5.12 Vozidla EX/III a FL registrovaná nebo uvedená do provozu před 1. dubnem 2012, jejichž elektrická spojení nesplňují požadavky v 9.2.2.6.3, ale splňují požadavky platné do 31. prosince 2010, smějí být dále používána.

1.6.5.13 Přípojná vozidla poprvé registrovaná (nebo která byla uvedena do provozu, jestliže registrace nebyla povinná) před 1. červencem 1995, vybavená antiblokovacím brzdovým systémem vyhovujícím Předpisu EHK č. 13, sérii změn 06, který však nesplňuje technické požadavky na antiblokovací brzdový systém kategorie A, smějí být dále používána.

1.6.5.14 MEMU, která byla schválena před 1. červencem 2013 podle ustanovení ADR platných do 31. prosince 2012, která však neodpovídají požadavkům uvedeným v 6.12.3.1.2 nebo 6.12.3.2.2 platným od 1. ledna 2013, smějí být dále používána.

1.6.6 Třída 7

1.6.6.1 *Kusy nevyžadující schválení konstrukce příslušným orgánem podle vydání z let 1985 a 1985 (se změnami 1990) předpisů IAEA Safety Series No. 6*

Vyjmuté kusy, průmyslové kusy typu IP-1, typu IP-2 a typu IP-3 a kusy typu A, které nevyžadují schválení konstrukce příslušným orgánem a které splňují předpisy vydání z let 1985 nebo 1985 (se změnami 1990) Pravidel pro bezpečnou přepravu radioaktivních látek Mezinárodní agentury pro atomovou energii (série č. 6) [IAEA Regulations for the Transport of Radioactive Material (IAEA Safety Series No. 6)] mohou být nadále používány za podmínky, že jsou podrobeny povinnému programu zajištění kvality podle předpisů oddílu 1.7.3 a mezním hodnotám aktivity a omezením týkajícím se látek uvedeným v pododdílu 2.2.7.2.2, 2.2.7.2.4.1, 2.2.7.2.4.4, 2.2.7.2.4.5, 2.2.7.2.4.6, zvláštním ustanovení 336 kapitoly 3.3 a pododdílu 4.1.9.3.

Jakýkoli změněný obal, ledaže se touto změnou zvýší bezpečnost, nebo vyrobený po 31.prosinci 2003 musí splňovat požadavky ADR. Kusy připravené k přepravě nejpozději do 31.prosince 2003 podle vydání z roku 1985 nebo 1985 (se změnami 1990) IAEA Regulations for the Transport of Radioactive Material (IAEA Safety Series No. 6) mohou být dále přepravovány. Kusy připravené pro přepravu po tomto datu musí splňovat požadavky ADR.

1.6.6.2 *Kusy schválené podle vydání z let 1973, 1973 (se změnami), 1985 a 1985 (se změnami 1990) IAEA Safety Series No. 6*

1.6.6.2.1 Obaly vyrobené podle konstrukčního vzoru kusu schváleného příslušným orgánem podle ustanovení vydání 1973 nebo 1973 (se změnami) IAEA Safety Series No. 6 mohou být dále používány za

předpokladu vícestranného schválení konstrukčního vzoru kusu, povinného programu zajištění kvality podle příslušných předpisů oddílu 1.7.3, mezních hodnot aktivity a omezení týkajících se látek uvedených v pododdílu 2.2.7.2.2, 2.2.7.2.4.1, 2.2.7.2.4.4, 2.2.7.2.4.5, 2.2.7.2.4.6, zvláštním ustanovení 337 kapitoly 3.3 a pododdílu 4.1.9.3. Není dovoleno zahájit novou výrobu obalů tohoto druhu. Změny v konstrukci obalu nebo v povaze nebo množství schváleného radioaktivního obsahu, které by podle stanoviska příslušného orgánu významně ovlivnily bezpečnost, musí vyhovět předpisům ADR. Každému obalu musí být podle ustanovení v 5.2.1.7.5 přiděleno sériové číslo, které musí být vyznačeno na jeho vnější straně.

1.6.6.2.2 Obaly vyrobené podle konstrukčního vzoru kusu schváleného příslušným orgánem podle ustanovení vydání 1985 nebo 1985 (se změnami 1990) IAEA Safety Series No. 6 mohou být dále používány za předpokladu vícestranného schválení konstrukčního vzoru kusu, povinného programu zajištění kvality podle příslušných předpisů oddílu 1.7.3 a mezních hodnot aktivity a omezení týkajících se látek uvedených v pododdílu 2.2.7.2.2, 2.2.7.2.4.1, 2.2.7.2.4.4, 2.2.7.2.4.5, 2.2.7.2.4.6, zvláštním ustanovení 337 kapitoly 3.3 a pododdílu 4.1.9.3. Změny v konstrukci obalu nebo v povaze nebo množství schváleného radioaktivního obsahu, které by podle stanoviska příslušného orgánu významně ovlivnily bezpečnost, musí vyhovět předpisům ADR. Všechny obaly, jejichž výroba bude zahájena po 31.prosinci 2006, musí splňovat předpisy ADR.

1.6.6.3 ***Radioaktivní látky zvláštní formy schválené podle vydání z let 1973, 1973 (se změnami), 1985 a 1985 (se změnami 1990) IAEA Safety Series No. 6***

Radioaktivní látky zvláštní formy vyrobené podle konstrukčního vzoru, který byl jednostranně schválen příslušným orgánem podle vydání 1973, 1973 (se změnami), 1985 a 1985 (se změnami 1990) IAEA Safety Series No. 6 mohou být dále používány, pokud jsou v souladu s povinným programem zajištění kvality podle příslušných předpisů uvedených v oddílu 1.7.3. Všechny radioaktivní látky zvláštní formy vyrobené po 31.prosinci 2003 musí splňovat předpisy ADR.

KAPITOLA 1.7

VŠEOBECNÉ PŘEDPISY PRO TŘÍDU 7

1.7.1 Rozsah a použití

POZNÁMKA 1: V případě nehod nebo událostí v průběhu přepravy radioaktivních látek, musí být plněna nouzová opatření k ochraně osob, majetku a životního prostředí tak jak je stanoveno relevantními národními a/nebo mezinárodními organizacemi, Příslušné směrnice jsou obsaženy v dokumentu „Plánování a příprava havarijních odezvy při nehodách zahrnující radioaktivní látky“, bezpečnostní norma Safety Standard Series N. TS-G-1.2 (ST-3), vydaná IAEA, Vídeň (2002).

POZNÁMKA 2: Bezpečnostní postupy musí zahrnovat možnost přítomnosti jiných nebezpečných látek, které mohou ovlivnit reakci mezi obsahem zásilky a životním prostředím v případě nehody.

1.7.1.1

ADR stanoví normy bezpečnosti, které obsahují přijatelnou úroveň kontroly záření, kritického stavu a tepelného ohrožení osob, majetku a životního prostředí, spojených s přepravou radioaktivních látek. Tyto normy jsou založeny na IAEA Regulations for Safe Transport of Radioactive Material, vydání 2009, Safety Standards Series No. TS-R-1, IAEA, Vídeň (2009). Vysvětlující materiál je možno nalézt v „Advisory Material for the IAEA Regulations for the Safe Transport of Radioactive Material (2005 Edition)“, Safety Standard Series No. TS-G-1.1 (Rev.1), IAEA, Vídeň (2008).

1.7.1.2

Cílem ADR je stanovit požadavky, které musí být splněny, aby se zajistila bezpečnost a ochrana osob, majetku a životního prostředí před účinky záření při přepravě radioaktivních látek. Tato ochrana je dosažena vyžadováním:

- (a) uzavření radioaktivního obsahu;
- (b) kontrolou vnějších dávkových intenzit;
- (c) zabránění kritickému stavu; a
- (d) zamezení škodám způsobeným teplem.

Tyto požadavky se uspokojují za prvé uplatňováním odstupňovaného přístupu k limitům obsahu pro kusy a vozidla a uplatněním norem týkajících se konstrukce kusu v závislosti na riziku, které představuje radioaktivní obsah. Za druhé se uspokojují uplatňováním předpisů pro konstrukci a používání kusů a pro údržbu obalů s přihlédnutím k povaze radioaktivního obsahu. Dále jsou uspokojovány vyžadováním administrativních kontrol a popřípadě schválením příslušnými orgány.

1.7.1.3

ADR se vztahuje na silniční přepravu radioaktivních látek včetně přepravy, která souvisí s používáním radioaktivních látek. Přeprava zahrnuje všechny činnosti a podmínky spojené a vyvolané přemístováním radioaktivních látek; ty pak zahrnují konstrukci, výrobu, údržbu a opravy obalů a přípravu, odeslání, nakládku, přepravu včetně tranzitního skladování, vykládku a příjem v konečném místě určení nákladů radioaktivních látek a kusů. Aplikuje se odstupňovaný přístup ke stanovení požadavků v ADR, které jsou charakterizovány třemi všeobecnými stupni přísnosti:

- (a) Běžné podmínky přepravy (bez nehod);
- (b) Normální podmínky přepravy (drobné nehody);
- (c) Nehodové podmínky přepravy.

1.7.1.4

Opatření ADR se neuplatní u následujících radioaktivních látek (nespadají pro účely ADR do třídy 7)

- (a) Radioaktivní látky, které jsou integrální součástí dopravních prostředků;
- (b) Radioaktivní látky, které jsou přepravovány uvnitř podniku, kde podléhají příslušným bezpečnostním předpisům platným v tomto podniku a kde přeprava neprobíhá po veřejných komunikacích nebo kolejových cestách;

- (c) Radioaktivní látky, které jsou implantovány nebo vloženy do organismu osob nebo živých zvířat pro diagnostické nebo terapeutické účely;
- (d) Radioaktivní látky ve výrobcích určených ke spotřebě, které obdržely příslušné schválení příslušného orgánu, pokud následuje jejich prodej koncovému uživateli;
- (e) Přírodní látky a rudy obsahující radionuklidy, které se v přírodě vyskytují a které nejsou určeny ke zpracování pro použití těchto radionuklidů za předpokladu, že koncentrace aktivity těchto látek nepřevyšuje 10-ti násobek hodnot uvedených v 2.2.7.2.2.1 (b) nebo vypočtené v souladu s 2.2.7.2.2.2 až 2.2.7.2.2.6;
- (f) neradioaktivní tuhé předměty s radioaktivními látkami přítomnými na jakémkoli povrchu v množstvích nepřevyšujícím mezní hodnotu stanovenou v definici „kontaminace“ v 2.2.7.1.2.

1.7.1.5 Zvláštní ustanovení pro přepravu vyjmutých kusů

1.7.1.5.1 Vyjmuté kusy, které smějí obsahovat radioaktivní látky v omezených množstvích, přístroje, výrobky a prázdné obaly, jak jsou specifikovány v 2.2.7.2.4.1, musí podléhat pouze následujícím ustanovením částí 5 až 7:

- a) platná příslušná ustanovení uvedená v 5.1.2, 5.1.3.2, 5.1.4, 5.1.5.4, 5.2.1.9 a 7.5.11 CV 33 (5.2);
- b) požadavky na vyjmuté kusy specifikované v 6.4.4; a
- c) pokud vyjmutý kus obsahuje štěpný materiál, bude použita jedna z výjimek uvedených v 2.2.7.2.3.5 a budou uplatněny požadavky 6.4.7.2.

1.7.1.5.2 Vyjmuté kusy podléhají relevantním ustanovením všech ostatních částí ADR.

1.7.2 Program ochrany proti záření

1.7.2.1 Přeprava radioaktivních látek musí probíhat podle programu ochrany proti záření, který obsahuje systematický soubor ustanovení zaměřených na provádění přiměřených ochranných opatření proti záření.

1.7.2.2 Osobní dávky musí být nižší, než jsou příslušné dávkové limity. Ochrana a bezpečnost musí být optimalizovány tak, aby velikost individuálních dávek, počet osob vystavených záření a pravděpodobnost zdraví škodlivého záření byly udrženy tak nízké, jak je to jen rozumně dosažitelné s přihlédnutím k ekonomickým a sociálním faktorům kromě toho, že individuálně obdržené dávky budou omezeny dávkovými limity. Musí být zvolen strukturalizovaný systematický postup na vztahy mezi přepravou a ostatními činnostmi.

1.7.2.3 Povaha a rozsah měření použité v programu se musí vztahovat k závažnosti a pravděpodobnosti radiačního ozáření. Program musí zahrnovat požadavky uvedené v 1.7.2.2., 1.7.2.4, 1.7.2.5 a 7.5.11 CV33 (1.1). Programové dokumenty musí být k dispozici, na požadavek, pro inspekci relevantního příslušného orgánu

1.7.2.4 Pro profesní vystavení záření vznikající při dopravních činnostech, kde se odhaduje, že účinná dávka:

- (a) bude pravděpodobně mezi 1 mSv a 6 mSv za 1 rok, musí být prováděn program vyhodnocování dávek monitorováním pracovního místa nebo individuálním monitorováním;
- (b) pravděpodobně překročí 6 mSv za 1 rok, musí být prováděno individuální monitorování.

Pokud je prováděno monitorování pracovního místa nebo individuální monitorování, příslušné záznamy musí být uchovávány.

POZNÁMKA: Pro profesní expozici vyplývající z přepravních aktivit, kde se předpokládá, že efektivní dávka pravděpodobně nepřekročí 1 mSv za rok, není požadováno vypracovávání zvláštních pracovních postupů, podrobné monitorování, programy ohodnocování dávek nebo uchovávání individuálních záznamů.

- 1.7.2.5** Pracovníci (viz 7.5.11, CV 33 Poznámka 3) musí být náležitě vyškoleni v radiační ochraně včetně monitorovacích opatření za účelem omezení jejich pracovního ozáření a ozáření jiných osob, které by mohly být dotčeny jejich činností.“

1.7.3 Zajištění kvality

Programy zajištění kvality založené na mezinárodních, vnitrostátních nebo jiných normách, které jsou přijatelné pro příslušný orgán, musí být zavedeny a aplikovány, aby se zajistilo dodržení příslušných ustanovení ADR týkajících se konstrukce, výroby, zkoušení, dokumentace, použití, údržby a kontroly všech zvláštních forem radioaktivních látek, nízkodisperzních radioaktivních látek a všech kusů při přepravě, tranzitním skladování a překládce. Potvrzení, že specifikace konstrukce byly v plném rozsahu dodrženy, musí být k dispozici příslušnému orgánu. Výrobce, odesílatel nebo uživatel musí být připraven dát příslušnému orgánu k dispozici prostředky pro provedení kontroly v průběhu výroby a používání a prokázat jakémukoli zúčastněnému příslušnému orgánu že:

- (a) používané výrobní postupy a použité materiály odpovídají schváleným specifikacím konstrukce; a
- (b) všechny obaly jsou pravidelně kontrolovány a, pokud je to nezbytné, opravovány a udržovány v dobrém stavu tak, aby i nadále při jejich opakovaném použití odpovídaly příslušným předpisům a specifikacím.

Jestliže se požaduje schválení příslušného orgánu, musí toto schválení přihlížet k přiměřenosti programu zajištění kvality a musí být na něm závislé.

1.7.4 Zvláštní ujednání

- 1.7.4.1** Zvláštním ujednáním se rozumí taková ustanovení schválená příslušným orgánem, podle nichž mohou být přepravovány, které nesplňují všechny požadavky ADR aplikovatelné na radioaktivní látky.

POZNÁMKA: Zvláštní ujednání se nepovažuje za dočasnou odchylku podle oddílu 1.5.1.

- 1.7.4.2** Zásilky, pro které je prakticky neproveditelné vyhovět ustanovením vztahujícím se na třídu 7, nesmějí být přepravovány jinak, než podle zvláštního ujednání. Pokud je příslušný orgán přesvědčen, že soulad s ustanoveními ADR pro třídu 7 je prakticky neproveditelný a že splnění nezbytných bezpečnostních norem předepsaných ADR bylo prokázáno alternativními prostředky, příslušný orgán může schválit zvláštní ujednání o přepravách pro jednotlivou zásilku nebo plánovanou sérii více zásilek. Celková úroveň bezpečnosti přepravy musí být nejméně rovnocenná úrovni, které by bylo dosaženo při dodržení všech příslušných předpisů. Pro mezinárodní zásilky tohoto typu se požaduje vícestranné schválení.

1.7.5 Radioaktivní látky s dalšími nebezpečnými vlastnostmi

Kromě radioaktivních a štěpných vlastností musí být brány v úvahu v dokladech, při balení, označování bezpečnostními značkami a nápisy, tranzitním skladování, oddělování a přepravě všechna další vedlejší nebezpečí obsahu kusu, jako je výbušnost, hořlavost, samozápalnost, chemická toxicita a žíravost, aby odpovídaly všem příslušným ustanovením pro nebezpečné věci podle ADR.

1.7.6 Nedodržení limitů

- 1.7.6.1** V případě nedodržení jakéhokoli limitu v ADR platného pro dávkovou intenzitu nebo kontaminaci

- (a) odesílatel musí být informován o nedodržení

- (i) dopravcem, pokud se nedodržení zjistí během přepravy; nebo
 - (ii) příjemcem, pokud se nedodržení zjistí při příjmu;
- (b) dopravce, odesílatel, popřípadě příjemce musí:
- (i) učinit okamžitá opatření ke zmírnění následků nedodržení;
 - (ii) vyšetřit nedodržení a jeho příčiny, okolnosti a následky;
 - (iii) učinit vhodná opatření k odstranění příčin a okolností, které vedly k nedodržení a zamezit opakování podobných okolností, které vedly k nedodržení; a
 - (iv) sdělit příslušnému orgánu (příslušným orgánům) příčiny nedodržení a nápravná nebo preventivní opatření, která byla nebo mají být učiněna; a
- (c) informování odesílatele, popřípadě příslušného orgánu (příslušných orgánů) musí být provedeno bezodkladně, a musí být okamžité, jestliže se vyvinula nebo vyvíjí situace kritického ozáření.

KAPITOLA 1.8

KONTROLY A JINÁ PODPŮRNÁ OPATŘENÍ PRO ZAJIŠTĚNÍ PLNĚNÍ BEZPEČNOSTNÍCH POŽADAVKŮ

1.8.1 Kontroly nebezpečných věcí

1.8.1.1 Příslušné orgány smluvních stran mohou kdykoli na svém území provádět namátkové kontroly pro ověření, zda jsou dodržovány předpisy pro přepravu nebezpečných věcí včetně požadavků pododdílu 1.10.1.5.

Tyto kontroly však musí být prováděny bez ohrožení osob, majetku nebo životního prostředí a bez nepřiměřeného narušení silničního provozu.

1.8.1.2 Účastníci přepravy nebezpečných věcí (kapitola 1.4) musí bezodkladně v rámci svých příslušných povinností poskytnout příslušným orgánům a jejich pověřeným zástupcům informace nezbytné pro provedení kontrol.

1.8.1.3 Příslušné orgány mohou též v objektech podniků zúčastněných na přepravě nebezpečných věcí (kapitola 1.4) za účelem kontroly provádět inspekce, prozkoumat nezbytné doklady a odebrat vzorky nebezpečných věcí nebo obalů pro zkoušku, pokud tím není ohrožena bezpečnost. Účastníci přepravy nebezpečných věcí (kapitola 1.4) musí též zpřístupnit vozidla nebo jejich části a zařízení a vybavení pro účely kontrol, pokud je to možné a zdůvodněné. Mohou též, pokud se jim to jeví nezbytným, určit osobu z podniku pro doprovod zástupce příslušného orgánu.

1.8.1.4 Pokud příslušné orgány zjistí, že předpisy ADR nejsou dodrženy, mohou zakázat odeslání zásilky nebo přerušit přepravu, dokud zjištěné nedostatky nejsou odstraněny, nebo mohou předepsat jiná vhodná opatření. Přerušování přepravy může být provedeno na místě nebo na jiném místě určeném příslušným orgánem z bezpečnostních důvodů. Tato opatření nesmějí způsobit nepřiměřené narušení silničního provozu.

1.8.2 Vzájemná úřední podpora

1.8.2.1 Smluvní strany se mohou dohodnout na vzájemné úřední podpoře při uplatňování ADR.

1.8.2.2 Pokud jedna smluvní strana zjistí, že bezpečnost přepravy nebezpečných věcí po jejím území je ohrožena následkem velmi vážných nebo opakovaných porušení předpisů ze strany podniku, který má své sídlo na území jiné smluvní strany, musí takové přestupky oznámit příslušným orgánům této smluvní strany. Příslušné orgány smluvní strany, na jejímž území byly zjištěny velmi vážné nebo opakované přestupky, mohou požádat příslušné orgány smluvní strany, na jejímž území má podnik své sídlo, aby přijaly vhodná opatření proti viníkům. Předání údajů osobního charakteru není dovoleno, ledaže je to nezbytné pro postih velmi vážných nebo opakovaných přestupků.

1.8.2.3 Takto informované orgány musí sdělit příslušným orgánům smluvní strany, na jejímž území byly předpisy porušeny, jaká opatření, pokud to bylo nezbytné, byla učiněna vůči tomuto podniku.

1.8.3 Bezpečnostní poradce

1.8.3.1 Každý podnik, jehož činnosti zahrnují silniční přepravu nebezpečných věcí nebo s touto přepravou související operace balení, nakládky, plnění nebo vykládky nebezpečných věcí, musí jmenovat jednoho nebo více bezpečnostních poradců, dále nazývaných „poradci“ pro přepravu nebezpečných věcí, odpovědných za pomoc při zabránění rizikům při těchto činnostech s ohledem na osoby, majetek a životní prostředí.

1.8.3.2 Příslušné orgány smluvních stran mohou stanovit, že se tyto předpisy nevztahují na podniky:

- (a) jejichž činnosti se týkají množství, která jsou v každé dopravní jednotce menší než meze (limity) uvedené v 1.1.3.6 a 1.7.1.4, jakož i v kapitolách 3.3, 3.4 a 3.5, nebo
- (b) jejichž hlavní nebo vedlejší činnosti nejsou přeprava nebo související nakládka nebo vykládka nebezpečných věcí, ale které se příležitostně zabývají vnitrostátní přepravou nebo související nakládkou nebo vykládkou nebezpečných věcí představujících jen velmi malé nebezpečí nebo riziko znečištění.

1.8.3.3

Hlavním úkolem poradce, při zachování odpovědnosti vedoucího podniku, je snažit se všemi vhodnými prostředky a opatřeními v mezích příslušných činností výše uvedeného podniku usnadnit provádění těchto činností v souladu s platnými předpisy a co nejbezpečnějším způsobem.

S přihlédnutím k činnostem podniku má poradce zejména tyto povinnosti:

- dohlížet na dodržování předpisů pro přepravu nebezpečných věcí;
- radit svému podniku při operacích souvisejících s přepravou nebezpečných věcí;
- připravit výroční zprávu pro vedení svého podniku nebo popřípadě pro místní orgán veřejné správy, o činnostech podniku týkajících se přepravy nebezpečných věcí. Takové výroční zprávy musí být uchovávány po dobu pěti let a musí být k dispozici národním orgánům na jejich žádost.

Poradce má rovněž za povinnost sledovat zejména tyto činnosti a postupy vztahující se k dotčeným činnostem podniku:

- postupy pro dodržování předpisů upravujících zařazování nebezpečných věcí určených k přepravě;
- postup podniku při pořizování dopravních prostředků s ohledem na respektování všech zvláštních požadavků souvisejících s přepravou nebezpečných věcí;
- postupy kontrol zařízení užívaného při přepravě, nakládce nebo vykládce nebezpečných věcí;
- vlastní školení zaměstnanců podniku, včetně školení o změnách předpisů, a vedení záznamů o takovém školení;
- uplatňování vhodných nouzových postupů v případě jakékoli nehody nebo mimořádné události, která může nepříznivě ovlivnit bezpečnost přepravy, nakládky nebo vykládky nebezpečných věcí;
- analýzy a, pokud je to potřebné, vypracovávání zpráv týkajících se vážných nehod, mimořádných událostí nebo závažných porušení předpisů zjištěných během přepravy, nakládky nebo vykládky nebezpečných věcí;
- uplatňování vhodných opatření k zamezení opakování nehod, mimořádných událostí nebo závažných porušení předpisů;
- dodržování právních předpisů a zvláštních požadavků spojených s přepravou nebezpečných věcí, týkajících se volby a využití subdodavatelů nebo jiných třetích osob;
- ověřování, že zaměstnanci účastníci se přepravy, nakládky nebo vykládky nebezpečných věcí mají k dispozici podrobné pracovní postupy a pokyny;
- zavádění opatření ke zvýšení informovanosti o nebezpečích spojených s přepravou, nakládkou a vykládkou nebezpečných věcí;
- uplatňování kontrolních postupů s cílem zajistit, aby v dopravních prostředcích byly k dispozici doklady a bezpečnostní výbava, které musí doprovázet přepravu, a aby tyto doklady a výbava byly v souladu s předpisy;

- uplatňování kontrolních postupů s cílem zajistit dodržování předpisů pro nakládku a vykládku;
- existenci bezpečnostního plánu uvedeného v pododdílu 1.10.3.2.

1.8.3.4 Poradcem může být též vedoucí podniku, osoba s jinými povinnostmi v podniku nebo osoba, která výše uvedeným podnikem není přímo zaměstnána, pokud je tato osoba odborně způsobilá pro vykonávání povinností poradce.

1.8.3.5 Každý dotčený podnik musí na požádání informovat o totožnosti svého poradce příslušný orgán nebo instituci pověřenou pro tento účel každou smluvní stranou.

1.8.3.6 Kdykoli během přepravy, nakládky nebo vykládky prováděné dotčeným podnikem postihne nehoda osoby, majetek nebo životní prostředí, zajistí poradce po shromáždění všech potřebných informací vypracování zprávy o nehodě pro vedení podniku nebo popřípadě pro místní orgán veřejné správy. Tato zpráva nesmí nahrazovat žádnou zprávu vypracovanou vedením podniku, která by mohla být požadována jinými mezinárodními nebo vnitrostátními předpisy.

1.8.3.7 Poradce musí být držitelem osvědčení o odborné způsobilosti bezpečnostního poradce pro přepravu nebezpečných věcí po silnici. Toto osvědčení musí být vydáno příslušným orgánem nebo organizací pověřenou pro tento účel každou smluvní stranou.

1.8.3.8 K získání osvědčení se musí uchazeč podrobit školení a úspěšně složit zkoušku schválenou příslušným orgánem smluvní strany.

1.8.3.9 Hlavním účelem školení je poskytnout uchazečům dostatečné znalosti o nebezpečích při přepravě nebezpečných věcí, dostatečné znalosti právních a správních ustanovení, platných pro konkrétní druhy dopravy, jakož i dostatečné znalosti povinností uvedených v pododdílu 1.8.3.3.

1.8.3.10 Zkouška musí být organizována příslušným orgánem nebo jím pověřenou zkušební organizací. Zkušební organizace nesmí být školícím zařízením.

Pověření zkušební organizace musí být provedeno písemnou formou. Toto schválení může být časově omezeno a musí být založeno na následujících •ritériích:

- způsobilost zkušební organizace;
- specifikace forem zkoušek navržené zkušební organizací;
- opatření určená pro zajištění nestrannosti zkoušek;
- nezávislost zkušební organizace na všech fyzických nebo právnických osobách zaměstnávajících poradce.

1.8.3.11 Hlavním účelem zkoušky je zjistit, zda uchazeči mají potřebnou úroveň znalostí potřebných pro výkon funkce bezpečnostního poradce, jak je uvedeno v pododdílu 1.8.3.3, pro získání osvědčení předepsaného v pododdílu 1.8.3.7 a musí zahrnovat nejméně následující témata:

- (a) Znalost druhů následků, které mohou být způsobeny při nehodě s nebezpečnými věcmi a znalost hlavních příčin nehody;
- (b) Ustanovení vnitrostátních předpisů, mezinárodních úmluv a dohod, zejména pokud jde o:
 - klasifikaci nebezpečných věcí (postup při klasifikaci roztoků a směsí, struktura seznamu látek, třídy nebezpečných věcí a zásady jejich klasifikace, povaha přepravovaných nebezpečných věcí, fyzikální, chemické a toxikologické vlastnosti nebezpečných věcí);
 - všeobecná ustanovení o obalech, cisternách a cisternových kontejnerech (druhy, kódování, značení, konstrukce, první a periodické inspekce a zkoušky);

- nápisy a bezpečnostní značky, oranžové označení (nápisy a bezpečnostní značky na kusech, umístování a odstraňování velkých bezpečnostních značek (placards) a oranžového označení);
- údaje v přepravních dokladech (požadované informace);
- způsob odesílání a omezení při odesílání (vozová zásilka, přeprava ve volně loženém stavu, přeprava v IBC, přeprava v kontejnerech, přeprava v nesnímatelných nebo snímatelných cisternách);
- přepravu osob;
- zákazy a bezpečnostní opatření týkající se společné nakládky;
- vzájemné oddělování věcí;
- limity přepravovaných množství a množství vyňatá z platnosti předpisů;
- manipulaci a uložení (nakládka a vykládka, stupně plnění, uložení ve vozidle a vzájemné oddělování);
- čištění nebo odplyňování před nakládkou a po vykládce;
- osádku a odborné školení;
- doklady vozidla (přepravní doklady, písemné pokyny, osvědčení o schválení vozidla, osvědčení o školení řidiče, kopie všech odchylek, jiné doklady);
- písemné pokyny pro řidiče (používání pokynů a ochranné prostředky pro osádku);
- požadavky na dozor nad vozidly (parkování);
- pravidla a omezení silničního provozu;
- únik znečišťujících látek během provozu a při nehodách;
- předpisy týkající se dopravních prostředků.

1.8.3.12 Zkoušky

1.8.3.12.1 Zkouška sestává z písemného testu, který může být doplněn ústní zkouškou.

1.8.3.12.2 Při písemných testech není dovoleno použití žádných jiných dokumentů kromě mezinárodních nebo vnitrostátních předpisů.

1.8.3.12.3 Elektronická media smějí být použita jen tehdy, pokud byla poskytnuta zkušební organizací. Kandidát nesmí mít žádnou možnost pořizovat jiná data do poskytnutého elektronického media; kandidát smí odpovídat pouze na položené otázky.

1.8.3.12.4 Písemný test musí mít dvě části:

(a) Uchazeč obdrží dotazník. Ten musí obsahovat nejméně dvacet otevřených otázek zahrnujících nejméně témata uvedená v seznamu v pododdílu 1.8.3.11. Mohou však být použity také otázky s uvedením několika možných odpovědí, z nichž pouze jedna je správná. V tomto případě se takové dvě otázky počítají za jednu otevřenou otázku. Zvláštní pozornost musí být věnována těmto tématům:

- všeobecná preventivní a bezpečnostní opatření;
- klasifikace nebezpečných věcí;
- všeobecná ustanovení o balení, včetně cisteren, cisternových kontejnerů, cisternových vozidel atd.;

- nápisy k označení nebezpečí a bezpečnostní značky;
- údaje v přepravním dokladu;
- manipulace a uložení;
- odborné školení osádky;
- doklady vozidla a osvědčení;
- písemné pokyny pro řidiče;
- předpisy týkající se dopravních prostředků.

(b) Uchazeči musí vypracovat případovou studii podle povinností poradce uvedených v pododdílu 1.8.3.3, aby prokázali, že mají nezbytnou kvalifikaci pro plnění funkce poradce.

1.8.3.13 Smluvní strany mohou rozhodnout, že uchazeči, kteří hodlají pracovat pro podniky specializované na přepravu určitých druhů nebezpečných věcí mohou být zkoušeni pouze z témat, které jsou spojeny s jejich činnostmi. Tyto druhy věcí jsou:

- třída 1,
- třída 2,
- třída 7,
- třídy 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 6.2, 8 a 9.
- UN čísla 1202, 1203, 1223, 3475 a letecké palivo zařazené pod UN čísla 1268 nebo 1863.

Osvědčení předepsané v pododdílu 1.8.3.7 musí zřetelně uvádět, že je platné pouze pro druhy nebezpečných věcí uvedených v tomto pododdíle a pro které byl poradce zkoušen podle podmínek uvedených v pododdíle 1.8.3.12.

Osvědčení o odborné způsobilosti bezpečnostních poradců vydaná před 1. lednem 2009 pro UN čísla 1202, 1203 a 1223 jsou platná také pro UN číslo 3475 a letecké palivo zařazené pod UN čísla 1268 nebo 1863.

1.8.3.14 Příslušný orgán nebo zkušební organizace musí uchovávat seznam zkušebních otázek, které byly použity při zkoušce.

1.8.3.15 Osvědčení předepsané v pododdílu 1.8.3.7 musí mít formu podle vzoru uvedeného v pododdílu 1.8.3.18 a musí být uznáváno všemi smluvními stranami.

1.8.3.16 *Platnost a prodloužení platnosti osvědčení*

1.8.3.16.1 Osvědčení je platné po dobu pěti let. Doba platnosti osvědčení se prodlouží o pět let od data uplynutí jeho platnosti, pokud jeho držitel během posledního roku před uplynutím doby jeho platnosti složil zkoušku. Zkouška musí být schválena příslušným orgánem.

1.8.3.16.2 Účelem zkoušky je ověřit, zda má držitel potřebné znalosti k vykonávání povinností uvedených v pododdílu 1.8.3.3. Vyžadované znalosti jsou uvedeny v pododdíle 1.8.3.11 (b) a musí zahrnovat změny předpisů, k nimž došlo od získání posledního osvědčení. Zkouška musí být organizována a dozorována na stejném základě, jak je uvedeno v pododdílech 1.8.3.10 a 1.8.3.12 až 1.8.3.14. Držitel osvědčení však nemusí vypracovat případovou studii podle ustanovení pododdílu 1.8.3.12.4 (b).

1.8.3.17 *(Vypuštěno)*

1.8.3.18 *Vzor osvědčení*

Osvědčení o odborné způsobilosti bezpečnostního poradce pro přepravu nebezpečných věcí

Osvědčení č:

Poznávací značka státu vydávajícího osvědčení:.....

Příjmení:

Jméno(a):

Datum a místo narození:

Státní příslušnost:

Podpis držitele:

Platné dopro podniky, které přepravují nebezpečné věci, a pro podniky, které provádějí nakládku nebo vykládku spojenou s touto přepravou:

silniční dopravou železniční dopravou vnitrozemskou vodní dopravou

Vydáno kým:

Datum: Podpis

Prodlouženo do: Kým

Datum: Podpis

1.8.4 Seznam příslušných orgánů a jimi pověřených organizací

Smluvní strany oznámí Sekretariátu Evropské hospodářské komise Organizace spojených národů adresy příslušných orgánů a jimi pověřených organizací, které jsou kompetentní podle vnitrostátních předpisů pro uplatňování ADR, přičemž uvedou pro každý případ příslušné ustanovení ADR, jakož i adresy, na které je třeba zasílat příslušné žádosti.

Sekretariát Evropské hospodářské komise Organizace spojených národů pořídí na základě obdržených informací seznam a udržuje jej v aktuálním stavu. Oznamuje tento seznam a jeho změny smluvním stranám³.

1.8.5 Hlášení o nehodách a mimořádných událostech při přepravě nebezpečných věcí

1.8.5.1 Dojde-li během nakládky, plnění, přepravy nebo vykládky nebezpečných věcí na území smluvní strany k závažné nehodě nebo mimořádné události, je nakládkce, plnič, dopravce nebo příjemce povinen zajistit, aby byla pro příslušný orgán dotýčné smluvní strany vypracována a předložena zpráva podle vzoru předepsaného v pododdíle 1.8.5.4 nejpozději jeden měsíc po této události.

1.8.5.2 Tato smluvní strana musí, je-li to žádoucí, zaslat zprávu Sekretariátu Evropské hospodářské komise Organizace spojených národů za účelem informování ostatních smluvních stran.

1.8.5.3 Událostí, která podléhá povinnosti vypracování zprávy podle pododdílu 1.8.5.1, je událost, při níž došlo k úniku nebezpečných věcí nebo hrozilo bezprostřední riziko úniku látky, došlo-li ke zranění osob, k hmotným škodám nebo ke škodám na životním prostředí, nebo pokud byly zapojeny orgány (úřady) a je-li splněno alespoň jedno z následujících kritérií:

Zranění osob znamená událost, při níž došlo k usmrčení nebo zranění v přímém vztahu k přepravovaným nebezpečným věcem, přičemž zranění

- (a) vyžaduje intenzivní lékařskou péči,
- (b) vyžaduje nejméně jednodenní pobyt v nemocnici, nebo
- (c) má za následek pracovní neschopnost v trvání nejméně tří po sobě jdoucích dnů.

Únik látky znamená uniknutí nebezpečných věcí

- (a) přepravní kategorie 0 nebo 1 v množství větším než 50 kg / 50 litrů,
- (b) přepravní kategorie 2 v množství větším než 333 kg / 333 litrů, nebo
- (c) přepravní kategorie 3 nebo 4 v množství větším než 1000 kg / 1000 litrů.

Kritérium úniku látky platí také v případě bezprostředního rizika úniku látky ve výše uvedených množstvích. Zpravidla se toto riziko musí předpokládat, jestliže z důvodu poškození své konstrukce již dopravní nebo přepravní prostředky nejsou způsobilé pro další přepravu nebo jestliže z nějakého jiného důvodu již nemůže být zajištěna dostatečná úroveň bezpečnosti (např. z důvodu deformace cisterny nebo kontejneru, převrácení cisterny nebo požáru v bezprostřední blízkosti).

Dojde-li k nehodě nebo mimořádné události při přepravě nebezpečných věcí třídy 6.2, předkládá se zpráva o nehodě vždy bez ohledu na množství uniklé látky.

Dojde-li k nehodě nebo mimořádné události při přepravě látek třídy 7 jsou kritéria pro únik látky následující:

- (a) jakýkoli únik radioaktivních látek z kusů;
- (b) expozice vedoucí k překročení mezních hodnot stanovených v předpisech pro ochranu pracovníků a veřejnosti proti ionizujícímu záření (Schedule II of IAEA Safety Series No. 115 – „International Basic Safety Standards for Protection Against Ionizing Radiation and for Safety Radiation Sources“); nebo
- (c) je-li důvod předpokládat, že došlo k významnému zhoršení bezpečnostní funkce kusu (kontejnment, stínění, tepelná ochrana nebo kritičnost), které může učinit kus nezpůsobilým pro pokračování přepravy bez dodatečných bezpečnostních opatření.

³ Seznam příslušných orgánů (k 1. lednu 2004) je uveden v dodatku k Části 1.

POZNÁMKA: Viz ustanovení pro nedoručitelné zásilky oddílu 7.5.11 (6), dodatečné ustanovení CV33.

Hmotné škody nebo škody na životním prostředí nastanou při uvolnění nebezpečných věcí, bez ohledu na jejich množství, kdy odhadovaná částka škody překročí 50 000 euro. Škoda na přímo zúčastněných dopravních prostředcích obsahujících nebezpečné věci ani na dopravní infrastruktuře se pro tento účel nebere v úvahu.

Účast orgánů (úřadů) znamená přímé zapojení úřadů nebo nouzových zásahových jednotek během události s nebezpečnými věcmi a evakuaci osob nebo uzavření veřejných dopravních komunikací (silnic/železničních tratí) na nejméně tři hodiny z důvodu nebezpečí vytvářeného nebezpečnými věcmi.

Pokud je to potřebné, může si příslušný orgán vyžádat další relevantní informace.

1.8.5.4 VZOR ZPRÁVY O NEHODĚ NEBO MIMOŘÁDNÉ UDÁLOSTI BĚHEM PŘEPRAVY NEBEZPEČNÝCH VĚCÍ

**Zpráva o nehodě nebo mimořádné události při přepravě nebezpečných věcí
podle oddílu 1.8.5 RID/ADR**

Dopravce/Provozovatel železniční infrastruktury:
Adresa:
Kontaktní osoba:Telefon:.....Fax:.....

(Příslušný orgán odejme tento krycí list před dalším postoupením zprávy)

6. Přepřavované nebezpečné věci						
UN číslo ⁽¹⁾	Třída	Obalová skupina	Odhadované množství uniklé látky (kg nebo l) ⁽²⁾	Zádržné prostředky ⁽³⁾	Materiál zádržných prostředků	Druh selhání zádržných prostředků ⁽⁴⁾
⁽¹⁾ U nebezpečných věcí přiřazených k hromadným položkám, pro něž platí zvláštní ustanovení 274, musí být uveden také technický název.				⁽²⁾ U třídy 7 uveďte hodnoty podle kritéria uvedeného v pododdíle 1.8.5.3.		
⁽³⁾ Uveďte příslušné číslo 1 Obal 2 IBC 3 Velký obal 4 Malý kontejner 5 Vůz 6 Vozidlo 7 Cisternový vůz 8 Cisternové vozidlo 9 Bateriový vůz 10 Bateriové vozidlo 11 Vůz se snímatelnými cisternami 12 Snímatelná cisterna 13 Velký kontejner 14 Cisternový kontejner 15 MEGC 16 Přemístitelná cisterna				⁽⁴⁾ Uveďte příslušné číslo 1 Unik látky 2 Požár 3 Výbuch 4 Konstrukční vada		
7. Příčina události (pokud je jasně známa)						
<input type="checkbox"/> Technická závada <input type="checkbox"/> Nesprávné zajištění nákladu <input type="checkbox"/> Provozní příčina (železniční provoz) <input type="checkbox"/> Jiné:						
8. Následky události						
<u>Postižení osob v souvislosti s přepravovanými nebezpečnými věcmi:</u> <input type="checkbox"/> Mrtví (počet:) <input type="checkbox"/> Zranění (počet:) <u>Únik látky:</u> <input type="checkbox"/> Ano <input type="checkbox"/> Ne <input type="checkbox"/> Bezprostřední nebezpečí úniku látky <u>Hmotné škody/škody na životním prostředí</u> <input type="checkbox"/> Odhadovaná výše škody ≤ 50.000 Euro <input type="checkbox"/> Odhadovaná výše škody > 50.000 Euro <u>Účast orgánů (úřadů):</u> <input type="checkbox"/> Ano <input type="checkbox"/> Evakuace osob trvající nejméně tři hodiny zapříčiněná přepravovanými nebezpečnými věcmi <input type="checkbox"/> Uzavření veřejných komunikací na dobu nejméně tří hodin zapříčiněné přepravovanými nebezpečnými věcmi <input type="checkbox"/> Ne						

Příslušný orgán může vyžadovat další údaje.

1.8.6 Administrativní dozor nad prováděním posuzování shody, periodických inspekcí, meziperiodických inspekcí a mimořádných kontrol popsanych v 1.8.7

1.8.6.1 Schvalování inspekčních organizací

Příslušný orgán může schválit inspekční organizace pro posuzování shody, periodické inspekce, meziperiodické inspekce, mimořádné kontroly a dohled nad vlastní inspekční službou, jak je uvedeno v oddílu 1.8.7.

1.8.6.2 Pracovní povinnosti příslušného orgánu, jeho zástupce nebo inspekční organizace

1.8.6.2.1 Příslušný orgán, jeho zástupce nebo inspekční organizace musí provádět posuzování shody, periodické inspekce, meziperiodické inspekce a mimořádné kontroly přiměřeným způsobem, bez zbytečných nákladů. Příslušný orgán, jeho zástupce nebo inspekční organizace musí vykonávat své činnosti s přihlédnutím k velikosti, odvětví a struktuře dotčených podniků, k relativní složitosti technologie a sériovému charakteru výroby.

1.8.6.2.2 Avšak příslušný orgán, jeho zástupce nebo inspekční organizace musí respektovat stupeň přesnosti a úroveň ochrany vyžadované k tomu, aby přepravitelná tlaková zařízení vyhovovala příslušným ustanovením částí 4 a 6.

1.8.6.2.3 Pokud příslušný orgán, jeho zástupce nebo inspekční organizace zjistí, že požadavky stanovené v částech 4 nebo 6 nebyly výrobcem dodrženy, požádá výrobce, aby učinil náležitá nápravná opatření, a nevydá žádné osvědčení o schválení konstrukčního typu ani osvědčení o shodě.

1.8.6.3 Informační povinnost

Smluvní strany ADR musí zveřejnit své vnitrostátní postupy pro posuzování, pověřování a monitorování inspekčních organizací a všechny změny těchto informací.

1.8.6.4 Delegování inspekčních činností

POZNÁMKA: *Vlastních inspekčních služeb podle 1.8.7.6 se pododdíl 1.8.6.4 netýká.*

1.8.6.4.1 Pokud inspekční organizace využívá služeb jakékoli jiné organizační jednotky (např. subdodavatel, pobočka) k vykonávání specifických činností spojených s posuzováním shody, periodickou inspekci, meziperiodickou inspekci nebo mimořádnými kontrolami, musí být tato organizační jednotka zahrnuta do akreditace inspekční organizace, nebo musí být akreditována odděleně. Inspekční organizace se musí ujistit, že tato organizační jednotka splňuje požadavky stanovené pro činnosti, které jsou jí předány, se stejnou úrovní kompetentnosti a bezpečnosti, jaká je stanovena pro inspekční organizace (viz 1.8.6.8) a inspekční organizace to musí monitorovat. Inspekční organizace musí informovat příslušný orgán o výše uvedených opatřeních.

1.8.6.4.2 Inspekční organizace přebírá plnou odpovědnost za činnosti vykonávané takovými organizačními jednotkami, bez ohledu na místo, kde tyto činnosti vykonávají.

1.8.6.4.3 Inspekční organizace nesmí převést celou činnost posuzování shody, periodické inspekce, meziperiodické inspekce nebo mimořádných kontrol. V každém případě posuzování a vydávání osvědčení musí být prováděno vlastní inspekční organizací.

1.8.6.4.4 Činnosti nesmějí být převáděny bez souhlasu žadatele.

1.8.6.4.5 Inspekční organizace musí uchovávat k dispozici příslušného orgánu příslušné doklady týkající se posuzování kvalifikací a prací provedených výše zmíněnými organizačními jednotkami.

1.8.6.5 Informační povinnosti inspekčních organizací

Každá inspekční organizace musí informovat příslušný orgán, který ji schválil, o následujících skutečnostech. Jsou to:

- (a) s výjimkou aplikace ustanovení uvedených v 1.8.7.2.4, každé zamítnutí, omezení, pozastavení platnosti nebo odebrání osvědčení o schválení konstrukčního typu;
- (b) každá okolnost nebo okolnosti ovlivňující rozsah a podmínky pro schválení, jak bylo uděleno příslušným orgánem;

- (c) každá žádost o informace o vykonávaných činnostech při posuzování shody, kterou obdržela od příslušných orgánů monitorujících dodržování ustanovení uvedených v 1.8.1 nebo 1.8.6.6;
- (d) na vyžádání, činnosti vykonávané při posuzování shody v rámci rozsahu jejich schválení a jiné vykonávané činnosti, včetně převádění činností.

1.8.6.6 Příslušný orgán musí zajistit monitorování inspekčních organizací a musí zrušit nebo omezit platnost uděleného schválení, pokud zjistí, že schválená organizace již neplní podmínky schválení a požadavky pododdílu 1.8.6.8 nebo nedodržuje postupy uvedené v ustanoveních ADR.

1.8.6.7 Je-li platnost schválení inspekční organizace zrušena nebo omezena, nebo pokud inspekční organizace zastavila svou činnost, musí příslušný orgán učinit příslušné kroky k tomu, aby se zajistilo, že její dokumentace bude buď zpracována jinou inspekční organizací, nebo bude k dispozici.

1.8.6.8 Inspekční organizace musí:

- (a) mít k dispozici personál s organizační strukturou, který je schopný, vyškolený, kompetentní a způsobilý vykonávat uspokojivě své technické funkce;
- (b) mít přístup ke vhodným a přiměřeným technickým prostředkům a vybavení;
- (c) pracovat nestranně a bez jakéhokoli vlivu, který by mohl takové činnosti bránit;
- (d) zajistit důvěrnost obchodních a vlastnických aktivit výrobce a jiných organizací;
- (e) udržovat jasný odstup mezi vlastními činnostmi inspekční organizace a ostatními činnostmi, které k nim nemají vztah;
- (f) mít dokumentovaný systém kvality;
- (g) zajistit, aby byly prováděny zkoušky a inspekce specifikované v příslušné normě a v ADR; a
- (h) udržovat účinný a přiměřený dokumentační a záznamový systém podle 1.8.7 a 1.8.8

Inspekční organizace musí být kromě toho akreditována podle normy EN ISO/IEC 17020:2004, jak je specifikováno v 6.2.2.9 a 6.2.3.6 a TA4 a TT9 oddílu 6.8.4.

Inspekční organizace, která zahajuje novou činnost smí být schválena prozatímně. Před prozatímním schválením musí příslušný orgán zajistit, aby inspekční organizace splňovala požadavky normy EN ISO/IEC 17020:2004. Inspekční organizace musí být akreditována v prvním roce své činnosti, aby byla schopna pokračovat v této nové činnosti.

1.8.7 Postupy pro posuzování shody a periodickou inspekci

POZNÁMKA: V tomto oddílu „příslušná organizace“ znamená organizaci určenou v pododdíle 6.2.2.10 k certifikaci UN tlakových nádob, v pododdílu 6.2.3.6 ke schvalování jiných tlakových nádob, než jsou UN tlakové nádoby, a ve zvláštních ustanoveních TA4 a TT9 oddílu 6.8.4.

1.8.7.1 Všeobecná ustanovení

1.8.7.1.1 Postupy v 1.8.7 se musí použít podle 6.2.3.6 při schvalování jiných tlakových nádob, než jsou UN tlakové nádoby, a podle zvláštních ustanovení TA4 a TT9 oddílu 6.8.4 při schvalování cisteren, bateriových vozidel a MEGC.

Postupy v oddílu 1.8.7 se mohou použít podle tabulky v 6.2.2.10 při certifikaci UN tlakových nádob.

1.8.7.1.2 Každá žádost o:

- (a) schválení konstrukčního typu podle 1.8.7.2; nebo
- (b) dohled nad výrobou podle 1.8.7.3 a první inspekci a zkoušku podle 1.8.7.4; nebo
- (c) periodickou, meziperiodickou inspekci a mimořádné kontroly podle 1.8.7.5

musí být podána žadatelem u jediného příslušného orgánu, jeho zástupce nebo schválené inspekční organizace podle jeho vlastní volby.

1.8.7.1.3 Žádost musí obsahovat:

- (a) jméno a adresu žadatele;
- (b) v případě posuzování shody, není-li žadatel výrobcem, jméno a adresu výrobce;
- (c) písemné prohlášení, že stejná žádost nebyla podána u jiného příslušného orgánu, jeho zástupce nebo inspekční organizace;
- (d) příslušnou technickou dokumentaci uvedenou v 1.8.7.7;
- (e) prohlášení dovolující příslušnému orgánu, jeho zástupci nebo inspekční organizaci z inspekčních důvodů vstup do objektů výroby, inspekce, zkoušení a skladování a poskytující jim všechny potřebné informace.

1.8.7.1.4 Pokud může žadatel prokázat ke spokojenosti příslušného orgánu nebo jej zastupující inspekční organizace splnění podmínek pododdílu 1.8.7.6, smí si žadatel zřídit vlastní inspekční službu, která smí provádět část nebo všechny inspekce a zkoušky, je-li to uvedeno v 6.2.2.10 nebo 6.2.3.6.

1.8.7.1.5 Osvědčení o schválení konstrukčního typu a osvědčení o shodě – včetně technické dokumentace – musí být uchovávána výrobcem, nebo žadatelem o typové schválení, pokud tento není výrobcem, a inspekční organizací, která osvědčení vydala, po dobu nejméně 20 let od posledního data výroby výrobků téhož typu.

1.8.7.1.6 Pokud výrobce nebo vlastník zamýšlí zastavit činnost, musí zaslat dokumentaci příslušnému orgánu. Příslušný orgán poté uchová dokumentaci po zbytek doby stanovené v 1.8.7.1.5.

1.8.7.2 Schválení konstrukčního typu

Typová schválení povolují výrobu tlakových nádob, cisteren, bateriových vozidel nebo MEGC po dobu platnosti tohoto schválení.

1.8.7.2.1 Žadatel musí:

- (a) v případě tlakových nádob dát k dispozici příslušné organizaci reprezentativní vzorky zamýšlené výroby. Příslušná organizace si může vyžádat další vzorky, vyžaduje-li si to zkušební program;
- (b) v případě cisteren, bateriových vozidel nebo MEGC umožnit přístup k prototypu pro zkoušení konstrukčního typu.

1.8.7.2.2 Příslušná organizace musí:

- (a) prozkoumat technickou dokumentaci uvedenou v 1.8.7.2.1 a ověřit, zda konstrukce odpovídá příslušným ustanovením ADR a že prototyp nebo prototypová série byl(y) vyrobeny ve shodě s technickou dokumentací a je (jsou) typovou konstrukcí;
- (b) provést prohlídky a dohlížet na zkoušky předepsané ADR, aby se zjistilo, zda byly použity a dodrženy předpisy a zda postupy použité výrobcem odpovídají předpisům;
- (c) zkontrolovat certifikát(y) vystavený(é) výrobcem (výrobci) materiálů vzhledem k platným ustanovením ADR;
- (d) pokud je to aplikovatelné, schválit postupy pro trvalá spojení konstrukčních částí nebo zkontrolovat, zda byly předem schváleny, a ověřit si, že personál provádějící trvalé spojení konstrukčních částí a nedestruktivní zkoušky je kvalifikovaný nebo schválený;
- (e) dohodnout se žadatelem místo a zkušební laboratoře, kde se mají provést prohlídky a potřebné zkoušky.

Příslušná organizace vydá žadateli protokol o posouzení konstrukčního typu.

1.8.7.2.3 Pokud konstrukční typ vyhovuje všem platným ustanovením, vydá příslušný orgán, jeho zástupce nebo inspekční organizace žadateli osvědčení o schválení konstrukčního typu.

Toto osvědčení musí obsahovat:

- (a) název a adresu vydávající instituce;
- (b) název a adresu výrobce a žadatele, pokud žadatel není výrobcem;
- (c) odvolávku na vydání ADR a normy použité pro posouzení konstrukčního typu;

- (d) jakékoli požadavky vyplývající z posouzení;
- (e) údaje nezbytné pro identifikaci konstrukčního typu a modifikace, jak je definováno příslušnou normou;
- (f) odvolávku na protokol(y) o posouzení konstrukčního typu; a
- (g) maximální dobu platnosti typového schválení.

K osvědčení musí být přiložen seznam příslušných částí technické dokumentace (viz 1.8.7.7.1).

1.8.7.2.4

Typové schválení je platné na dobu nejvýše 10 let. Jestliže se v průběhu této doby změni příslušné technické požadavky ADR (včetně referenčních norem), takže schválený typ jim už nevyhovuje, příslušná organizace, která typové schválení vydala, toto schválení zruší a informuje o tom držitele typového schválení.

POZNÁMKA: *K nejzazším termínům pro zrušení platnosti existujících typových schválení viz sloupec (5) tabulek v 6.2.4 a 6.8.2.6 nebo 6.8.3.6, jak je to náležité.*

Jestliže platnost typového schválení vypršela nebo bylo zrušeno, není již výroba tlakových nádob, cisteren, bateriových vozidel a MEGC podle tohoto typového schválení dovolena.

V takovém případě příslušná ustanovení týkající se používání, periodické inspekce a meziperiodické inspekce tlakových nádob, cisteren, bateriových vozidel nebo MEGC obsažená v typovém schválení, jehož platnost vypršela nebo bylo zrušeno, budou nadále platit pro tyto tlakové nádoby, cisterny, bateriová vozidla nebo MEGC vyrobené před vypršením platnosti nebo zrušením platnosti typového schválení, jestliže smějí být dále používány.

Tyto smějí být dále používány, dokud zůstávají ve shodě s požadavky ADR. Jestliže již nejsou ve shodě s požadavky ADR, smějí být dále používány pouze tehdy, je-li takové používání povoleno příslušnými přechodnými ustanoveními v kapitole 1.6.

Typová schválení smějí být obnovena po úplné revizi a posouzení shody s ustanoveními ADR platnými k datu obnovy. Obnova není dovolena poté, co bylo zrušeno typové schválení. Modifikace existujícího typového schválení, které se objevily během doby jeho platnosti (např. pro tlakové nádoby menší změny, jako je doplnění dalších velikostí a objemů, které neovlivňují shodu s předpisy, nebo pro cisterny viz 6.8.2.3.2) neprodlužují ani nemění původní platnost osvědčení.

POZNÁMKA: *Revize a posouzení shody s ustanoveními ADR mohou být provedeny jinou organizací, než je organizace, která vydala původní typové schválení.*

Vydávající organizace musí uchovávat všechny dokumenty pro typové schválení (viz 1.8.7.7.1) po celou dobu platnosti včetně jeho obnov, pokud byly povoleny.

1.8.7.2.5

V případě modifikace tlakové nádoby, cisterny, bateriového vozidla nebo MEGC s platným, propadlým nebo zrušeným typovým schválením jsou zkoušky, inspekce a schválení omezeny na ty součásti tlakové nádoby, cisterny, bateriového vozidla nebo MEGC, které byly modifikovány. Modifikace musí splňovat ustanovení ADR platná v době modifikace. Pro všechny součásti tlakové nádoby, cisterny, bateriového vozidla nebo MEGC, jichž se modifikace nedotkla, zůstává v platnosti dokumentace původního typového schválení.

Modifikace se může týkat jedné nebo více tlakových nádob, cisteren, bateriových vozidel nebo MEGC, pro které platí typové schválení.

Osvědčení o schválení modifikace musí být vydáno žadateli příslušným orgánem kterékoli smluvní strany ADR nebo organizací pověřenou tímto orgánem. Pro cisterny, bateriová vozidla nebo MEGC musí být kopie tohoto osvědčení součástí dokumentace cisterny.

Každá žádost o vydání schvalovacího osvědčení pro modifikaci musí být žadatelem podána u jednoho příslušného orgánu nebo organizace pověřené tímto orgánem.

1.8.7.3 Dohled nad výrobou

1.8.7.3.1

Výrobní proces musí být podroben ze strany příslušné organizace dohledu, aby se zajistilo, že je výrobek vyráběn ve shodě s ustanoveními schválení konstrukčního typu.

1.8.7.3.2

Žadatel musí učinit všechna potřebná opatření, aby zajistil, že výrobní proces vyhovuje platným ustanovením ADR a osvědčení o schválení konstrukčního typu a jeho přílohám.

1.8.7.3.3 Příslušná organizace musí:

- (a) ověřit shodu s technickou dokumentací uvedenou v 1.8.7.7.2;
- (b) ověřit si, že výrobní proces produkuje výrobky, které odpovídají předpisům a dokumentací, která se jich týká;
- (c) ověřit zpětnou zjištělnost materiálů a zkontrolovat certifikát(y) materiálů vzhledem ke specifikacím;
- (d) pokud je to aplikovatelné, ověřit si, že personál provádějící trvalé spojení konstrukčních částí a nedestruktivní zkoušky je kvalifikovaný nebo schválený;
- (e) dohodnout se žadatelem na místě, kde se mají provést prohlídky a potřebné zkoušky; a
- (f) zaznamenat výsledky svého dohledu.

1.8.7.4 První inspekce a zkoušky**1.8.7.4.1** Žadatel musí:

- (a) umístit značky uvedené v ADR; a
- (b) dodat příslušné organizaci technickou dokumentaci uvedenou v 1.8.7.7 .

1.8.7.4.2 Příslušná organizace musí:

- (a) provést potřebné prohlídky a zkoušky za účelem ověření, že výrobek je vyráběn v souladu se schválením konstrukčního typu a příslušnými předpisy;
- (b) zkontrolovat certifikáty dodané výrobcem provozní výstroje vůči provozní výstroji;
- (c) vydat žadateli protokol o první inspekci a zkoušce týkající se provedených detailních zkoušek a ověření a ověřenou technickou dokumentací;
- (d) vystavit písemné osvědčení o shodě výroby a umístit svou registrační značku, pokud výroba vyhovuje předpisům; a
- (e) zkontrolovat, zda typové schválení zůstává platné poté, co se změnila ustanovení ADR (včetně referenčních norem) platná pro toto typové schválení.

Osvědčení pod písmenem (d) a protokol pod písmenem (c) mohou být společné pro více jednotek téhož konstrukčního typu (skupinové osvědčení nebo skupinový protokol).

1.8.7.4.3 Osvědčení musí obsahovat alespoň :

- (a) název a adresu příslušné organizace;
- (b) název a adresu výrobce a název a adresu žadatele, pokud není výrobcem;
- (c) odvolávku na vydání ADR a normy použité pro první inspekce a zkoušky;
- (d) výsledky inspekce a zkoušek;
- (e) údaje pro identifikaci zkontrolovaného (zkontrolovaných) výrobku(ů), alespoň sériové číslo, nebo pro láhve, které nejsou opakovaně plnitelné, číslo výrobní série; a
- (f) číslo schválení konstrukčního typu.

1.8.7.5 Periodická, meziperiodická inspekce a mimořádné kontroly**1.8.7.5.1** Příslušná organizace musí:

- (a) provést identifikaci a ověřit shodu s dokumentací;
- (b) provést inspekce a dohlížet na zkoušky, aby zkontrolovala, zda jsou dodrženy předpisy;
- (c) vydat protokoly o výsledcích inspekce a zkoušek, které mohou být společné pro více jednotek; a
- (d) zajistit, aby byly umístěny vyžadované značky.

- 1.8.7.5.2** Protokoly o periodických inspekcích a zkouškách tlakových nádob musí být žadatelem uchovávány alespoň do příští periodické inspekce.

POZNÁMKA: *K cisternám viz ustanovení o dokumentaci cisterny v 4.3.2.1.7.*

1.8.7.6 Dohled nad vlastní inspekční službou žadatele

1.8.7.6.1 Žadatel musí:

- (a) realizovat vlastní inspekční službu se systémem kvality pro inspekce a zkoušky dokumentovanou podle 1.8.7.7.5 a podléhající dohledu;
- (b) plnit povinnosti vyplývající ze systému kvality, jak byl schválen, a zajistit, aby zůstal uspokojivý a účinný;
- (c) přidělit k provádění vlastní inspekční služby vyškolený a kompetentní personál; a
- (d) umístit registrační značku inspekční organizace, kde je to náležité.

1.8.7.6.2 Inspekční organizace musí provést první audit. Je-li uspokojivý, vydá inspekční organizace pověření na období nejdéle tří let. Musí být splněna tato ustanovení:

- (a) tento audit musí potvrdit, že inspekce a zkoušky provedené na výrobku jsou v souladu s předpisy ADR;
- (b) inspekční organizace může pověřit vlastní inspekční službu žadatele, aby umístita registrační značku inspekční organizace na každý schválený výrobek;
- (c) pověření může být prodlouženo po uspokojivém auditu v posledním roce před skončením jeho platnosti. Nová doba platnosti započne od data skončení platnosti pověření; a
- (d) auditři inspekční organizace musí být schopni provést posouzení shody výrobku spadajícího pod systém kvality.

1.8.7.6.3 Inspekční organizace musí provést během trvání platnosti pověření periodické audity, aby se ubezpečila, že žadatel udržuje a používá systém kvality. Musí být splněna tato ustanovení:

- (a) v období 12 měsíců musí být provedeny nejméně dva audity;
- (b) inspekční organizace může vyžadovat dodatečné kontroly, školení, technické změny, modifikace systému kvality, může omezit nebo zakázat inspekce a zkoušky, které má dělat žadatel;
- (c) inspekční organizace musí posoudit jakékoli změny v systému kvality a rozhodnout, zda pozměněný systém kvality ještě vyhovuje požadavkům prvního auditu, nebo zda se vyžaduje jeho zcela nové posouzení;
- (d) auditři inspekční organizace musí být schopni provést posouzení shody výrobku spadajícího pod systém kvality; a
- (e) inspekční organizace musí žadateli poskytnout kontrolní nebo auditorskou zprávu, a pokud byla provedena zkouška, zkušební protokol.

1.8.7.6.4 V případech nesouladu s platnými předpisy musí inspekční organizace zabezpečit, že budou učiněna nápravná opatření. Nejsou-li nápravná opatření učiněna v náležité lhůtě, inspekční organizace dočasně pozastaví platnost oprávnění nebo odejme oprávnění vlastní inspekční službě provádět její činnosti. Oznámení o dočasném pozastavení platnosti nebo odejmutí oprávnění musí být zasláno příslušnému orgánu. Žadatel musí obdržet zprávu obsahující podrobné důvody pro rozhodnutí učiněná inspekční organizací.

1.8.7.7 Dokumentace

Technická dokumentace musí umožnit posouzení, zda jsou dodrženy příslušné předpisy.

1.8.7.7.1 Dokumenty pro schválení konstrukčního typu

Žadatel musí poskytnout, jak je to náležité:

- (a) seznam norem použitých pro konstrukci a výrobu;
- (b) popis konstrukčního typu včetně všech modifikací;
- (c) pokyny podle příslušného sloupce tabulky A kapitoly 3.2, nebo seznam nebezpečných věcí, které se mají přepravovat, pro dotyčné výrobky;
- (d) výkres nebo výkresy celkové sestavy;
- (e) detailní výkresy, včetně rozměrů použitých pro výpočty, výrobku, provozní výstroje, konstrukční výstroje, značení a/nebo označení bezpečnostními značkami nezbytné pro ověření shody;
- (f) poznámky k výpočtům, výsledky a závěry;
- (g) seznam provozní výstroje s příslušnými technickými údaji a informacemi k pojistným zařízením včetně výpočtu odlehčovací kapacity, pokud je to relevantní;
- (h) seznam materiálu vyžadovaného v normě pro výrobu, použitého pro každou část, podskupinu, vnitřní povlak, provozní a konstrukční výstroj a odpovídající specifikace materiálů nebo odpovídající prohlášení o souladu s ADR;
- (i) schválenou kvalifikaci procesu trvalých spojení;
- (j) popis procesu(ů) tepelného zpracování; a
- (k) postupy, popisy a záznamy o všech příslušných zkouškách uvedených v normách nebo ADR pro schválení konstrukčního typu a pro výrobu.

1.8.7.7.2 Dokumenty pro dohled nad výrobou

Žadatel musí dát k dispozici, jak je to náležité:

- (a) dokumenty uvedené v 1.8.7.7.1;
- (b) kopii osvědčení o schválení konstrukčního typu;
- (c) výrobní postupy včetně zkušebních postupů;
- (d) výrobní záznamy;
- (e) schválené kvalifikace pracovníků provádějících trvalá spojení;
- (f) schválené kvalifikace pracovníků provádějících nedestruktivní zkoušky;
- (g) protokoly o destruktivních a nedestruktivních zkouškách;
- (h) záznamy o tepelném zpracování; a
- (i) kalibrační záznamy.

1.8.7.7.3 Dokumenty pro první inspekci a zkoušky

Žadatel musí dát k dispozici, jak je to náležité:

- (a) dokumenty uvedené v 1.8.7.7.1 a 1.8.7.7.2;
- (b) certifikáty materiálu výrobku a všech podskupin;
- (c) prohlášení o shodě a certifikáty materiálu provozní výstroje; a
- (d) prohlášení o shodě včetně popisu výrobku a všech modifikací odvozených ze schválení konstrukčního typu.

1.8.7.7.4 Dokumenty pro periodické, meziperiodické inspekce a mimořádné kontroly

Žadatel musí dát k dispozici, jak je to náležité:

- (a) pro tlakové nádoby dokumenty obsahující zvláštní požadavky, pokud to normy pro výrobu a pro periodické inspekce a zkoušky vyžadují;

- (b) pro cisterny:
 - (i) dokumentaci cisterny (pasport); a
 - (ii) jeden nebo více dokumentů uvedených v 1.8.7.7.1 až 1.8.7.7.3.

1.8.7.7.5 Dokumenty pro hodnocení vlastní inspekční služby

Žadatel o vlastní inspekční službu musí dát k dispozici dokumentaci k systému kvality, jak je to náležité:

- (a) organizační strukturu a odpovědnosti;
- (b) příslušné pokyny pro inspekci a zkoušku, kontrolu kvality, zajištění kvality a operační postupy a systematické činnosti, které budou prováděny;
- (c) záznamy o kvalitě, jako jsou inspekční zprávy, testovací data, kalibrační údaje a certifikáty;
- (d) výsledky auditů k zajištění účinného fungování systému kvality vyplývající z auditů podle 1.8.7.6;
- (e) postup popisující, jak jsou plněny požadavky zákazníka a předpisů;
- (f) postup pro kontrolu dokumentů a jejich revizi;
- (g) postupy pro nevyhovující výrobky; a
- (h) školicí programy a kvalifikační postupy pro příslušný personál.

1.8.7.8 Výrobky vyrobené, schválené, prohlížené a zkoušené podle norem

Požadavky pododdílu 1.8.7.7 se považují za splněné, použijí-li se dále uvedené relevantní normy:

Příslušné ustanovení	Odkazy	Název dokumentu
1.8.7.7.1 až 1.8.7.7.4	EN 12972:2007	Cisterny pro přepravu nebezpečných věcí – Zkoušení, inspekce a značení kovových cisteren

1.8.8 Postupy pro posuzování shody plynových kartuší

Při posuzování shody plynových kartuší se použije jeden z následujících postupů:

- (a) postup v oddílu 1.8.7 pro tlakové nádoby neodpovídající UN, s výjimkou pododdílu 1.8.7.5; nebo
- (b) postup v pododdílech 1.8.8.1 až 1.8.8.7.

1.8.8.1 Všeobecná ustanovení

1.8.8.1.1 Dohled nad výrobou musí být prováděn organizací Xa a zkoušky vyžadované v 6.2.6 musí být prováděny buď organizací Xa, nebo organizací IS schválenou touto organizací Xa; k definici organizací Xa a IS viz definice v 6.2.3.6.1. Posuzování shody musí být prováděno příslušným orgánem, jeho zástupcem nebo jeho schválenou inspekční organizací smluvní strany ADR.

1.8.8.1.2 Při použití ustanovení v 1.8.8 musí žadatel prokázat, zajistit a deklarovat na svou výlučnou odpovědnost shodu plynových kartuší s ustanoveními uvedenými v 6.2.6 a se všemi dalšími platnými ustanoveními ADR.

1.8.8.1.3 Žadatel musí:

- (a) provést posouzení konstrukčního typu každého typu plynových kartuší (včetně použitých materiálů a modifikací tohoto typu, např. objemy, tlaky, výrobní výkresy a uzavírací a výpustná zařízení) podle 1.8.8.2;
- (b) používat schválený systém kvality pro konstrukci, výrobu, inspekci a zkoušení podle 1.8.8.3;
- (c) používat schválený zkušební režim podle 1.8.8.4 pro zkoušky vyžadované v 6.2.6;

- (d) požádat o schválení svého systému kvality pro dohled nad výrobou a pro zkoušení jednu organizaci Xa podle své volby smluvní strany; jestliže žadatel nemá své sídlo ve smluvní straně, musí požádat jednu organizaci Xa ze smluvní strany před první přepravou do smluvní strany;
- (e) je-li plynová kartuše v konečné fázi kompletována z dílů vyrobených žadatelem jedním nebo více jinými podniky, vypracovat písemné pokyny, jak kompletovat a plnit plynové kartuše, aby splnily ustanovení jeho osvědčení o posouzení konstrukčního typu.

1.8.8.1.4 Pokud žadatel a podniky kompletující nebo plnící plynové kartuše podle pokynů žadatele mohou prokázat ke spokojenosti organizace Xa shodu s ustanoveními pododdílu 1.8.7.6, kromě 1.8.7.6.1 (d) a 1.8.7.6.2 (b), smějí si zřídit vlastní inspekční službu, která smí vykonávat část nebo všechny inspekce a zkoušky uvedené v 6.2.6.

1.8.8.2 *Posuzování konstrukčního typu*

1.8.8.2.1 Žadatel musí vypracovat technickou dokumentaci pro každý typ plynových kartuší včetně použité technické normy (norem). Jestliže se rozhodne použít normu, na kterou není odkaz v 6.2.6, musí doplnit použitou normu do dokumentace.

1.8.8.2.2 Žadatel musí uchovávat technickou dokumentaci spolu se vzorky tohoto typu k dispozici organizaci Xa během výroby a poté po dobu nejméně pěti let od posledního data výroby plynových kartuší podle osvědčení o posouzení konstrukčního typu.

1.8.8.2.3 Žadatel vydá po pečlivém posouzení osvědčení pro konstrukční typ, které platí na maximální dobu deseti let; toto osvědčení musí doplnit do dokumentace. Toto osvědčení ho opravňuje vyrábět plynové kartuše tohoto typu po tuto dobu.

1.8.8.2.4 Jestliže se v průběhu této doby změní příslušné technické požadavky ADR (včetně referenčních norem), takže konstrukční typ jim už nevyhovuje, musí žadatel zrušit své osvědčení o posouzení konstrukčního typu a informovat o tom organizaci Xa.

1.8.8.2.5 Žadatel smí po pečlivém a úplném přezkoumání vydat znovu osvědčení s platností na další období maximálně deseti let.

1.8.8.3 *Dohled nad výrobou*

1.8.8.3.1 Postup při posuzování konstrukčního typu, jakož i výrobní proces musí být podrobeny kontrole ze strany organizace Xa, aby se zajistilo, že konstrukční typ certifikovaný žadatelem a výrobek, jak je vyráběný, jsou ve shodě s ustanoveními osvědčení pro konstrukční typ a s platnými ustanoveními ADR. Při použití odstavce 1.8.8.1.3 © musí být do tohoto postupu zahrnuty rovněž podniky pověřené kompletací a plněním.

1.8.8.3.2 Žadatel musí učinit všechna potřebná opatření, aby zajistil, že výrobní proces splňuje platná ustanovení ADR a jeho osvědčení pro konstrukční typ a jeho příloh. Při použití odstavce 1.8.8.1.3 (c) musí být do tohoto postupu zahrnuty rovněž podniky pověřené kompletací a plněním.

1.8.8.3.3 Organizace Xa musí:

- (a) ověřit shodu posouzení konstrukčního typu žadatele a shodu typu plynových kartuší s technickou dokumentací uvedenou v 1.8.8.2;
- (b) ověřit, zda výrobní proces vyrábí výrobky ve shodě s předpisy a dokumentací, které se na něj vztahují; je-li plynová kartuše v konečné fázi kompletována z dílů vyrobených žadatelem jedním nebo více jinými podniky, musí organizace Xa rovněž ověřit, zda jsou plynové kartuše v plné shodě s platnými předpisy po finální kompletaci a naplnění a že jsou pokyny žadatele správně používány;
- (c) ověřit, zda je personál provádějící trvalá spojení dílů a zkoušky kvalifikovaný nebo schválený;
- (d) zaznamenat výsledky svých kontrol.

1.8.8.3.4 Jestliže nálezy organizace Xa ukáží neshodu osvědčení pro konstrukční typ žadatele nebo výrobního procesu, musí tato organizace vyžadovat náležitá opravná opatření nebo zrušení platnosti osvědčení vydaného žadatelem.

1.8.8.4 Zkouška těsnosti

1.8.8.4.1 Žadatel a podniky v konečné fázi kompletující a plnicí plynové kartuše podle pokynů žadatele musí:

- (a) provést zkoušky vyžadované v 6.2.6;
- (b) zaznamenat výsledky zkoušek;
- (c) vydat osvědčení o shodě pouze pro plynové kartuše, které plně vyhovují ustanovením svého posouzení konstrukčního typu a platným ustanovením ADR a které s úspěchem prošly zkouškami vyžadovanými v 6.2.6;
- (d) uchovávat dokumentaci uvedenou v 1.8.8.7 během výroby a poté po dobu nejméně pěti let od posledního data výroby plynových kartuší náležejících k jednomu typovému schválení pro inspekci prováděnou organizací Xa v namátkově zvolených intervalech;
- (e) připevnit odolnou a čitelnou značku identifikující typ plynové kartuše, žadatele a datum výroby nebo číslo výrobní série; tam, kde vzhledem k omezené disponibilní ploše nemůže být tato značka umístěna na těleso plynové kartuše, musí připevnit odolnou visačku s těmito informacemi k plynové kartuši nebo ji vložit s plynovou kartuší do vnitřního obalu.

1.8.8.4.2 Organizace Xa musí:

- (a) provádět potřebné prohlídky a zkoušky v namátkově zvolených intervalech, ale alespoň krátce po zahájení výroby určitého typu plynových kartuší a poté alespoň jednou za tři roky za účelem ověření, že postup pro posouzení konstrukčního typu žadatele, jakož i výroba a zkoušení výrobku jsou prováděny v souladu s osvědčením pro konstrukční typ a s příslušnými předpisy;
- (b) zkontrolovat osvědčení dodaná žadatelem;
- (c) provádět zkoušky vyžadované v 6.2.6 nebo schválit program zkoušek a vlastní inspekční službu k provádění zkoušek.

1.8.8.4.3 Osvědčení musí obsahovat alespoň:

- (a) název a adresu žadatele a, není-li finální kompletace prováděna žadatelem, nýbrž podnikem nebo podniky podle písemných pokynů žadatele, název (názy) a adresu (adresy) těchto podniků;
- (b) odvolávku na vydání ADR a normu (normy) použité pro výrobu a zkoušky;
- (c) výsledky inspekce a zkoušek;
- (d) údaje pro značení, jak jsou vyžadovány v 1.8.8.4.1 (c).

1.8.8.5 *(Vyhrazeno)*

1.8.8.6 Dohled nad vlastní inspekční službou

Pokud si žadatel nebo podnik kompletující nebo plnicí plynové kartuše zřídil vlastní inspekční službu, použijí se ustanovení uvedená v 1.8.7.6, kromě 1.8.7.6.1 (d) a 1.8.7.6.2 (b). Podnik kompletující nebo plnicí plynové kartuše musí splňovat ustanovení platná pro žadatele.

1.8.8.7 Dokumentace

Použijí se ustanovení uvedená v 1.8.7.7.1, 1.8.7.7.2, 1.8.7.7.3 a 1.8.7.7.5.

KAPITOLA 1.9

DOPRAVNÍ OMEZENÍ STANOVENÁ PŘÍSLUŠNÝMI ORGÁNY

- 1.9.1** Podle článku 4, odstavce 1 dohody ADR může být vstup nebezpečných věcí na území smluvních stran předmětem pravidel nebo zákazů stanovených z jiných důvodů, než je bezpečnost během přepravy. Taková pravidla nebo zákazy musí být uveřejněny vhodnou formou.
- 1.9.2** Smluvní strany mohou uplatňovat vůči vozidlům provádějícím mezinárodní silniční přepravu nebezpečných věcí na svém území určitá dodatečná ustanovení v rámci výčtu uvedeného v následujícím oddílu 1.9.3, která nejsou obsažena v ADR, pokud tato ustanovení nejsou v rozporu s článkem 2, odstavcem 2 Dohody a pokud jsou obsažena v jejich vnitrostátních právních předpisech a vztahují se rovnocenně rovněž na vozidla provádějící vnitrostátní silniční přepravu nebezpečných věcí na území této smluvní strany.
- 1.9.3** Dodatečná ustanovení, která mohou být uplatňována podle výše uvedeného oddílu 1.9.2 jsou tato:
- (a) Dodatečné bezpečnostní požadavky nebo omezení týkající se vozidel užívajících určitou infrastrukturu, jako jsou mosty, vozidel přepravovaných prostředky kombinované dopravy, jako jsou trajekty nebo vlaky, nebo vozidel vjíždějících nebo vyjíždějících z přístavů nebo jiných dopravních terminálů;
 - (b) Požadavky na jízdu vozidel po předepsaných dopravních trasách, které se vyhýbají obchodním nebo obytným územím, územím citlivým z hlediska ochrany životního prostředí, průmyslovým zónám s rizikovými zařízeními nebo silnicím s vážnými fyzikálními riziky;
 - (c) Výjimečné požadavky týkající se dopravní trasy nebo podmínek parkování vozidel přepravujících nebezpečné věci, které vyplývají z extrémních povětrnostních podmínek, zemětřesení, nehody, odborářských akcí, občanských nepokojů nebo vojenských konfliktů;
 - (d) Omezení silničního provozu vozidel přepravujících nebezpečné věci v určitých dnech týdne nebo roku.
- 1.9.4** Příslušný orgán smluvní strany uplatňující na svém území jakákoli dodatečná ustanovení uvedená v odstavcích (a) a (d) předchozího oddílu 1.9.3 musí o tom informovat Sekretariát Evropské hospodářské komise Organizace spojených národů, který o nich uvědomí smluvní strany¹.
- 1.9.5 Omezení průjezdu tunely**
- POZNÁMKA:** Ustanovení o omezeních průjezdu vozidel silničními tunely jsou též uvedeny v kapitole 8.6.
- 1.9.5.1** Všeobecná ustanovení
- Při aplikaci omezení průjezdu vozidel přepravujících nebezpečné věci tunely musí příslušný orgán označit silniční tunel jednou z kategorií tunelů definovaných v 1.9.5.2.2. Musí být vzaty v úvahu charakteristiky tunelu, odhad rizika, včetně možnosti a vhodnosti alternativních tras a způsobů a řízení provozu. Tentýž tunel může být označen více než jednou kategorií tunelu, např. závisející na denních hodinách nebo na dnech týdne atd.
- 1.9.5.2** Kategorizace
- 1.9.5.2.1** Kategorizace musí vycházet z předpokladu, že v tunelech existují tři hlavní nebezpečí, které mohou způsobit početné oběti nebo vážné poškození infrastruktury tunelu:

¹ Do Všeobecného návodu pro výpočet rizik při silniční přepravě nebezpečných věcí (A Guideline for the Calculation of Risks in the Transport of Dangerous Goods by Road) je možno nahlédnout na webové stránce sekretariátu Evropské hospodářské komise OSN (<http://www.unece.org/trans/danger/danger.htm>).

- (a) Výbuchy;
- (b) Únik toxického plynu nebo těkavé toxické kapaliny;
- (c) Požáry.

1.9.5.2.2 Pět kategorií jsou dále uvedené:

Kategorie tunelu A

Žádná omezení pro dopravu nebezpečných věcí;

Kategorie tunelu B

Omezení pro nebezpečné věci, které mohou vést k velmi silnému výbuchu;

Dále uvedené nebezpečné věci jsou považovány za splňující tato kritéria²:

Třída 1:	Skupiny snášenlivosti A a L;
Třída 3:	Klasifikační kód D (UN 1204, 2059, 3064, 3343, 3357 a 3379);
Třída 4.1:	Klasifikační kódy D a DT; a Samovolně se rozkládající látky, typ B (UN 3221, 3222, 3231 a 3232);
Třída 5.2:	Organické peroxidy, typ B (UN 3101, 3102, 3111 a 3112).
Pokud celková čistá hmotnost výbušné látky v dopravní jednotce je větší než 1000 kg:	
Třída 1:	Podtřídy 1.1, 1.2 a 1.5 (kromě skupin snášenlivosti A a L).
Pokud jsou přepravovány v cisternách:	
Třída 2:	Klasifikační kódy F, TF a TFC;
Třída 4.2:	Obalová skupina I;
Třída 4.3:	Obalová skupina I;
Třída 5.1:	Obalová skupina I.
Třída 6.1:	UN 1510

Kategorie tunelu C

Omezení pro nebezpečné věci, které mohou vést k velmi silnému výbuchu, silnému výbuchu nebo velkému úniku toxické látky;

Dále uvedené nebezpečné věci jsou považovány za splňující tato kritéria²:

- nebezpečné věci omezené v tunelu kategorie B, a
- následující nebezpečné věci:

Třída 1:	Podtřída 1.1, 1.2 a 1.5 (kromě skupin snášenlivosti A a L); a Podtřída 1.3 (skupiny snášenlivosti H a J);
Třída 7:	UN 2977 a 2978.
Pokud celková čistá hmotnost výbušné látky v dopravní jednotce je větší než 5000 kg:	
Třída 1:	Podtřída 1.3 (skupiny snášenlivosti C a G).
Pokud jsou přepravovány v cisternách:	
Třída 2:	Klasifikační kódy 2A, 2O, 3A a 3O, jakož i klasifikační kódy obsahující jen písmeno T nebo skupiny písmen TC, TO a TOC;
Třída 3:	Obalová skupina I pro klasifikační kódy FC, FT1, FT2 a FTC;
Třída 6.1:	Obalová skupina I; kromě UN 1510
Třída 8:	Obalová skupin I pro klasifikační kód CT1, CFT a COT.

² Odhad vychází ze skutečných nebezpečných vlastností věcí, typu ochrany a přepravovaného množství.

Kategorie tunelu D:

Omezení pro nebezpečné věci, které mohou vést k velmi silnému výbuchu, silnému výbuchu, velkému úniku toxické látky nebo velkému požáru;

Dále uvedené nebezpečné věci jsou považovány za splňující tato kritéria².

- nebezpečné věci omezené v tunelu kategorie C, a
- následující nebezpečné věci:

Třída 1:	Podtřída 1.3 (skupina snáčenlivosti C a G);
Třída 2:	Klasifikační kódy F, FC, T, TF, TC, TO, TFC a TOC;
Třída 4.1:	Samovolně se rozkládající látky, typy C, D, E a F; a UN 2956, 3241, 3242 a 3251;
Třída 5.2:	Organické peroxidy, typy C, D, E a F;
Třída 6.1:	Obalová skupina I pro klasifikační kódy TF1 a TFC; a Látky toxické při vdechování, jimž je ve sloupci (6) tabulky A kapitoly 3.2 přiřazeno zvláštní ustanovení 354 a látky toxické při vdechování UN čísel 3381 až 3390;
Třída 8:	Obalová skupina I pro klasifikační kód CT1, CFT a COT;
Třída 9:	Klasifikační kódy M9 a M10.
Pokud jsou přepravovány volně ložené nebo v cisternách:	
Třída 3	
Třída 4.2:	Obalová skupina II;
Třída 4.3:	Obalová skupina II;
Třída 6.1:	Obalová skupina II; a Obalová skupina III pro klasifikační kód TF2;
Třída 8:	Obalová skupina I pro klasifikační kódy CF1, CFT a CW1; a Obalová skupina II pro klasifikační kódy CF1 a CFT ² .
Třída 9:	Klasifikační kódy M2 a M3.

Kategorie tunelu E:

Omezení pro všechny nebezpečné věci jiné než UN 2919, 3291, 3331 a 3373 a pro všechny nebezpečné věci podle ustanovení kapitoly 3.4, jestliže přepravované množství překračuje 8 tun celkové (btto) hmotnosti na dopravní jednotku.

POZNÁMKA: Pro nebezpečné věci přiřazené do UN 2919 a 3331 omezení průjezdu tunely však mohou být částí zvláštních ujednání schválených příslušným(i) orgánem(y) podle pododdílu 1.7.4.2.

1.9.5.3 **Ustanovení o dopravních značkách a vyhlášení omezení**

1.9.5.3.1 Smluvní strany musí označit zákazy průjezdu tunelem a alternativní trasy prostřednictvím značek a signálů.

1.9.5.3.2 Pro tento účel mohou být použity značky C, 3h a D, 10a, 10b a 10c podle Vídeňské úmluvy o dopravních značkách a signálech (Vídeň, 1968) a Evropské dohody doplňující Úmluvu o dopravních značkách a signálech (Ženeva, 1971), jak je uvedeno v Rezoluci o dopravních značkách a signálech (R.E.2) Hlavní pracovní skupiny pro silniční dopravu Výboru pro pozemní dopravu EHK OSN, se změnami a doplňky.

1.9.5.3.3 Za účelem usnadnění výkladu značek je systém značek a signálů předepsaný Vídeňskou úmluvou založen na používání tvarů a charakteristiky barev každé třídy značek a, kde je to možné, na použití grafických symbolů (piktogramů) spíše než popisů. Kde Smluvní strany považují za nezbytné upravit předepsané značky a symboly, tyto úpravy nesmí měnit jejich podstatné charakteristiky. Kde

² Odhad vychází ze skutečných nebezpečných vlastností věcí, typu ochrany a přepravovaného množství.

Smluvní strany neuplatňují Vídeňskou úmluvu, předepsané značky a symboly mohou být upravovány, tyto úpravy nesmí měnit jejich podstatný smysl.

- 1.9.5.3.4** Dopravní značky a signály určené pro zákaz vjezdu vozidel přepravujících nebezpečné věci do silniční tunelů musí umístěny na místě, kde je možná volba alternativní trasy.
- 1.9.5.3.5** Kde vjezd do tunelů je omezen nebo jsou předepsány alternativní trasy, značky musí být označeny doplňkovými tabulkami takto:
- Žádná značka: žádné omezení
- Značka s doplňkovou tabulkou opatřenou písmenem B: vztahuje se na vozidla přepravující nebezpečné věci nedovolené pro dopravu tunely kategorie B;
- Značka s doplňkovou tabulkou opatřenou písmenem C: vztahuje se na vozidla přepravující nebezpečné věci nedovolené pro dopravu tunely kategorie C;
- Značka s doplňkovou tabulkou opatřenou písmenem D: vztahuje se na vozidla přepravující nebezpečné věci nedovolené pro dopravu tunely kategorie D;
- Značka s doplňkovou tabulkou opatřenou písmenem E: vztahuje se na vozidla přepravující nebezpečné věci nedovolené pro dopravu tunely kategorie E;
- 1.9.5.3.6** Omezení průjezdu tunely platí pro dopravní jednotky, pro které je vyžadováno označení oranžovými tabulkami podle 5.3.2 a u tunelů kategorie E platí též pro dopravní jednotky, pro které je vyžadováno označení podle 3.4.13, nebo které přepravují kontejnery, pro něž je vyžadováno označení podle 3.4.13.
- Omezení průjezdu tunely neplatí, pokud jsou nebezpečné věci přepravovány podle 1.1.3, s výjimkou případů, kdy jsou vozidla přepravující takové věci označena podle 3.4.13 s přihlédnutím k 3.4.14³.
- 1.9.5.3.7** Omezení musí být úředně publikována a zpřístupněna veřejnosti. Smluvní strany musí taková omezení sdělit sekretariátu UNECE a sekretariát tyto informace zveřejní na své webové stránce.
- 1.9.5.3.8** Pokud Smluvní strany uplatňují zvláštní provozní opatření pro snížení rizik a vztahující se na některá nebo všechna vozidla používající tunely, taková jako prohlášení před vjezdem nebo průjezdem v konvoji doprovázeném doprovodnými vozidly, taková provozní opatření musí být úředně publikována a zpřístupněna veřejnosti.

³ nebo podle 3.4.10 s přihlédnutím k 3.4.11 ADR platné do 31. prosince 2010, jestliže se použije přechodných ustanovení v 1.6.1.20.

KAPITOLA 1.10

BEZPEČNOSTNÍ PŘEDPISY

POZNÁMKA: Pro účely této kapitoly se slovem „bezpečnost“ rozumí opatření nebo preventivní kroky ke snížení nebezpečí odcizení nebo zneužití nebezpečných věcí, v jehož důsledku by mohlo dojít k ohrožení osob, majetku nebo životního prostředí.

1.10.1 Všeobecná ustanovení

1.10.1.1 Všechny osoby podílející se na přepravě nebezpečných věcí musí dodržovat bezpečnostní předpisy pro přepravu nebezpečných věcí uvedené v této kapitole v přiměřené míře ke svým odpovědnostem.

1.10.1.2 Nebezpečné věci smějí být předány k přepravě pouze dopravcům, jejichž totožnost byla vhodným způsobem ověřena.

1.10.1.3 Prostory terminálů pro dočasné skladování, plochy pro dočasné skladování, odstavné plochy pro vozidla, kotviště a seřadovací nádraží používané pro dočasné skladování během přepravy nebezpečných věcí musí být vhodně zabezpečeny, dobře osvětleny a, kde je to možné a vhodné, nepřístupné veřejnosti.

1.10.1.4 Každý člen osádky vozidla musí mít během přepravy nebezpečných věcí u sebe průkaz totožnosti opatřený fotografií.

1.10.1.5 Bezpečnostní kontroly podle oddílu 1.8.1 a pododdílu 7.5.1.1 se musí zaměřit také na vhodná opatření k zajištění bezpečnosti.

1.10.1.6 Příslušný orgán musí vést aktuální soupisy všech platných osvědčení o školení řidičů předepsaných v oddílu 8.2.1, vydaných jím nebo jakoukoli uznávanou organizací.

1.10.2 Školení o obecné bezpečnosti

1.10.2.1 Úvodní a obnovovací školení uvedené v kapitole 1.3 musí zahrnovat také prvky poučení o bezpečnosti. Obnovovací školení nemusí být nutně vázáno jen na změny předpisů.

1.10.2.2 Školení musí být zaměřeno na povahu bezpečnostních rizik, jejich rozpoznávání a postupů k jejich snížení, jakož i na opatření, která je nutno provést při narušení bezpečnosti. Musí zahrnovat seznámení s příslušnými bezpečnostními plány, v přiměřené míře k odpovědnostem povinnostem jednotlivých pracovníků a jejich účasti při aplikaci bezpečnostních plánů.

1.10.2.3 Toto školení musí být poskytnuto při přijímání osob na pracovní místa spojená s přepravou nebezpečných věcí, nebo musí být ověřeno, že takové školení již absolvovaly. Následně musí být periodicky doplňováno obnovovacím školením.

1.10.2.4 Záznamy o všech absolvovaných bezpečnostních školeních musí být uchovávány zaměstnavatelem a musí být na požádání zpřístupněny zaměstnanci nebo příslušnému orgánu. Záznamy musí být uchovávány zaměstnavatelem po dobu stanovenou příslušným orgánem.

1.10.3 Ustanovení pro vysoce rizikové nebezpečné věci

1.10.3.1 Definice vysoce rizikových nebezpečných věcí

1.10.3.1.1 Vysoce rizikové nebezpečné věci jsou takové nebezpečné věci, které mají potenciál být zneužity při teroristické akci a které mohou, jako výsledek, vyvolat vážné důsledky, jako jsou hromadné oběti na životech, hromadné ničení nebo, zejména pro třídu 7, hromadný socio-ekonomický rozvrat.

- 1.10.3.1.2** Vysoce rizikové nebezpečné věci jiných tříd, než je třída 7, jsou nebezpečné věci uvedené v tabulce 1.10.3.1.2 níže a přepravované v množstvích větších, než jsou množství uvedená v této tabulce.

Tabulka 1.10.3.1.2: Seznam vysoce rizikových nebezpečných věcí

Třída	Podtřída	Látka nebo předmět	Množství		
			Cisterna (l) ^c	Volně ložené (kg) ^d	Kusy (kg)
1	1.1	Výbušné látky a předměty	a	a	0
	1.2	Výbušné látky a předměty	a	a	0
	1.3	Výbušné látky a předměty skupiny snášenlivosti C	a	a	0
	1.4	Výbušné látky a předměty UN čísel 0104, 0237, 0255, 0267, 0289, 0361, 0365, 0366, 0440, 0441, 0455, 0456 a 0500	a	a	0
	1.5	Výbušné látky a předměty	0	a	0
2		Hořlavé plyny (klasifikační kódy zahrnující jen písmeno F)	3000	a	b
		Toxické plyny (klasifikační kódy zahrnující písmena T, TF, TC, TO, TFC nebo TOC), s výjimkou aerosolů	0	a	0
3		Hořlavé kapaliny obalových skupin I a II	3000	a	b
		Znecitlivěné výbušné kapaliny	0	a	0
4.1		Znecitlivěné výbušné látky	a	a	0
4.2		Látky obalové skupiny I	3000	a	b
4.3		Látky obalové skupiny I	3000	a	b
5.1		Kapaliny podporující hoření obalové skupiny I	3000	a	b
		Chloristany, dusičnan amonný, hnojiva obsahující dusičnan amonný a emulze nebo suspenze nebo gely obsahující dusičnan amonný	3000	3000	b
6.1		Toxické látky obalové skupiny I	0	a	0
6.2		Infekční látky (UN čísel 2814 a 2900, kromě materiálu živočišného původu)	a	0	0
8		Žiravé látky obalové skupiny I	3000	a	b

a Nevztahuje se.

b Ustanovení oddílu 1.10.3 neplatí, bez ohledu na množství.

c Hodnota uvedená v tomto sloupci platí pouze tehdy, je-li přeprava v cisternách podle kapitoly 3.2, tabulky A, sloupce (10) nebo (12) povolena. Pro látky, které není dovoleno v cisternách přepravovat, instrukce uvedená v tomto sloupci neplatí.

d Hodnota uvedená v tomto sloupci platí pouze tehdy, je-li přeprava ve volně loženém stavu podle kapitoly 3.2, tabulky A, sloupce (10) nebo (17) povolena. Pro látky, které není dovoleno ve volně loženém stavu přepravovat, instrukce uvedená v tomto sloupci neplatí.

- 1.10.3.1.3** Pro třídu 7 jsou vysoce rizikové radioaktivní látky takové látky, které mají úroveň aktivity stejnou nebo vyšší než je práh dopravní bezpečnosti 3 000 A2 pro jednotlivý kus (viz též 2.2.7.2.2.1), s výjimkou následujících radionuklidů, pro které je práh dopravní bezpečnosti udán v tabulce 1.10.3.1.3 níže.

Tabulka 1.10.3.1.3: Prahy dopravní bezpečnosti pro jednotlivé radionuklidy

<i>Prvek</i>	<i>Radionuklid</i>	<i>Práh dopravní bezpečnosti (TBq)</i>
Americium	Am-241	0,6
Zlato	Au-198	2
Kadmium	Cd-109	200
Kalifornium	Cf-252	0,2
Curium	Cm-244	0,5
Kobalt	Co-57	7
Kobalt	Co-60	0,3
Cesium	Cs-137	1
Železo	Fe-55	8000
Germanium	Ge-68	7
Gadolinium	Gd-153	10
Iridium	Ir-192	0,8
Nikl	Ni-63	600
Paladium	Pd-103	900
Prometium	Pm-147	400
Polonium	Po-210	0,6
Plutonium	Pu-238	0,6
Plutonium	Pu-239	0,6
Radium	Ra-226	0,4
Ruthenium	Ru-106	3
Selen	Se-75	2
Stroncium	Sr-90	10
Thalium	Tl-204	200
Thulium	Tm-170	200
Yterbium	Yb-169	3

- 1.10.3.1.4** Pro směsi radionuklidů může být zjištěno, zda je dosažen nebo překročen práh dopravní bezpečnosti, provedeno výpočtem tak, že se sečte aktivita každého radionuklidu podělena prahem dopravní bezpečnosti pro tento radionuklid. Je-li součet těchto zlomků menší než 1, potom nebyl překročen práh radioaktivity pro směs.

Výpočet může být proveden podle tohoto vzorce:

$$\sum \frac{A_i}{T_i} < 1$$

kde:

A_i = aktivita radionuklidu i , který je přítomen v kusu (TBq)
 T_i = práh dopravní bezpečnosti pro radionuklid i (TBq)

- 1.10.3.1.5** Pokud má radioaktivní látka vedlejší nebezpečí jiných tříd, musí být vzata v úvahu také kritéria tabulky 1.10.3.1.2 (viz též 1.7.5).

1.10.3.2 Bezpečnostní plány

- 1.10.3.2.1** Dopravci, odesílatelé a ostatní účastníci přepravy uvedení v oddílech 1.4.2 a 1.4.3, podílející se na přepravě vysoce rizikových nebezpečných věcí (viz tabulku 1.10.3.1.2), nebo vysoce rizikových radioaktivních látek (viz tabulku 1.10.3.1.3) musí přijmout, aplikovat a dodržet bezpečnostní plán, který musí obsahovat alespoň součásti uvedené v 1.10.3.2.2.

- 1.10.3.2.2** Bezpečnostní plán musí obsahovat alespoň následující součásti:

- (a) specifické stanovení odpovědností za bezpečnost způsobitým a kvalifikovaným osobám s odpovídající pravomocí k uplatnění svých odpovědností;

- (b) seznamy dotčených nebezpečných věcí nebo skupin nebezpečných věcí;
- (c) přehled běžných činností a rozbor bezpečnostních rizik, které z nich vyplývají, včetně všech zastávek nutných při přepravě, přítomnosti nebezpečných věcí ve vozidle, cisterně nebo kontejneru před jízdou, během ní a po jízdě a dočasného skladování nebezpečných věcí za účelem jejich intermodální překládky nebo překládky na jiné vozidlo;
- (d) jasná specifikace opatření, která je třeba učinit ke snížení bezpečnostních rizik, přiměřených k odpovědnostem a povinnostem účastníka, včetně:
 - školení;
 - bezpečnostní politiky (např. reakce na podmínky velkého ohrožení, prověření nově přijímaných zaměstnanců nebo zaměstnanců přidělovaných na některá místa atd.);
 - provozní praxe (např. volba nebo používání známých tras, přístup k nebezpečným věcem při jejich dočasném skladování (jak je definováno pod písmenem c)), blízkost ohrožitelné infrastruktury atd.);
 - zařízení a zdrojů, které je nutno použít ke snížení bezpečnostních rizik;
- (e) účinné a moderní postupy pro ohlašování ohrožení, narušení bezpečnosti nebo případů s takovými situacemi souvisejících, a pro jednání v takových situacích
- (f) postupy pro posuzování a testování bezpečnostních plánů a postupy pro periodickou revizi a aktualizaci těchto plánů;
- (g) opatření pro zajištění fyzické bezpečnosti dopravních informací obsažených v bezpečnostním plánu; a
- (h) opatření pro zajištění toho, aby šíření informací týkajících se přepravy, obsažených v bezpečnostním plánu, bylo omezeno na ty osoby, které je potřebují mít. Tato opatření nesmějí být přítom překážkou sdělování informací vyžadovaných v jiných ustanoveních ADR.

POZNÁMKA: *Dopravci, odesílatelé a příjemci by měli spolupracovat mezi sebou a s příslušnými orgány při výměně informací týkajících se případných ohrožení, aplikaci vhodných bezpečnostních opatření a reakci na bezpečnostní incidenty.*

1.10.3.3

Na vozidlech, kterými jsou přepravovány vysoce rizikové nebezpečné věci (viz tabulku 1.10.3.1.2) nebo vysoce rizikové radioaktivní látky (viz tabulku 1.10.3.1.3), musí být nainstalovány prostředky, zařízení nebo systémy k ochraně proti odcizení vozidla a jeho nákladu a musí být učiněna opatření, aby se zajistila jejich funkčnost a účinnost v každém okamžiku. Použití těchto ochranných opatření nesmí ohrozit zásah záchranných jednotek.

POZNÁMKA: *Pokud je to vhodné a pokud jsou potřebná zařízení již nainstalována, měly by být použity telematické systémy nebo jiné metody nebo přístroje pro sledování pohybu vysoce rizikových nebezpečných věcí (viz tabulku 1.10.5).*

1.10.4

Podle ustanovení v 1.1.3.6 se požadavky oddílů 1.10.1, 1.10.2, 1.10.3 a pododdílu 8.1.2.1 (d) nepoužijí, jestliže množství přepravovaná v kusech v dopravní jednotce nepřekročí množství uvedená v 1.1.3.6.3, s výjimkou UN čísel 0029, 0030, 0059, 0065, 0073, 0104, 0237, 0255, 0267, 0288, 0289, 0290, 0360, 0361, 0364, 0365, 0366, 0439, 0440, 0441, 0455, 0456 a 0500 a s výjimkou UN čísel 2910 a 2911, jestliže úroveň aktivity překračuje hodnotu A₂ (viz první odsek v 1.1.3.6.2). Kromě toho se ustanovení 1.10.1, 1.10.2, 1.10.3 a 8.1.2.1 (d) nepoužijí, jestliže množství přepravovaná v cisternách nebo volně ložená v dopravní jednotce nepřekročí množství uvedená v 1.1.3.6.3.

1.10.5

Pro radioaktivní látky se ustanovení této kapitoly považují za splněná, pokud se použije ustanovení Úmluvy o fyzické ochraně jaderných materiálů¹ a oběžníku IAEA „Fyzická ochrana jaderných materiálů a jaderných zařízení“².

¹ INFCIRC/274/Rev.1, IAEA, Vídeň (1980).

² INFCIRC/225/Rev.4 (korigováno), IAEA, Vídeň (1999).

ČÁST 2

KLASIFIKACE

KAPITOLA 2.1

VŠEOBECNÁ USTANOVENÍ

2.1.1 Úvod

2.1.1.1 V ADR jsou následující třídy nebezpečných věcí:

Třída 1	Výbušné látky a předměty
Třída 2	Plyny
Třída 3	Hořlavé kapaliny
Třída 4.1	Hořlavé tuhé látky, samovolně se rozkládající látky a znečtivěné tuhé výbušné látky
Třída 4.2	Samozápalné látky
Třída 4.3	Látky, které ve styku s vodou vyvíjejí hořlavé plyny
Třída 5.1	Látky podporující hoření
Třída 5.2	Organické peroxidy
Třída 6.1	Toxické látky
Třída 6.2	Infekční látky
Třída 7	Radioaktivní látky
Třída 8	Žiravé látky
Třída 9	Jiné nebezpečné látky a předměty

2.1.1.2 Ke každé položce v různých třídách je přiřazeno UN číslo. Používají se následující druhy položek:

A. Samostatné položky pro přesně definované látky nebo předměty, včetně položek pokrývajících více isomerů, např.:

UN 1090	ACETON
UN 1104	AMYLACETÁTY
UN 1194	ETHYLNITRIT, ROZTOK

B. Druhové položky pro přesně definované skupiny látek nebo předmětů, které nejsou j.n. položkami, např.:

UN 1133	LEPIDLA
UN 1266	VÝROBKY KOSMETICKÉ
UN 2757	PESTICID KARBAMÁT, TUHÝ, TOXICKÝ
UN 3101	PEROXID ORGANICKÝ TYP B, KAPALNÝ

C. Specifické j.n. položky zahrnující skupiny látek nebo předmětů určité chemické nebo technické povahy, jinde nejmenované, např.:

UN 1477	DUSIČNANY, ANORGANICKÉ, J.N.
UN 1987	ALKOHOLY, J.N.

D. Všeobecné j.n. položky zahrnující skupiny látek nebo předmětů, mající jednu nebo více všeobecných nebezpečných vlastností, jinde nejmenované, např.

UN 1325	LÁTKA, HOŘLAVÁ, TUHÁ, ORGANICKÁ, J.N.
UN 1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N.

Položky definované pod písmeny B, C a D se označují jako hromadné položky.

2.1.1.3

Pro účely balení jsou látky, kromě látek tříd 1, 2, 5.2, 6.2 a 7 a kromě samovolně se rozkládajících látek třídy 4.1, přiřazeny k obalovým skupinám v závislosti na svém stupni nebezpečí:

Obalová skupina I : látky velmi nebezpečné
Obalová skupina II : látky středně nebezpečné
Obalová skupina III : látky málo nebezpečné

Obalová skupina (obalové skupiny), k nimž je látka přiřazena, je (jsou) uvedena(y) v tabulce A kapitoly 3.2.

2.1.2 Zásady klasifikace

2.1.2.1 Nebezpečné věci, které spadají pod název třídy, jsou definovány na základě svých vlastností dle pododdílu 2.2.x.1 odpovídající třídy. Zařazení nebezpečných věcí do určité třídy a přiřazení k obalové skupině se provádí podle kritérií uvedených ve stejném pododdílu 2.2.x.1. Přiřazení jednoho nebo více vedlejších nebezpečí nebezpečné látky nebo předmětu se provádí podle kritérií třídy nebo tříd odpovídajících těmto nebezpečím, uvedených v příslušném(-ých) pododdílu(-ech) 2.2.x.1.

2.1.2.2 Všechny položky nebezpečných věcí jsou uvedeny v tabulce A kapitoly 3.2 v číselném pořadí UN čísel. Tato tabulka obsahuje odpovídající informace o uvedených věcech, jako pojmenování, třídu, obalovou(-é) skupinu(-y), bezpečnostní značku(y), která(é) musí být umístěna(y), jakož i ustanovení o balení a přepravě¹.

2.1.2.3 Látka smí obsahovat technické nečistoty (například takové, které pocházejí z výrobního procesu) nebo přísady pro stabilizaci nebo jiné účely, které neovlivňují její klasifikaci. Avšak látka jmenovitě uvedená, tj. uvedená jako samostatná položka v tabulce A kapitoly 3.2, která obsahuje technické nečistoty nebo přísady pro stabilizaci nebo jiné účely ovlivňující její klasifikaci, musí být považována za roztok nebo směs (viz 2.1.3.3).

2.1.2.4 K přepravě nejsou připuštěny nebezpečné věci uvedené nebo definované v pododdílu 2.2.x.2 každé třídy.

2.1.2.5 Jmenovitě neuvedené nebezpečné věci, tj. věci, které nejsou uvedeny jako samostatné položky v tabulce A kapitoly 3.2 a které nejsou uvedeny ani definovány v jednom z výše uvedených pododdílů 2.2.x.2, musí být zařazeny do příslušné třídy v souladu s postupem dle oddílu 2.1.3. Dále musí být stanoveno vedlejší nebezpečí (pokud je) a obalová skupina (pokud je), musí být určeno odpovídající UN číslo. Rozhodovací stromy uvedené v pododdílu 2.2.x.3 (seznam hromadných položek) na konci každé třídy uvádějí určující parametry pro výběr příslušné hromadné položky (UN čísla). Ve všech případech musí být vybrána nejspecifičtější hromadná položka zahrnující vlastnosti látky nebo předmětu v pořadí vyjádřeném v pododdílu 2.1.1.2 písmeny B, C a D. Pouze v tom případě, že látka nebo předmět nemohou být zařazeny pod položku typu B nebo C podle pododdílu 2.1.1.2, je možné je zařadit pod položku typu D.

2.1.2.6 Na základě zkušebních postupů kapitoly 2.3 a kritérií stanovených v pododdílech 2.2.x.1 jednotlivých tříd může být stanoveno, jak je to uvedeno ve zmíněných pododdílech, že látka, roztok nebo směs určité třídy, které jsou jmenovitě uvedeny v tabulce A kapitoly 3.2, nesplňují kritéria této třídy. V tomto případě nenáleží dotyčná látka, roztok nebo směs do této třídy.

2.1.2.7 Pro účely klasifikace jsou látky s bodem tání nebo počátkem tání 20°C nebo nižším při tlaku 101,3 kPa považovány za kapalné látky. Viskózní látku, pro kterou nelze stanovit přesný bod tání, je třeba podrobit zkoušce dle ASTM D 4359-90 nebo zkoušce stanovení tekutosti (zkouška penetrem) předepsané v oddílu 2.3.4.

2.1.3 Klasifikace jmenovitě neuvedených látek, včetně roztoků a směsí (jako přípravky a odpady)

2.1.3.1 Látky, včetně roztoků a směsí, jmenovitě neuvedené, musí být zařazeny podle svého stupně nebezpečnosti na základě kritérií uvedených v pododdílu 2.2.x.1 jednotlivých tříd. Nebezpečí vyplývající z látky musí být určeno(a) na základě jejich fyzikálních, chemických a fyziologických vlastností. Tyto vlastnosti je nutné rovněž zohlednit, pokud praktické zkušenosti vedou k přísnějšímu zařazení.

¹ **Poznámka sekretariátu:** Abecední seznam těchto položek byl připraven sekretariátem a je uveden v tabulce B kapitoly 3.2. Tato tabulka není oficiální částí ADR.

2.1.3.2 Látka jmenovitě neuvedená v tabulce A kapitoly 3.2, která vykazuje jediné nebezpečí, musí být zařazena do příslušné třídy pod hromadnou položku dle pododdílu 2.2.x.3 této třídy.

2.1.3.3 Roztok nebo směs splňující klasifikační kritéria ADR, složené z jedné převažující látky, jmenovitě uvedené v tabulce A kapitoly 3.2, a z jedné nebo více látek nepodléhající(ch) ADR, nebo stopových množství jedné nebo více látek jmenovitě uvedených v tabulce A kapitoly 3.2, musí být přiřazeny k UN číslu a oficiálnímu pojmenování pro přepravu převažující látky, jmenovitě uvedené v tabulce A kapitoly 3.2, ledaže:

- (a) roztok nebo směs je jmenovitě uveden(a) v tabulce A kapitoly 3.2;
- (b) pojmenování a popis látky jmenovitě uvedené v tabulce A kapitoly 3.2 výslovně vyjadřují, že se vztahují jen na čistou látku;
- (c) třída, klasifikační kód, obalová skupina nebo fyzikální stav tohoto roztoku nebo směsi jsou odlišné od třídy, klasifikačního kódu, obalové skupiny nebo fyzikálního stavu látky jmenovitě uvedené v tabulce A kapitoly 3.2; nebo
- (d) charakteristiky nebezpečnosti a vlastnosti roztoku nebo směsi vyžadují opatření v případě nehody nebo nouzové situace, která jsou odlišná od opatření vyžadovaných pro látku jmenovitě uvedenou v tabulce A kapitoly 3.2.

V těchto jiných případech, kromě případu pod písmenem (a), musí být roztok nebo směs zařazena jako jmenovitě neuvedená látka do odpovídající třídy a přiřazena pod hromadnou položku uvedenou v pododdílu 2.2.x.3 této třídy, se zohledněním případných vedlejších nebezpečí představovaných tímto roztokem nebo směsí, ledaže by roztok nebo směs neodpovídaly kritériím žádné třídy a proto nepodléhaly předpisům ADR.

2.1.3.4 Roztoky a směsi obsahující látku spadající pod jednu z položek uvedených v odstavci 2.1.3.4.1 nebo 2.1.3.4.2 musí být zařazeny podle ustanovení těchto odstavců.

2.1.3.4.1 Roztoky a směsi, obsahující jednu z následujících jmenovitě uvedených látek, musí být vždy přiřazeny pod stejnou položkou, jako v nich obsažená látka, za podmínky, že tyto roztoky a směsi nemají nebezpečné vlastnosti uvedené v odstavci 2.1.3.5.3:

- Třída 3

UN 1921 PROPYLENIMIN, STABILIZOVANÝ
UN 3064 NITROGLYCERIN, ROZTOK V ALKOHOLU s více než 1 %, ale nejvýše 5 % nitroglycerinu

- Třída 6.1

UN 1051 KYANOVODÍK, STABILIZOVANÝ, obsahující méně než 3 % vody
UN 1185 ETYLENIMIN, STABILIZOVANÝ
UN 1259 TETRAKARBONYL NIKLU
UN 1613 KYSELINA KYANOVODÍKOVÁ, VODNÝ ROZTOK (KYANOVODÍK, VODNÝ ROZTOK), obsahující nejvýše 20 % kyanovodíku
UN 1614 KYANOVODÍK, STABILIZOVANÝ, obsahující méně než 3 % vody a nasáklý v porézní inertní hmotě
UN 1994 PENTAKARBONYL ŽELEZA
UN 2480 METHYLISOKYANÁT
UN 2481 ETHYLISOKYANÁT
UN 3294 KYANOVODÍK, ROZTOK V ALKOHOLU, obsahující nejvýše 45 % kyanovodíku

- Třída 8

UN 1052 FLUOROVODÍK, BEZVODÝ
UN 1744 BROM nebo BROM, ROZTOK
UN 1790 KYSELINA FLUOROVODÍKOVÁ, roztok, s více než 85 % fluorovodíku
UN 2576 BROMID FOSFORYLU, ROZTAVENÝ

- 2.1.3.4.2** Roztoky a směsi obsahující látky spadající pod jednu z následujících položek třídy 9:
- | | |
|---------|--|
| UN 2315 | BIFENYLY POLYCHLOROVANÉ, KAPALNÉ (PCB) |
| UN 3151 | BIFENYLY POLYHALOGENOVANÉ, KAPALNÉ, nebo |
| UN 3151 | TERFENYLY POLYHALOGENOVANÉ, KAPALNÉ |
| UN 3152 | BIFENYLY POLYHALOGENOVANÉ, TUHÉ |
| UN 3152 | TERFENYLY POLYHALOGENOVANÉ, TUHÉ, nebo |
| UN 3432 | BIFENYLY POLYCHLOROVANÉ, TUHÉ (PCB) |
- musí být vždy přiřazeny pod tutéž položku třídy 9, pokud
- neobsahují žádnou další nebezpečnou složku, jinou než složky obalové skupiny III tříd 3, 4.1, 4.2, 4.3, 5.1, 6.1 nebo 8; a
 - nemají nebezpečné vlastnosti uvedené v odstavci 2.1.3.5.3.
- 2.1.3.5** Látky jmenovitě neuvedené v tabulce A kapitoly 3.2, mající více nebezpečných vlastností, jakož i roztoky nebo směsi splňující klasifikační kritéria ADR a obsahující více nebezpečných látek, musí být přiřazeny pod hromadnou položku (viz pododíl 2.1.2.5) a obalovou skupinou příslušné třídy v závislosti na svých nebezpečných vlastnostech. Takovému zařazení podle nebezpečných vlastností musí být provedeno následovně:
- 2.1.3.5.1** Fyzikální, chemické a fyziologické charakteristiky musí být určeny měřením nebo výpočtem a zařazení látek, roztoků nebo směsí musí být provedeno podle kritérií uvedených v pododíle 2.2.x.1 jednotlivých tříd.
- 2.1.3.5.2** Je-li toto určení možné jen s neúměrně vysokými náklady (např. u určitých odpadů), musí být látka, roztok nebo směs zařazena do třídy komponentu, který představuje převažující nebezpečí.
- 2.1.3.5.3** Pokud nebezpečné vlastnosti látky, roztoku nebo směsi spadají do více než jedné třídy nebo skupiny látek uvedených níže, potom látka, roztok nebo směs musí být zařazený do třídy nebo skupiny látek odpovídající převažujícímu nebezpečí na základě následujícího pořadí:
- (a) látky třídy 7 (kromě radioaktivních látek ve vyjmutých kusech, pro něž platí zvláštní ustanovení 290 kapitoly 3.3, u kterých převažují jiné nebezpečné vlastnosti);
 - (b) látky třídy 1;
 - (c) látky třídy 2;
 - (d) znečistlivěné kapalné výbušné látky třídy 3;
 - (e) samovolně se rozkládající látky a znečistlivěné tuhé výbušné látky třídy 4.1;
 - (f) pyroforní látky třídy 4.2;
 - (g) látky třídy 5.2;
 - (h) látky třídy 6.1 splňující kritéria toxicity při vdechnutí pro obalovou skupinu I [látky splňující klasifikační kritéria třídy 8 a mající toxicitu při vdechnutí prachů a mlhy (LC₅₀) v rozsahu obalové skupiny I, ale toxicita při požití nebo při dotyku s pokožkou jen v rozsahu obalové skupiny III nebo nižší, musí být zařazený do třídy 8];
 - (i) infekční látky třídy 6.2.
- 2.1.3.5.4** Pokud nebezpečné vlastnosti látky spadají do více tříd nebo skupin látek, které nejsou uvedeny v odstavci 2.1.3.5.3, musí být látka zařazena stejným postupem, avšak odpovídající třída se vybere podle tabulky převažujících nebezpečí v pododíle 2.1.3.10.
- 2.1.3.5.5** Je-li látka, která se má přepravovat, odpadem se složením, které není přesně známo, smí být její přiřazení k UN číslu a obalové skupině podle 2.1.3.5.2 založeno na odesílatelově znalosti odpadu, včetně všech dostupných technických a bezpečnostních údajů, jak jsou vyžadovány platnou legislativou pro bezpečnost a životní prostředí².

² Takovou legislativou je např. rozhodnutí Komise 2000/532/ES ze 3. května 2000 nahrazující rozhodnutí 94/3/ES stanovící seznam odpadů na základě článku 1(a) směrnice Rady 75/442/EHS o odpadech (nahrazena směrnicí Evropského parlamentu a Rady 2006/12/ES (Úřední věstník Evropských společenství č. L 114 z 27. dubna 2006, strana 9)) a rozhodnutí Rady 94/904/ES stanovící

V případě pochybnosti musí být zvolena nejvyšší úroveň nebezpečí.

Jestliže je však možno na základě znalosti složení odpadu a fyzikálních a chemických vlastností jeho identifikovaných složek dokázat, že vlastnosti odpadu neodpovídají vlastnostem obalové skupiny I, smí být odpad zařazen pod nevhodnější j.n. položku obalové skupiny II. Avšak je-li známo, že odpad má jen vlastnosti ohrožující životní prostředí, může být přiřazen k obalové skupině III pod UN čísla 3077 nebo 3082.

Tento postup nesmí být použit pro odpady obsahující látky zmíněné v 2.1.3.5.3, látky třídy 4.3, látky případu zmíněného v 2.1.3.7 ani pro látky, které nejsou připuštěny k přepravě podle pododdílů 2.2.x.2.

- 2.1.3.6** Je vždy nutno použít nejspecifičtější hromadné položky (viz pododdíl 2.1.2.5), tj. všeobecné j.n. položky se používá jen tehdy, pokud nelze použít druhové položky nebo specifické j.n. položky.
- 2.1.3.7** Roztoky a směsi látek podporujících hoření nebo látek, jejichž vedlejším nebezpečím je podpora hoření, mohou mít výbušné vlastnosti. V tomto případě nejsou připuštěny k přepravě, ledaže by splňovaly předpisy pro třídu 1.
- 2.1.3.8** Látky tříd 1 až 6.2, 8 a 9, jiné než jsou látky přiřazené k UN číslům 3077 nebo 3082, splňující kritéria odstavce 2.2.9.1.10 se navíc ke svým nebezpečím tříd 1 až 6.2, 8 a 9 považují za látky ohrožující životní prostředí. Jiné látky nesplňující kritéria žádné jiné třídy, nýbrž jen kritéria odstavce 2.2.9.1.10, se přiřadí k UN číslům 3077 nebo 3082, jak je to náležité.
- 2.1.3.9** Odpady, které nesplňují kritéria pro zařazení do tříd 1 až 9, avšak spadají pod Basilejskou úmluvu o kontrol pohybu nebezpečných odpadů přes hranice států a jejich zneškodňování, se smějí přepravovat pod UN čísla 3077 nebo 3082.

Tabulka převážujících nebezpečí

2.1.3.10

Třída obalová skupina	4.1 II	4.1 III	4.2 II	4.2 III	4.3 I	4.3 II	4.3 III	5.1 I	5.1 II	5.1 III	6.1 DERMAL	6.1 ORAL	8 I	8 II	8 III	9
3 I	SOL LIQ 4.1 3 I	SOL LIQ 4.1 3 I	SOL LIQ 4.2 3 I	SOL LIQ 4.2 3 I	4.3 I	4.3 I	4.3 I	SOL LIQ 5.1 I 3 I	SOL LIQ 5.1 I 3 I	SOL LIQ 5.1 I 3 I	3 I	3 I	3 I	3 I	3 I	3 I
3 II	SOL LIQ 4.1 3 II	SOL LIQ 4.1 3 II	SOL LIQ 4.2 3 II	SOL LIQ 4.2 3 II	4.3 I	4.3 II	4.3 II	SOL LIQ 5.1 I 3 I	SOL LIQ 5.1 I 3 II	SOL LIQ 5.1 I 3 II	3 I	3 II	8 I	3 II	3 II	3 II
3 III	SOL LIQ 4.1 3 II	SOL LIQ 4.1 3 III	SOL LIQ 4.2 3 II	SOL LIQ 4.2 3 III	4.3 I	4.3 II	4.3 III	SOL LIQ 5.1 I 3 I	SOL LIQ 5.1 II 3 II	SOL LIQ 5.1 III 3 III	6.1 I	6.1 II	8 I	8 II	3 III	3 III
4.1 I			4.2 II	4.2 II	4.3 I	4.3 II	4.3 II	5.1 I	4.1 I	4.1 II	6.1 I	SOL LIQ 4.1 II 6.1 I	8 I	SOL LIQ 4.1 II 8 II	SOL LIQ 4.1 II 8 III	4.1 I
4.1 III			4.2 II	4.2 III	4.3 I	4.3 II	4.3 III	5.1 I	4.1 II	4.1 III	6.1 I	6.1 I	8 I	8 II	SOL LIQ 4.1 III 8 III	4.1 III
4.2 II					4.3 I	4.3 II	4.3 II	5.1 I	4.2 II	4.2 II	6.1 I	6.1 I	8 I	4.2 II	4.2 II	4.2 II
4.2 III					4.3 I	4.3 II	4.3 III	5.1 I	5.1 II	4.2 III	6.1 I	6.1 I	8 I	8 II	4.2 III	4.2 III
4.3 I								5.1 I	4.3 I	4.3 I	6.1 I	4.3 I	4.3 I	4.3 I	4.3 I	4.3 I
4.3 II								5.1 I	4.3 II	4.3 II	6.1 I	4.3 I	8 I	4.3 II	4.3 II	4.3 II
4.3 III								5.1 I	5.1 II	4.3 III	6.1 I	6.1 I	8 I	8 II	4.3 III	4.3 III
5.1 I											5.1 I	5.1 I	5.1 I	5.1 I	5.1 I	5.1 I
5.1 II											6.1 I	5.1 I	8 I	5.1 I	5.1 I	5.1 I
5.1 III											6.1 I	5.1 I	8 I	5.1 I	5.1 I	5.1 I
6.1 DERMAL													SOL LIQ 6.1 I	6.1 I	6.1 I	6.1 I
6.1 ORAL													SOL LIQ 6.1 I 8 I	6.1 I	6.1 I	6.1 I
6.1 INHAL													SOL LIQ 6.1 I 8 I	6.1 I	6.1 I	6.1 I
6.1 II													SOL LIQ 6.1 I 8 I	6.1 I	6.1 I	6.1 I
6.1 III													SOL LIQ 6.1 I 8 I	6.1 I	6.1 I	6.1 I
8 I													8 I	8 II	8 III	8 I
8 II													8 I	8 II	8 III	8 I
8 III																8 III

SOL = tuhé látky a směsi
 LIQ = kapalné látky, směsi a roztoky
 DERMAL = toxicita při absorpci pokožkou
 ORAL = toxicita při požití
 INHAL = toxicita při vdechnutí
 *) Třída 6.1 pro pesticidy.

POZNÁMKA 1: Příklady pro použití tabulky**Zařazení jediné látky**

Popis zařazované látky:

Amin, jmenovitě neuvedený, vyhovující kritériím pro třídu 3, obalovou skupinu II, jakož i kritériím pro třídu 8, obalovou skupinu I.

Postup:

Průsečík řádky 3 II se sloupcem 8 I dává 8 I.
Tento amin je tímto zařazen do třídy 8, a sice pod:

UN 2734 AMINY, KAPALNÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N. nebo UN 2734 POLYAMINY, KAPALNÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N., obalová skupina I.

Zařazení směsi

Popis zařazované směsi:

Směs skládající se z hořlavé kapaliny třídy 3, obalové skupiny III, toxické látky třídy 6.1, obalové skupiny II, a žíravé látky třídy 8, obalové skupiny I.

Postup:

Průsečík řádky 3 III se sloupcem 6.1 II dává 6.1 II.
Průsečík řádky 6.1 II se sloupcem 8 I dává 8 I LIQ.
Tato blíže nedefinovaná směs je tímto zařazena do třídy 8, a sice pod:

UN 2922 LÁTKA ŽÍRAVÁ, KAPALNÁ, TOXICKÁ, J.N., obalová skupina I.

POZNÁMKA 2: Příklady zařazení roztoků a směsí do třídy a obalové skupiny:

Roztok fenolu třídy 6.1, obalové skupiny II, v benzenu třídy 3, obalové skupiny II, musí být zařazen do třídy 3, obalové skupiny II. Tento roztok musí být na základě toxicity fenolu zařazen pod UN 1992 LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, J.N. třídy 3, obalové skupiny II.

Tuhá směs arzeničnanu sodného třídy 6.1, obalové skupiny II, a hydroxidu sodného třídy 8, obalové skupiny II, musí být zařazena pod UN 3290 LÁTKA TOXICKÁ, TUHÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N. do třídy 6.1, obalové skupiny II.

Roztok surového nebo rafinovaného naftalenu třídy 4.1, obalové skupiny III, v benzínu třídy 3, obalové skupiny II, musí být zařazen pod UN 3295 UHLOVODÍKY, KAPALNÉ, J.N. do třídy 3, obalové skupiny II.

Směs uhlovodíků třídy 3, obalové skupiny III, a polychlorovaných bifenyly (PCB) třídy 9, obalové skupiny II, musí být zařazena pod UN 2315 BIFENYLY POLYCHLOROVANÉ, KAPALNÉ nebo UN 3432 BIFENYLY POLYCHLOROVANÉ, TUHÉ do třídy 9, obalové skupiny II.

Směs propyleniminu třídy 3 a polychlorovaných bifenyly (PCB) třídy 9, obalové skupiny II, musí být zařazena pod UN 1921 PROPYLENIMIN, STABILIZOVANÝ do třídy 3.

2.1.4 Klasifikace zkušebních vzorků**2.1.4.1**

Jestliže třída látky není přesně známa a látka je přepravována k dalšímu zkoušení, musí být zařazena na základě znalostí odesílatele do předběžné třídy, pod předběžné oficiální pojmenování pro přepravu a pod předběžné UN číslo, a sice za použití:

- (a) klasifikačních kritérií kapitoly 2.2; a
- (b) ustanovení této kapitoly.

Musí se použít nejpřísnější obalové skupiny odpovídající zvolenému oficiálnímu pojmenování pro přepravu.

Při použití těchto předpisů musí být oficiální pojmenování pro přepravu doplněno slovem „VZOREK“ (např. "HOŘLAVÁ KAPALINA, J.N., VZOREK"). V některých případech, kdy pro vzorek, který vyhovuje určitým klasifikačním kritériím, existuje specifické oficiální pojmenování pro přepravu (např. VZOREK PLYNU, NESTLAČENÝ, HOŘLAVÝ, UN číslo 3167), musí být použito toto oficiální pojmenování pro přepravu. Pokud je pro přepravu vzorku použita j.n. položka, nemusí být oficiální pojmenování pro přepravu doplněno technickým názvem, jak je vyžadováno zvláštním ustanovením 274 kapitoly 3.3.

2.1.4.2

Vzorek látky musí být přepravován v souladu s ustanoveními vztahujícími se na předběžné oficiální pojmenování pro přepravu za podmínky, že:

- (a) látka se nepovažuje za látku nepřipouštěnou k přepravě podle pododdílů 2.2.x.2 kapitoly 2.2 anebo podle kapitoly 3.2;
- (b) látka se nepovažuje za látku, která splňuje kritéria třídy 1, nebo se nepovažuje za látku infekční ani radioaktivní;
- (c) látka vyhovuje ustanovením odstavce 2.2.41.1.15 nebo odstavce 2.2.52.1.9, jde-li o samovolně se rozkládající látku nebo organický peroxid;
- (d) vzorek je přepravován ve skupinovém obalu s čistou (netto) hmotností jednoho kusu nejvýše 2,5 kg; a
- (e) vzorek není balen společně s jinými věcmi do jednoho kusu.

KAPITOLA 2.2

ZVLÁŠTNÍ USTANOVENÍ PRO JEDNOTLIVÉ TŘÍDY

2.2.1 Třída 1 Výbušné látky a předměty

2.2.1.1 Kritéria

2.2.1.1.1 Pod název třídy 1 spadají:

- (a) výbušné látky: tuhé nebo kapalné látky (nebo směsi látek), které mohou chemickou reakcí vyvinout plyny takové teploty, takového tlaku a takové rychlosti, že mohou způsobit škody v okolním prostředí.

Pyrotechnické látky: látky nebo směsi látek určené k vyvolání tepelných, světelných, zvukových, plynových nebo dýmových efektů nebo jejich kombinací pomocí nedetonačních, samovolně probíhajících exotermických chemických reakcí.

POZNÁMKA1: Látky, které samy nejsou výbušnými látkami, ale mohou vytvořit směs plynu, páry nebo prachu schopnou výbuchu nejsou látkami třídy 1.

POZNÁMKA2: Z třídy 1 jsou vyjmuty také vodou nebo alkoholem navlhčené výbušniny, jejichž obsah vody nebo alkoholu překračuje udané mezní hodnoty, a výbušniny obsahující plastifikační prostředky - tyto výbušniny jsou zařazeny do třídy 3 nebo 4.1; vyjmuty jsou rovněž výbušniny, které jsou na základě svých převažujících nebezpečných vlastností zařazeny do třídy 5.2.

- (b) Výbušné předměty: předměty, které obsahují jednu nebo více výbušných nebo pyrotechnických látek.

POZNÁMKA: Zařízení, která obsahují výbušné nebo pyrotechnické látky v tak malém množství nebo takového druhu, že se jejich neúmyslný nebo náhodný zážeh nebo počín během přepravy neprojeví vně zařízení rozletem, ohněm, mlhou, dýmem, teplem nebo silným zvukem, nepodléhají předpisům třídy 1.

- (c) Látky a předměty výše nejmenované, které byly vyrobeny k vyvolání praktického účinku pomocí výbuchu nebo pyrotechnického efektu.

Pro účely třídy 1 platí následující definice:

Flegmatizovaná znamená, že k výbušné látce byla přidána látka (nebo „flegmatizátor“) ke zvýšení její bezpečnosti při manipulaci a přepravě. Flegmatizátor činí výbušnou látku necitlivou nebo méně citlivou k těmto účinkům: teplo, ořes, náraz, úder nebo tření. Typické flegmatizační prostředky zahrnují mimo jiné: vosk, papír, vodu, polymery (jako jsou chlorfluoropolymery), alkohol a oleje (jako jsou vazelína a parafín).

2.2.1.1.2 Každá látka nebo předmět, které mají nebo by mohly mít výbušné vlastnosti, musí být posouzeny pro zařazení do třídy 1 na základě zkoušek, zkušebních postupů a kritérií stanovených v Příručce zkoušek a kritérií, část I.

Látka nebo předmět zařazený do třídy 1 smí být připuštěn k přepravě pouze tehdy, jsou-li přiřazeny k jednomu z pojmenování nebo k jedné z j.n. položek uvedených v tabulce A kapitoly 3.2 a splňují kritéria Příručky zkoušek a kritérií.

2.2.1.1.3 Látky a předměty třídy 1 musí být přiřazeny k UN číslu a pojmenování nebo k j.n. položce tabulky A kapitoly 3.2. Interpretace pojmenování látek a předmětů tabulky A kapitoly 3.2 musí být založena na glosáři uvedeném v odstavci 2.2.1.4.

Vzorky nových nebo již existujících výbušných látek nebo předmětů, s výjimkou třaskavin, které jsou přepravovány pro účely zkoušení, zařazování, výzkumu a vývoje, kontroly kvality nebo jako obchodní vzorek mohou být přiřazeny k položce UN 0190 VZORKY, VÝBUŠNÉ.

Přiřazení výbušných látek a předmětů, jmenovitě neuvedených v Kapitole 3.2, tabulce A, k j.n. položce . třídy 1 nebo k položce UN 0190 VZORKY, VÝBUŠNÉ, jakož i přiřazení určitých

látek, u kterých je podle zvláštních ustanovení uvedených v kapitole 3.2, tabulce A, sloupci (6), přeprava závislá na vydání zvláštního povolení příslušného orgánu, musí být provedeno příslušným orgánem země původu. Tento příslušný orgán musí také písemně schválit přepravní podmínky těchto látek a předmětů. Není-li země původu smluvní stranou ADR, musí být klasifikace a přepravní podmínky uznány příslušným orgánem prvního státu smluvní strany ADR, který přijde do styku se zásilkou.

2.2.1.1.4 Látky a předměty třídy 1 musí být přiřazeny k některé podtřídě podle odstavce 2.2.1.1.5 a k některé skupině snášenlivosti podle odstavce 2.2.1.1.6. Podtřída musí být stanovena na základě výsledků zkoušek popsanych v oddílech 2.3.0 a 2.3.1 s použitím definic v odstavci 2.2.1.1.5. Skupina snášenlivosti musí být stanovena podle definic odstavci 2.2.1.1.6. Číslo podtřídě spolu s písmenem skupiny snášenlivosti tvoří klasifikační kód.

2.2.1.1.5 *Definice podtříd*

Podtřída 1.1 Látky a předměty nebezpečné hromadným výbuchem (hromadný výbuch je takový výbuch, který postihne téměř celý náklad zdánlivě okamžitě).

Podtřída 1.2 Látky a předměty nebezpečné rozletem, které však nejsou nebezpečné hromadným výbuchem.

Podtřída 1.3 Látky a předměty nebezpečné prudkým ohněm, s malým nebezpečím od tlakové vlny nebo rozletu nebo oběma těmito účinky, které ale nejsou nebezpečné hromadným výbuchem:

(a) která při hoření vydávají značné tepelné záření, nebo

(b) které hoří postupně za projevu malé tlakové vlny nebo rozletu nebo obou těchto účinků.

Podtřída 1.4 Látky a předměty, které v případě jejich zážehu nebo počínu během přepravy vykazují pouze malé nebezpečí výbuchu. Účinky jsou převážně omezeny na kus bez rozletu úlomků větších rozměrů nebo do větší vzdálenosti. Vnější oheň nesmí vyvolat zdánlivě okamžitý výbuch téměř celého obsahu kusu.

Podtřída 1.5 Velmi necitlivé látky schopné hromadného výbuchu, které jsou tak necitlivé, že pravděpodobnost jejich počínu nebo přechodu z hoření v detonaci je při běžných podmínkách přepravy velmi nízká. Jako minimální požadavek pro tyto látky je stanoveno, že nesmějí detonovat při zkoušce ve vnějším ohni.

Podtřída 1.6 Velmi málo citlivé předměty, které nejsou nebezpečné hromadným výbuchem. Předměty obsahují jen velmi málo citlivé látky a pravděpodobnost jejich náhodného roznětu nebo přenosu výbuchu je velmi nízká.

POZNÁMKA: Předměty podtřídě 1.6 vykazují nebezpečí, které je omezeno na výbuch pouze jednoho předmětu.

2.2.1.1.6 *Definice skupin snášenlivosti látek a předmětů*

A Třaskavina

B Předmět obsahující třaskavinu, který má méně než dvě účinná pojistná zařízení. Zahrnutý jsou i některé předměty, jako rozbušky a počínová zařízení pro trhací práce a zápalky pro náboje, i když neobsahují třaskaviny.

C Střelivina nebo jiná deflagrující výbušnina nebo předmět obsahující takovou výbušninu.

D Trhavina, černý prach nebo předmět obsahující trhavinu, vždy bez roznětných prostředků a bez hnací náplně nebo předmět obsahující třaskavinu, který má nejméně dvě účinná pojistná zařízení.

E Předmět, obsahující trhavinu, bez roznětných prostředků a s hnací náplní (jinou než takovou, která obsahuje hořlavou kapalinu nebo hořlavý gel nebo hypergoly).

- F Předmět obsahující trhavinu s vlastním roznětným prostředkem, s hnací náplní (jinou než takovou, která sestává z hořlavé kapaliny nebo hořlavého gelu nebo hypergolů) nebo bez hnací náplně.
- G Pyrotechnická látka nebo předmět obsahující pyrotechnickou látku nebo předmět obsahující jak výbušnou látku, tak i osvětlovací, zápalnou, slzotvornou nebo dýmotvornou látku (kromě předmětů aktivovaných vodou nebo předmětů, které obsahují bílý fosfor, fosfidy, pyroforní látku, hořlavou kapalinu nebo hořlavý gel nebo hypergoly).
- H Předmět, který obsahuje výbušnou látku a bílý fosfor.
- J Předmět, který obsahuje výbušnou látku a hořlavou kapalinu nebo hořlavý gel.
- K Předmět, který obsahuje výbušnou látku a toxickou chemickou látku.
- L Výbušná látka nebo předmět obsahující výbušnou látku, které představují zvláštní nebezpečí (např. pro svoji aktivaci vodou nebo pro přítomnost hypergolů, fosfidů nebo pyroforní látky) a vyžadující oddělení jednotlivých druhů.
- N Předměty, které obsahují jen velmi málo citlivé látky.
- S Látka nebo předmět, který je zabalen nebo zkonstruován tak, aby všechny nebezpečné účinky vyvolané náhodným uvedením do činnosti zůstaly omezeny na vnitřek obalu, pokud nebyl obal poškozen požárem. V takovém případě musí zůstat účinky tlaku vzduchu a rozletu omezeny tak, aby opatření ke zdoání požáru nebo jiná nouzová opatření v bezprostřední blízkosti kusu nebyla podstatně omezena ani jim nebylo zabráněno.

POZNÁMKA 1.: Každá látka nebo předmět ve specifikovaném obalu směji být přiřazeny jen k jedné skupině snášelnosti. Protože kritérium skupiny snášelnosti S je empirické povahy, je přiřazení k této skupině nutně vázáno na zkoušky k přidělení klasifikačního kódu.

POZNÁMKA 2: Předměty skupin snášelnosti D nebo E směji být opatřeny vlastními roznětnými prostředky nebo s nimi být baleny společně za předpokladu, že tyto prostředky mají nejméně dvě účinná pojistná zařízení určená k zamezení výbuchu v případě náhodného uvedení roznětného prostředku do činnosti. Takové předměty a kusy se přiřadí ke skupině snášelnosti D nebo E.

POZNÁMKA 3: Předměty skupin snášelnosti D nebo E směji být baleny společně se svými vlastními roznětnými prostředky, které neobsahují dvě účinná pojistná zařízení (t.j. z rozněčovači, které jsou přiřazeny ke skupině snášelnosti B) za předpokladu, že je dodrženo zvláštní ustanovení MP21 oddílu 4.1.10. Takové kusy se přiřadí skupinám snášelnosti D nebo E.

POZNÁMKA 4: Předměty směji být opatřeny svými vlastními roznětnými prostředky nebo s nimi být baleny společně za předpokladu, že se roznětné prostředky nemohou za normálních přepravních podmínek uvést v činnost.

POZNÁMKA 5: Předměty skupin snášelnosti C, D a E směji být baleny společně. Takové kusy musí být přiřazeny ke skupině snášelnosti E.

2.2.1.1.7 **Přiřazení výrobků zábavné pyrotechniky k podtřídám**

- 2.2.1.1.7.1 Výrobky zábavné pyrotechniky musí být obvykle přiřazeny k podtřídám 1.1, 1.2, 1.3 a 1.4 na základě dat získaných ze zkoušek série 6 Příručky zkoušek a kritérií. Jelikož je však počet druhů takových předmětů velmi rozsáhlý a kapacita zkušebních zařízení může být omezená, přiřazení k podtřídám může být také provedeno v souladu s postupem uvedeným v 2.2.1.1.7.2.
- 2.2.1.1.7.2 Přiřazení výrobků zábavné pyrotechniky k UN číslům 0333, 0334, 0335 a 0336 může být rovněž provedeno na základě analogie, bez zkoušek série 6, v souladu se stanovenou klasifikací výrobků zábavné pyrotechniky dle tabulky v 2.2.1.1.7.5. Takové přiřazení může být provedeno pouze se souhlasem příslušného orgánu. Výrobky neuvedené v této tabulce musí být klasifikovány na základě dat získaných ze zkoušek série 6.

POZNÁMKA 1: Zařazení nových druhů výrobků zábavné pyrotechniky do sloupce 1 tabulky v 2.2.1.1.7.5 může být provedeno pouze na základě výsledků všech předepsaných zkoušek postoupených Podvýboru expertů pro přepravu nebezpečných věcí OSN k posouzení.

POZNÁMKA 2: Výsledky zkoušek získané příslušnými orgány, které potvrzují nebo vyvracejí přiřazení výrobků zábavné pyrotechniky uvedených ve sloupci 4 tabulky v 2.2.1.1.7.5 k podtřídám ve sloupci 5, by měly být postoupeny Podvýboru expertů pro přepravu nebezpečných věcí OSN pro informaci.

- 2.2.1.1.7.3 Jestliže jsou výrobky zábavné pyrotechniky více než jedné podtřídy zabaleny ve stejném kusu, musí být klasifikovány jako nejnebezpečnější podtřída, pokud z dat získaných ze zkoušek série 6 nevyplyne jiná klasifikace.
- 2.2.1.1.7.4 Klasifikace uvedená v tabulce 2.2.1.1.7.5 platí pouze pro předměty zabalené v lepenkových bednách (4G).
- 2.2.1.1.7.5 Tabulka stanovených klasifikací výrobků zábavné pyrotechniky¹

POZNÁMKA 1: Odkazy na procenta v tabulce znamenají, není-li stanoveno jinak, hmotnost všech pyrotechnických látek (například raketových motorů, výmetné náložky, trhavé náložky a efektové náložky).

POZNÁMKA 2: „Výbušková slož“ se v této tabulce vztahuje na pyrotechnické látky v práškové formě nebo jako pyrotechnické díly předmětů zábavné pyrotechniky, které se používají k vytváření zvukového efektu nebo se používají jako trhací nebo startovací náložka, vyjma toho, když se Zkouškou HSL výbuškové slože v přílohu 7 Příručky zkoušek a kritérií prokáže, že doba nárůstu tlaku je delší než 8 ms pro 0,5 g pyrotechnické látky.“

POZNÁMKA 3: Uvedené rozměry v mm se vztahují:

- pro kulové nebo válcové kombinované efektové pumy k průměru tělesa pumy,
- pro válcové efektové pumy k délce pumy,
- pro efektové pumy v moždíři, římské svíce, vystřelovací trubice nebo miny k vnitřnímu průměru trubice obsahující předmět zábavné pyrotechniky,
- pro sáčkovou nebo válcovou minu, k vnitřnímu průměru moždíře určeného pro minu.

¹ Tato tabulka obsahuje seznam klasifikace předmětů zábavné pyrotechniky, která může být použita bez zkoušek série 6, Příručky zkoušek a kritérií (viz 2.2.1.1.7.2).

Typ	Zahnuje/nazývá se:	Definice	Specifikace	KLASIFIKACE
Puma, kulová nebo válcová	<p>Kulová efekťová puma: výšková efekťová puma: barevná efekťová puma: kombinovaná více-efekťová puma: námořní padáková efekťová puma: dýmová efekťová puma: hvězdicová efekťová puma: dělostřelecká efekťová pozdravná, pumy: zvukové efekťové puma: třesková efekťová puma: hromová rána, pumová sestava</p>	<p>Zařízení s hnací náplní nebo bez ní, se zpoždovací zápalnicí a trhavou náložkou, pyrotechnickými díly nebo volně loženou pyrotechnickou látkou, určené k odpalování z moždíře</p>	<p>Všechny třeskové pumy</p> <p>Barevná puma: ≥ 180 mm</p> <p>Barevná puma: < 180 mm s $> 25\%$ výbuškové složky, jako volný prášek a/nebo s třeskovým efektem</p> <p>Barevná puma: < 180 mm s $\leq 25\%$ výbuškové složky, jako volný prášek a/nebo s třeskovým efektem</p> <p>Barevná puma: ≤ 50 mm, nebo ≤ 60 g pyrotechnické složky, s $\leq 2\%$ výbuškové složky, jako volný prášek a/nebo s třeskovým efektem</p>	<p>1.1G</p> <p>1.1G</p> <p>1.1G</p> <p>1.3G</p> <p>1.4G</p>
Kombinovaná efekťová puma		<p>Zařízení s dvěma nebo více kulovými efekťovými pumami ve společném obalu, s oddělenými vnějšími zpoždovacími zápalnicemi, vystřelované společnou hnací náplní</p>	<p>Nejnebezpečnější kulová efekťová puma určuje klasifikaci.</p>	
Přebíťý moždíř, puma v moždíři		<p>Zařízení sestávající z kulové nebo válcové efekťové pumy umístěné v moždíři, který je určen k jejímu vystřelení</p>	<p>Všechny třeskové pumy</p> <p>Barevné pumy: ≥ 180 mm</p> <p>Barevná puma: s $> 25\%$ výbuškové složky jako volný prášek a/nebo s třeskovým efektem</p> <p>Barevné pumy > 50 mm a < 180 mm</p> <p>Barevné pumy ≤ 50 mm, nebo s ≤ 60 g pyrotechnické látky, s $\leq 25\%$ zábleskové složky jako volný prášek a/nebo s třeskovým efektem</p>	<p>1.1G</p> <p>1.1G</p> <p>1.1G</p> <p>1.2G</p> <p>1.3G</p>

Typ	Zahmje/nazývá se:	Definice	Specifikace	KLASIFIKACE
Puma kulová nebo válcová (pokračování)	Pumy v pumě (kulová) (Odkazy na procenta pro pumy v pumě se vztahují na hrubou hmotnost pyrotechnického předmětu)	Zařízení, bez hnací náplně se zpožďovací zápalnici a s trhavou náložkou, obsahující třeskové pumy a inertní materiálu, které je určeno k vystřelování z moždíře	> 120 mm	1.1G
		Zařízení, bez hnací náplně se zpožďovací zápalnici a s trhavou náložkou, obsahující třeskové pumy s $\leq 25g$ výbuškové složky v jedné pumě, s $\leq 33\%$ výbuškové složky a s $\geq 60\%$ inertního materiálu, které je určeno k vystřelování z moždířů	≤ 120 mm	1.3G
		Zařízení, bez hnací náplně se zpožďovací zápalnici a trhavou náložkou, obsahující barevné pumy a/nebo pyrotechnické díly, které je určeno k vystřelování z moždířů	> 300 mm	1.1G
		Zařízení, bez hnací náplně se zpožďovací zápalnici a trhavou náložkou, obsahující barevné pumy ≤ 70 mm a/nebo pyrotechnické díly s $\leq 25\%$ výbuškové složky a $\leq 60\%$ pyrotechnických látek, které je určeno k vystřelování z moždířů	> 200 mm a ≤ 300 mm	1.3G
		Zařízení, s hnací náplní, se zpožďovací zápalnici a trhavou náložkou, obsahující barevné pumy ≤ 70 mm a/nebo pyrotechnické díly s $\leq 25\%$ výbuškové složky a $\leq 60\%$ pyrotechnické látky, které je určeno k vystřelování z moždířů	≤ 200 mm	1.3G
Baterie/kombi nace	Přehradová palba, dělostřelecká palba, prostorové efekty, květinové efekty, pumové koule, výbuchy, palebné baterie, palebné baterie se zábleskem, vzdušná pumová sestava	Sestava obsahující několik dílů buď stejného typu nebo různých typů, které odpovídají jednomu z typů předmětu zábavné pyrotechniky uvedeného v této tabulce. Má jedno nebo dvě místa zážehu	Nejnebezpečnější typ předmětu zábavné pyrotechniky určuje klasifikaci	

Typ	Zahmje/nazývá se:	Definice	Specifikace	KLASIFIKACE
Římská svíce	Efektová svíce, svíce, bombičky	Trubice obsahující sestavu pyrotechnických dílů, sestávající z podobných pyrotechnických látek, hnací a přenosové zápalnice	<p>≥ 50 mm vnitřního průměru, obsahující výbuškovou slož, nebo</p> <p><50 mm s > 25% výbuškové slože</p> <p>≥ 50 mm vnitřního průměru, neobsahující výbuškovou slož</p> <p>< 50 mm vnitřního průměru a s ≤ 25% výbuškové slože</p> <p>≤ 30 mm vnitřního průměru každého pyrotechnického elementu ≤ 25 g a s ≤ 5% výbuškové slože</p>	1.1G 1.2G 1.3G 1.4G
Jednoranná svíce	Jednoranná svíce	Trubice obsahující pyrotechnické díly sestávající z pyrotechnické látky, hnací náplně a přenosové zápalnice nebo bez ní	<p>≤ 30 mm vnitřního průměru a pyrotechnický element > 25 g, nebo s > 5% a s ≤ 25% výbuškové slože</p> <p>≤ 30 mm vnitřního průměru, pyrotechnický element ≤ 25 g a s ≤ 5% výbuškové slože</p>	1.3G 1.4G
Raketa	Lavinové rakety, signální rakety, pískavé, lahvové rakety, nebeské rakety, rakety typu stíel, stolní rakety	Trubice obsahující pyrotechnickou látku a/nebo pyrotechnické díly, opatřena latí nebo jiným prostředkem stabilizace letu, která je určena k vystřelování do vzduchu	<p>Pouze s efektem výbuškové slože</p> <p>Výbušková slož s > 25% pyrotechnické látky</p> <p>s > 20 g pyrotechnické látky s ≤ 25% výbuškové slože</p> <p>s ≤ 20 g pyrotechnické látky, černého prachu, trhavé směsí a s ≤ 0,13 g výbuškové slože na ránu a ≤ 1 g celkové</p>	1.1G 1.1G 1.3G 1.4G

Typ	Zahmje/nazývá se:	Definice	Specifikace	KLASIFIKACE
Mina	Povrchová mina, sádková mina, válcová mina	Trubice obsahující hnací náplň a pyrotechnické díly, která je určena k položení nebo upevnění na zem. Základním efektem je vymetení všech pyrotechnických dílů do vzduchu v jediném ohnivém prostorovém vizuálním a/nebo zvukovém efektu nebo: Tkaninový nebo papírový sáček nebo válec obsahující hnací náplň a pyrotechnické díly, určený k umístění do mořdře s funkcí miny	s > 25% výbuškové slože, jako volný prášek a/nebo s třeskovými efekty ≥ 180 mm a s ≤ 25% výbuškové slože jako volný prášek a/nebo s třeskovými efekty < 180 mm a s ≤ 25% výbuškové slože jako volný prášek a/nebo s třeskovými efekty s ≤ 150 g pyrotechnické látky, obsahující ≤ 5% výbuškové slože jako volný prášek a/nebo s třeskovým efektem. Každý pyrotechnický element ≤ 25 g, každý třeskový efekt < 2 g; každý hvizd, jestliže existuje ≤ 3 g	1.1G 1.1G 1.3G 1.4G
Fontány	Sopky, ohňopády, bengálské ohně, osvětlovací pochodně, fontány, létající jiskry	Nekovové pouzdro obsahující lisovanou nebo zhutněnou pyrotechnickou látku vytvářející jiskry a plamen	≥ 1 kg pyrotechnické látky < 1 kg pyrotechnické látky	1.3G 1.4G
Prskavky	Ruční prskavky, prskavky určené k držení v ruce, drátové prskavky	Tuhý drát částečně potažený (z jednoho konce) pomalu hořící pyrotechnickou látkou s nebo bez zapalovací špičky	Prskavky s chloristany: > 5 g na kus nebo > 10 kusů v balíčku Prskavky s chloristany: ≤ 5 g na kus a ≤ 10 kusů v balíčku; Prskavky s dusičňany: ≤ 30 g na kus	1.3G 1.4G
Bengálská tyčinka	Tlumená tyčinka	Nekovové tyčinky částečně potažené (z jednoho konce) pomalu hořící pyrotechnickou látkou, určené k držení v ruce	Prskavky s chloristany: > 5 g na kus nebo > 10 kusů v balíčku Prskavky s chloristany: ≤ 5 g na kus a ≤ 10 kusů v balíčku; Prskavky s dusičňany: ≤ 30 g na kus	1.3 G 1.4G

Typ	Zahmuje/nazývá se:	Definice	Specifikace	KLASIFIKACE
Drobné předměty zábavní pyrotechniky s nízkou nebezpečností	Stolní bomby, bouchací kuličky, kapsle, dýmovnice, mlhovnice, hadi, červi, serpentiny, práskací provázky, oslavné rány	Zařízení určené k vytváření velmi omezených vizuálních a/nebo zvukových efektů, které obsahuje malé množství pyrotechnické a/nebo výbušné složky	Bouchací kuličky a kapsle mohou obsahovat nejvýše 1,6 mg třaskavého sířbra; kapsle a oslavné rány mohou obsahovat nejvýše 16 mg směsi chlorečnanu draselného a červeného fosforu; jiné předměty mohou obsahovat nejvýše 5 g pyrotechnické látky, ale žádnou výbuškovou složku	1.4G
Kotouče	Vzdušný kotouč, helikoptéra, pozemní kotouč	Nekovová trubička nebo trubičky obsahující pyrotechnickou látku, která vytváří plyn nebo jiskry s nebo bez složky produkující zvuk, s nebo bez křidélek	Pyrotechnická látka v kusu > 20 g, obsahující ≤ 3% výbuškové složky vytvářející třesk, nebo hvízdající složky ≤ 5 g	1.3G
Světelná kola	Saxon	Zařízení opatřené pohonnými jednotkami obsahujícími pyrotechnickou látku a vybavené přidavnými prostředky, které umožňují převést přímočarý pohyb v rotaci	Pyrotechnická látka v kusu ≤ 20 g, obsahující ≤ 3% zábleskové složky vytvářející třesk, nebo hvízdavé složky ≤ 5 g	1.4G
Vzdušné kolo	Létající Saxon, UFO, vznášející se koruna	Trubice obsahující hnací náplně a pyrotechnické látky vytvářející jiskry, plamen a/nebo zvuk. Trubice jsou upevněny k nosnému kolu	≥ 1 kg pyrotechnické látky celkem, bez třaskavého efektu, každý hvízd (jestliže existuje) ≤ 25 g a ≤ 50 g hvízdavé složky v kole < 1 kg pyrotechnické látky celkem, bez třaskavého efektu, každý hvízd (jestliže existuje) ≤ 5 g a ≤ 10 g hvízdavé složky v kole	1.3G 1.4G
Vzdušné kolo	Létající Saxon, UFO, vznášející se koruna	Trubice obsahující hnací náplně a pyrotechnické látky vytvářející jiskry, plamen a/nebo zvuk. Trubice jsou upevněny k nosnému kolu	> 200 g pyrotechnické látky nebo > 60 g pyrotechnické látky v jednom elementu s ≤ 3% výbuškové složky s třeskovými efekty, každý hvízd (jestliže existuje) ≤ 25 g a ≤ 50 g hvízdavé složky v jednom kole	1.3G

Typ	Zahmuje/nazývá se:	Definice	Specifikace	KLASIFIKACE
			<p>≤ 200 g pyrotechnické látky celkem a ≤ 60 g pyrotechnické látky v jedné pohonné jednotce s ≤ 3% výbuškové slože s třeskovými efekty, každý hvizd (jestliže existuje) ≤ 5 g a ≤ 10 g hvizdové slože v jednom kole</p>	1.4G
Výběrový balíček	Ukázková sestava, zahradní sestava, pokojová sestava	Balíček s více než jedním typem, který odpovídá jednomu z typu výrobku zábavné pyrotechniky uvedeného v této tabulce	Nejnebezpečnější výrobek zábavné pyrotechniky určuje klasifikaci	
Práskající sestava	Oslavná petarda, oslavná rulička	Sestava trubic (papírových nebo lepenkových) spojená pyrotechnickou zápalnicí. Každá trubice je určena k tvorbě zvukového efektu	Každá trubice ≤ 140 mg výbuškové slože nebo ≤ 1 g černého prachu	1.4G
Petarda	Pozdravná petarda, záblesková petarda, žertovná petarda	Nekovová trubice obsahující třeskovou slož určená k tvorbě zvukového efektu	> 2 g výbuškové slože v elementu	1.1G
			≤ 2 g výbuškové slože v elementu a ≤ 10 g ve vnitřním obalu	1.3G
			≤ 1 g výbuškové slože v elementu a ≤ 10 g ve vnitřním obalu nebo ≤ 10 g černého prachu v elementu	1.4G

2.2.1.1.8 *Vyloučení z třídy 1*

2.2.1.1.8.1 Předmět nebo látka může být vyloučen(a) z třídy 1 na základě výsledků zkoušek a definice třídy 1 se schválením příslušného orgánu kterékoli smluvní strany ADR, který může také uznat schválení udělené příslušným orgánem země, která není smluvní stranou ADR, za podmínky, že toto schválení bylo uděleno v souladu s postupy platnými podle RID, ADR, ADN, IMDG Code nebo ICAO Technical Instructions.

2.2.1.1.8.2 Se schválením příslušného orgánu podle 2.2.1.1.8.1 smí být předmět vyloučen z třídy 1, jestliže tři nezabalené předměty, každý jednotlivě aktivovaný svými vlastními iniciačními nebo roznětnými prostředky nebo vnějšími prostředky tak, aby fungoval stanoveným způsobem, splní následující zkušební kritéria:

- (a) Žádný vnější povrch nesmí mít teplotu vyšší než 65 °C. Okamžitý narůst teploty do 200 °C je akceptovatelný;
- (b) Žádné prasknutí nebo roztržení vnějšího pláště nebo pohyb předmětu nebo jeho uvolněných částí do vzdálenosti větší než jeden metr v kterémkoli směru;

POZNÁMKA: *Pokud by celistvost předmětu mohla být ovlivněna v případě vnějšího požáru, musí být tato kritéria prověřena zkouškou vystavením ohni, jak je popsána v normě ISO 12097-3.*

- (c) Žádný akustický záznam překračující špičkovou hodnotu 135 dB(C) ve vzdálenosti jednoho metru;
- (d) Žádný záblesk nebo plamen schopný zažehnout materiál, jako je list papíru gramáže 80 ± 10 g/m², při dotyku s tímto předmětem; a
- (e) Žádné tvoření kouře, dýmu nebo prachu v takových množstvích, že viditelnost v komoře o velikosti jednoho kubického metru, vybavené vyfukovacími panely náležité velikosti, je snížena o více než 50 %, jak je naměřeno kalibrovaným fotometrem (luxmetrem) nebo radiometrem umístěnými ve vzdálenosti jednoho metru od konstantního světelného zdroje umístěného ve středu protilehlých stěn. Je možno použít též všeobecný návod ke zkoušení optické hustoty v normě ISO 5659-1 a všeobecný návod k fotometrickému systému popsanému v oddílu 7.5 normy ISO 5659-2 nebo je možno použít také podobné metody měření optické hustoty určené ke stejnému účelu. K minimalizaci účinků rozptýleného nebo pronikajícího světla, které není emitováno přímo světelným zdrojem, musí být použit vhodný kryt obklopující zadní a boční strany fotometru.

POZNÁMKA 1: *Jestliže během zkoušek vztahujících se ke kritériím uvedeným pod písmeny (a), (b), (c) a (d) není zpozorován žádný nebo je zpozorován jen velmi malý kouř, je možno od zkoušky uvedené pod písmenem (e) upustit.*

POZNÁMKA 2: *Příslušný orgán zmíněný v 2.2.1.1.8.1 může vyžadovat provedení zkoušek v balené formě, je-li zjištěno, že předmět, jak je zabalen pro přepravu, může představovat větší riziko.*

2.2.1.2 ***K přepravě nepřípuštěné látky a předměty***

2.2.1.2.1 Výbušné látky, které vykazují podle kritérií Příručky zkoušek a kritérií nepřipustně vysokou citlivost, nebo u kterých může nastat samovolná reakce; jakož i výbušné látky a předměty, které nemohou být přiřazeny k pojmenování nebo j.n. položce uvedeným v tab. A, kapitoly 3.2, nejsou připuštěny k přepravě.

2.2.1.2.2 Předměty skupiny snášenlivosti K (1.2 K, UN číslo 0020 a 1.3 K, UN číslo 0021) nejsou připuštěny k přepravě.

2.2.1.3 Seznam hromadných položek

Klasifikační kód (viz 2.2.1.1.4)	UN číslo	Pojmenování látek nebo předmětů
1.1 A	0473	LÁTKY VÝBUŠNÉ, J.N.
1.1 B	0461	SOUČÁSTI, ROZNĚTNÉ SYSTÉMY, J.N.
1.1 C	0474	LÁTKY VÝBUŠNÉ, J.N.
	0497	POHONNÁ HMOTA, KAPALNÁ
	0498	POHONNÁ HMOTA TUHÁ
	0462	PŘEDMĚTY VÝBUŠNÉ, J.N..
1.1 D	0475	LÁTKY VÝBUŠNÉ, J.N.
	0463	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.1 E	0464	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.1 F	0465	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.1 G	0476	LÁTKY VÝBUŠNÉ, J.N.
1.1 L	0357	LÁTKY VÝBUŠNÉ, J.N.
	0354	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.2 B	0382	SOUČÁSTI ROZNĚTNÝCH ŘETĚZCŮ, J.N.
1.2 C	0466	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.2 D	0467	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.2 E	0468	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.2 F	0469	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.2 L	0358	VÝBUŠNÉ LÁTKY, J.N.
	0248	ZAŘÍZENÍ, AKTIVOVATELNÁ VODOU, s trhavou náložkou, výmetnou nebo hnací náplní
	0355	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.3 C	0132	DEFLAGRUJÍCÍ KOVOVÉ SOLI AROMATICKÝCH NITROSLOUČENIN, J.N.
	0477	LÁTKY VÝBUŠNÉ J.N.
	0495	POHONNÁ HMOTA, KAPALNÁ
	0499	POHONNÁ HMOTA TUHÁ
	0470	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.3 G	0478	LÁTKY VÝBUŠNÉ, J.N.
1.3 L	0359	LÁTKY VÝBUŠNÉ, J.N.
	0249	ZAŘÍZENÍ, AKTIVOVATELNÁ VODOU, s trhavou náložkou, výmetnou nebo hnací náplní
	0356	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.4 B	0350	PŘEDMĚTY VÝBUŠNÉ, J.N.
	0383	SOUČÁSTI ROZNĚTNÝCH ŘETĚZCŮ, J.N.
1.4 C	0479	LÁTKY VÝBUŠNÉ, J.N.
	0501	POHONNÁ HMOTA TUHÁ
	0351	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.4 D	0480	LÁTKY VÝBUŠNÉ, J.N.
	0352	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.4 E	0471	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.4 F	0472	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.4 G	0485	LÁTKY VÝBUŠNÉ, J.N.
	0353	PŘEDMĚTY VÝBUŠNÉ, J.N.
1.4 S	0481	LÁTKY VÝBUŠNÉ, J.N.
	0349	PŘEDMĚTY VÝBUŠNÉ, J.N.
	0384	SOUČÁSTI ROZNĚTNÝCH ŘETĚZCŮ, J.N.
1.5 D	0482	VÝBUŠNÉ LÁTKY, VELMI NECITLIVÉ (EVI), J.N.
1.6 N	0486	PŘEDMĚTY, VÝBUŠNÉ, VELMI NECITLIVÉ (EEI)
	0190	VZORKY, VÝBUŠNÉ, jiné než třaskaviny

POZNÁMKA: Podtřída a skupina snášenlivosti musí být určeny příslušným orgánem a v souladu s ustanoveními v odstavci 2.2.1.1.4

2.2.1.4*Glosář pojmenování*

POZNÁMKA 1: *Smyslem popisů v glosáři není náhrada zkušebních postupů, ani stanovení klasifikace látky nebo předmětu třídy 1. Rozhodnutí o zařazení do správné podtřídy a o tom, zda mohou být přiřazeny ke skupině snášenlivosti S, musí být založeno na zkouškách výrobku podle Příručky zkoušek a kritérií, části I, nebo na analogii s podobnými, již odzkoušenými výrobky, zařazenými podle postupů Příručky zkoušek a kritérií.*

POZNÁMKA 2: *Za pojmenováními jsou uvedena příslušná UN čísla (kapitola 3.2, tabulka A, sloupec 1). Pokud jde o klasifikační kód, viz odstavec 2.2.1.1.4*

BLESKOVICE, ohebná: UN čísla 0065, 0289

Předmět sestávající z duše z detonující výbušniny opředené textilním vláknem, buď s povlakem nebo bez povlaku z plastu nebo jiného materiálu. Povlak není potřebný, pokud je opředení z textilních vláken prachotěsné.

BLESKOVICE, s kovovým pláštěm : UN čísla 0102, 0290

Předmět sestávající z duše z detonující výbušniny v trubici z měkkého kovu s ochranným povlakem nebo bez ochranného povlaku.

BLESKOVICE, S MALÝM ÚČINKEM, s kovovým pláštěm: UN číslo 0104

Předmět sestávající z duše z detonující výbušniny v plášti z měkkého kovu s ochranným povlakem nebo bez ochranného povlaku. Množství výbušné látky je tak malé, že se vně bleskovice projevuje jen nepatrný účinek výbuchu.

BOJOVÉ HLAVICE, RAKETA, s trhací náplní: UN čísla 0286, 0287

Předměty sestávající z detonující výbušniny. Buď neobsahují roznětné prostředky nebo obsahují roznětné prostředky, které mají nejméně dvě účinná pojistná zařízení. Jsou určeny pro připevnění k raketě. Pod toto pojmenování spadají také bojové hlavice pro řízené střely.

BOJOVÉ HLAVICE, RAKETA, s trhací náplní: UN číslo 0369

Předměty sestávající z detonující výbušniny. Obsahují roznětné prostředky, které nemají nejméně dvě účinná pojistná zařízení. Jsou určeny pro připevnění k raketě. Pod toto pojmenování spadají také bojové hlavice pro řízené střely.

BOJOVÉ HLAVICE, RAKETA, s trhavou náložkou nebo výmetnou náplní: UN číslo 0370

Předměty sestávající z nevýbušné užitečné zátěže a z malé nálože detonující nebo deflagující výbušniny. Buď neobsahují roznětné prostředky nebo obsahují roznětné prostředky, které mají nejméně dvě účinná pojistná zařízení. Jsou určeny pro připevnění k raketovému motoru k rozhozu nevýbušného materiálu. Pod toto pojmenování spadají také bojové hlavice pro řízené střely.

BOJOVÉ HLAVICE, RAKETA, s trhavou náložkou nebo výmetnou náplní: UN číslo 0371

Předměty sestávající z nevýbušné užitečné zátěže a malé nálože detonující nebo deflagující výbušniny. Obsahují roznětné prostředky, které nemají nejméně dvě účinná pojistná zařízení. Jsou určeny pro připevnění k raketovému motoru k rozhozu nevýbušného materiálu. Pod toto pojmenování spadají také bojové hlavice pro řízené střely.

BOJOVÉ HLAVICE, TORPÉDO s trhací náplní: UN číslo 0221

Předměty sestávající z detonující výbušniny. Buď neobsahují roznětné prostředky, nebo obsahují roznětné prostředky, které mají nejméně dvě účinná pojistná zařízení. Jsou určeny pro připevnění k torpédu.

GRANÁTY, CVIČNÉ, ruční nebo puškové: UN čísla 0110, 0318, 0372, 0452

Předměty bez hlavní trhací nálože, které jsou určeny k ručnímu vrhání nebo k vystřelování z pušek. Obsahují roznětné prostředky a mohou obsahovat značkovací náplň.

GRANÁTY, ruční nebo puškové, s trhací náplní: UN čísla 0284, 0285

Předměty, které jsou určeny k ručnímu vrhání nebo k vystřelování z pušek. Neobsahují roznětné prostředky nebo obsahují roznětné prostředky, které mají nejméně dvě účinná pojistná zařízení.

GRANÁTY, ruční nebo puškové, s trhací náplní: UN čísla 0292, 0293

Předměty, které jsou určeny k ručnímu vrhání nebo k vystřelování z pušek. Obsahují roznětné prostředky, které mají méně než dvě účinná pojistná zařízení.

HEXOLIT (HEXOTOL), suchý nebo vlhčený méně než 15 % hm.. vody: UN číslo 0118

Látka sestávající z těsné směsi 1,3,5-trinitro-1,3,5-triazacyklohexanu (RDX) a trinitrotoluenu (TNT). Pod toto pojmenování spadá také „Composition B“.

HEXOTONAL: UN číslo 0393

Látka sestávající z těsné směsi z 1,3,5-trinitro-1,3,5-triazacyklohexanu (RDX), trinitrotoluenu (TNT) a hliníku.

HLOUBKOVÉ SONDY, VÝBUŠNÉ :UN čísla 0204, 0296

Předměty sestávající z nálože trhaviny s roznětnými prostředky, které nemají nejméně dvě účinná pojistná zařízení. Jsou shazovány z lodí a jsou uváděny v činnost při dosažení určené hloubky nebo po dopadu na dno.

HLOUBKOVÉ SONDY, VÝBUŠNÉ: UN čísla 0374, 0375

Předměty sestávající z nálože trhaviny bez roznětných prostředků nebo s roznětnými prostředky, které mají nejméně dvě účinná pojistná zařízení. Jsou shazovány z lodí a jsou uváděny v činnost při dosažení určené hloubky nebo po dopadu na dno.

KUMULATIVNÍ NÁLOŽE, PERFORAČNÍ, pro ropné vrty, bez rozbušky: UN čísla 0124, 0494

Předměty sestávající z ocelových trubek nebo kovových pouzder, do kterých jsou vloženy kumulativní nálože, které jsou propojeny bleskovicí. Neobsahují roznětné prostředky.

LÁTKY VÝBUŠNÉ, VELMI NECITLIVÉ (EVI), J.N.: UN číslo 0482

Látky nebezpečné hromadným výbuchem, které jsou tak necitlivé, že při normálních přepravních podmínkách je jen velmi malá pravděpodobnost jejich roznětu nebo přechodu z hoření v detonaci. Tyto látky musí obstát ve zkouškách série 5 dle Příručky zkoušek a kritérií.

MINY, s trhací náplní: UN čísla 0136, 0294

Předměty sestávající obvykle z obalu z kovu nebo kompozitních materiálů, které jsou naplněny detonující výbušninou, s roznětnými prostředky, které nemají nejméně dvě pojistná zařízení. Jsou určeny k uvedení v činnost při styku s plavidly, vozidly nebo osobami. Pod toto pojmenování spadají také „Bangalore torpedoes“.

MINY, s trhací náplní: UN čísla 0137, 0138

Předměty sestávající obvykle z kovových nebo kompozitních obalů, které jsou naplněny detonující výbušninou bez nebo s roznětnými prostředky, které mají nejméně dvě účinná pojistná zařízení. Jsou určeny k uvedení v činnost při styku s plavidly, vozidly nebo osobami. Pod toto pojmenování spadají také „Bangalore torpedoes“.

MUNICE, CVIČNÁ: UN čísla 0362, 0488

Munice, bez hlavní trhavé nálože, která obsahuje trhavou nebo výmetnou náložku. Obvykle obsahuje také rozněcovadlo a hnací náplň.

POZNÁMKA: GRANÁTY, CVIČNÉ nejsou zahrnuty pod toto pojmenování. Ty jsou v tomto glosáři uvedeny zvlášť.

MUNICE, DÝMOVÁ, S BÍLÝM FOSFOREM, s nebo bez trhavé náložky, výmetné nebo hnací náplně: UN čísla 0245, 0246

Munice, která obsahuje bílý fosfor jako dýmotvornou látku. Kromě toho obsahuje jeden nebo více těchto komponentů: hnací náplň se zápalkou a zažehovačem; rozněcovadlo s trhavou nebo výmetnou náplní. Toto pojmenování zahrnuje též dýmové granáty.

MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně: UN čísla 0015, 0016, 0303

Munice, která obsahuje dýmotvornou látku; jako směs kyseliny chlorsulfonové, chlorid titaničitý, nebo dýmotvornou pyrotechnickou slož založenou na hexachlorethanu nebo červeném fosforu. Pokud není dýmotvorná látka sama výbušninou, obsahuje munice také jednu nebo více následujících složek: hnací náplň se zapalovačem a zažehovačem, rozněcovadlo s trhavou nebo výmetnou náplní. Toto pojmenování zahrnuje též dýmové granáty.

POZNÁMKA: *SIGNÁLNÍ PROSTŘEDKY, DÝMOVÉ nejsou zahrnuty pod toto pojmenování. Ty jsou v tomto glosáři uvedeny zvlášť.*

MUNICE, OSVĚTLOVACÍ, s nebo bez trhavé náložky, výmetné nebo hnací náplně: UN čísla 0171, 0254, 0297

Munice určená k vytvoření jednotlivého zdroje intenzivního světla k osvětlení prostoru. Toto pojmenování zahrnuje osvětlovací náložky, granáty, střely a bomby osvětlovací a identifikující cíle.

POZNÁMKA: *Následující předměty nespádají pod toto pojmenování: NÁBOJE, SIGNÁLNÍ; PROSTŘEDKY SIGNÁLNÍ, TÍŠŇOVÉ; PROSTŘEDKY SIGNÁLNÍ RUCNÍ; SVĚTLICE, LETECKÉ; SVĚTLICE, POZEMNÍ. Ty jsou v tomto glosáři uvedeny zvlášť.*

MUNICE, SLZOTVORNÁ, s trhavou náložkou, výmetnou nebo hnací náplní: UN čísla 0018, 0019, 0301

Munice obsahující slzotvornou látku. Kromě toho obsahuje jeden nebo více těchto komponentů: pyrotechnickou látku, hnací náplň se zápalkou a zažehovačem, rozněcovadlo s trhavou nebo výmetnou náplní.

MUNICE, ZÁPALNÁ S BÍLÝM FOSFOREM, s trhavou náložkou, výmetnou nebo hnací náplní: UN čísla 0243, 0244

Munice, která obsahuje jako zápalnou látku bílý fosfor. Kromě toho obsahuje jednu nebo více těchto složek: hnací náplň se zápalkou a zažehovačem, rozněcovadlo s trhavou nebo výmetnou náplní.

MUNICE, ZÁPALNÁ, s kapalinou nebo gelem, s trhavou náložkou, výmetnou nebo hnací náplní: UN číslo 0247

Munice, která obsahuje kapalnou nebo gelovitou zápalnou látku. Pokud není zápalná látka sama výbušninou, obsahuje munice kromě toho ještě jednu nebo více těchto složek: hnací náplň se zápalkou a zažehovačem, rozněcovadlo s trhavou náložkou nebo výmetnou náplní.

MUNICE, ZÁPALNÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně: UN čísla 0009, 0010, 0300

Munice, která obsahuje zápalnou slož. Pokud není zápalná slož sama výbušninou, obsahuje munice kromě toho jednu nebo více těchto složek: pohonnou náplň se zápalkou a zažehovačem, rozněcovadlo s trhavou nebo výmetnou náložkou.

MUNICE, ZKUŠEBNÍ: UN číslo 0363

Munice, která obsahuje pyrotechnické látky. Slouží ke zkoušce funkce nebo odolnosti nové munice, zbraňových dílů nebo zařízení.

NÁBOJE, MALORÁŽOVÉ: UN čísla 0012, 0339, 0417

Munice, která sestává z nábojnice se středovým nebo okrajovým zápalem, obsahující hnací náplň a pevnou strelu. Náboje jsou určeny k vystřelování ze zbraní o ráži nejvýše 19,1 mm. Pod toto pojmenování jsou zahrnuty také brokové náboje všech ráží.

POZNÁMKA: NÁBOJE MALORÁŽOVÉ, CVIČNÉ nespádají pod toto pojmenování. Tyto jsou uvedeny zvlášť. Také některé vojenské malorážové náboje nespádají pod toto pojmenování. Tyto jsou uvedeny pod pojmenováním NÁBOJE PRO ZBRANĚ, S INERTNÍ STŘELOU.

NÁBOJE PRO NÁRADÍ, SLEPÉ: UN číslo 0014

Předmět, používaný v náradí, sestávající z uzavřené nábojnice se středovým nebo okrajovým zápalem a s náplní bezdýmného nebo černého prachu nebo bez ní, ale bez střely.

NÁBOJE PRO ZBRANĚ CVIČNÉ, nebo NÁBOJE MALORÁŽOVÉ, CVIČNÉ: UN čísla 0014, 0327, 0338

Munice, která sestává z uzavřené nábojnice se středovým nebo okrajovým zápalem a náplně z bezdýmného nebo z černého prachu. Náboje neobsahují střely. Jsou určeny k vystřelování ze zbraní o ráži nejvýše 19,1 mm a slouží k vyvolání silného zvukového efektu. Používají se pro cvičné účely, k pozdravné střelbě, jako hnací náplně, pro startovací pistole atd.

NÁBOJE PRO ZBRANĚ, CVIČNÉ: UN čísla 0014, 0326, 0327, 0338, 0413

Munice, která sestává z uzavřené nábojnice se středovým nebo okrajovým zápalem a z náplně bezdýmného nebo černého prachu. Náboje neobsahují střely. Předměty slouží k vyvolání silného zvukového efektu. Používají se pro cvičné účely, k pozdravné střelbě, jako hnací náplně, pro startovací pistole atd. Pod toto pojmenování spadá také munice, cvičná.

NÁBOJE PRO ZBRANĚ, S INERTNÍ STŘELOU: UN čísla 0012, 0328, 0339, 0417

Munice, která sestává ze střely bez trhací nálože a z nábojky, s nebo bez zápalného šroubu. Předměty mohou obsahovat stopovku za předpokladu, že převažující nebezpečí představuje hnací náplň.

NÁBOJE PRO ZBRANĚ s trhací náplní: UN čísla 0005, 0007, 0348

Munice, která sestává ze střely s trhavinou náplní s roznětnými prostředky, které nemají nejméně dvě účinná pojistná zařízení a hnací náplně, s nebo bez zápalného šroubu. Pojmenování zahrnuje jednotné náboje, částečně dělené náboje a dělené náboje, jestliže jsou jednotlivé díly baleny společně.

NÁBOJE PRO ZBRANĚ s trhací náplní: UN čísla 0006, 0321, 0412

Munice, která sestává ze střely s trhací náplní bez roznětných prostředků nebo s roznětnými prostředky, které mají nejméně dvě účinná pojistná zařízení, a hnací náplně, s nebo bez zápalného šroubu. Pojmenování zahrnuje jednotné náboje, částečně dělené náboje a dělené náboje, jestliže jsou jednotlivé díly baleny společně.

NÁBOJE, SIGNÁLNÍ: UN čísla 0054, 0312, 0405

Předměty, které jsou určeny pro vytváření barevných světelných nebo jiných signálů. Jsou vystřelovány ze signálních pistolí apod.

NÁBOJE, ZÁBLESKOVÉ: UN čísla 0049, 0050

Předměty sestávají z pouzdra, zápalky a zábleskové složky. Všechny součásti jsou sestaveny do jednoho celku připraveného ke střelbě.

NÁBOJKY, PRO ROPNÉ VRTY: UN čísla 0277, 0278

Předměty, sestávají z tenkého pouzdra z lepenky, kovu nebo jiného materiálu, které obsahují pouze bezdýmný prach a slouží k vystřelování tvrzených střel k prorážení pažení ropných vrtů.

NÁBOJKY PRO TECHNICKÉ ÚČELY: UN čísla 0275, 0276, 0323, 0381

Předměty jsou určeny k vyvolání mechanických účinků. Sestávají z pouzdra s náloží z deflagrující výbuštiny a roznětného prostředku. Plynné produkty deflagrace slouží k nafukování, k podélnému nebo rotačnímu pohybu nebo k aktivaci funkce přepážek, ventilů nebo spínačů nebo k vystřelování upevňovacích prvků nebo hasících prostředků.

POZNÁMKA: *Následující předměty nespadají pod toto pojmenování: NÁLOŽE KUMULATIVNÍ. Ty jsou v tomto glosáři uvedeny zvlášť.*

NÁBOJNICE, PRÁZDNÉ, SE ZÁPALKOU: UN čísla 0055, 0379

Předměty, sestávající z nábojnice z kovu, plastu nebo jiného nehořlavého materiálu, jejichž jedinou výbušnou součástí je zápalka nebo zápalkový šroub.

NÁBOJNICE, SPALITELNÉ, PRÁZDNÉ, BEZ ZÁPALKY: UN čísla 0446, 0444

Předměty sestávající z nábojnice, která je z části nebo celá zhotovena z nitrocelulózy.

NÁLOŽE, DESTRUKČNÍ: UN číslo 0048

Předměty, sestávající z pouzdra z lepenky, plastu, kovu nebo jiného materiálu, které obsahuje náplň z detonující výbuštiny. Neobsahují roznětné prostředky, nebo obsahují roznětné prostředky, které mají nejméně dvě účinná pojistná zařízení.

POZNÁMKA: *Následující předměty nespadají pod tento pojem: PUMY, MINY, STŘELY, atd. Tyto jsou v tomto glosáři uvedeny zvlášť.*

NÁLOŽE, KUMULATIVNÍ, bez rozbušky: UN čísla 0059, 0439, 0440, 0441

Předměty sestávající z pouzdra obsahujícího nálož detonující výbuštiny s dutinou, která je vyložena tuhým materiálem. Předměty jsou určeny k vyvolání mohutného usměrněného průrazného efektu.

NÁLOŽE, KUMULATIVNÍ, OHEBNÉ, LINEÁRNÍ: UN čísla 0237, 0288

Předměty sestávající z duše z detonující výbuštiny tvarované do „V“ opláštěované pružnou hmotou.

NÁLOŽE POČINOVÉ, bez rozbušky: UN čísla 0042, 0283

Předměty sestávají z nálože výbuštiny schopné detonace, bez roznětného prostředku. Jsou určeny k zesílení počínového účinku rozbušky nebo bleskovice.

NÁLOŽE POČINOVÉ, S ROZBUŠKOU: UN čísla 0225, 0268

Předměty sestávají z nálože výbuštiny schopné detonace a roznětného prostředku. Jsou určeny k zesílení počínového účinku rozbušky nebo bleskovice.

NÁLOŽE, HLUBINNÉ: UN číslo 0056

Předměty sestávající z nálože výbuštiny schopné detonace, umístěné v sudu nebo ve střeše, bez roznětných prostředků nebo s roznětnými prostředky, které mají nejméně dvě pojistná zařízení. Předměty jsou určeny k detonaci pod vodou.

NÁLOŽE TRHACÍ, S PLASTICKÝM POJIVEM: UN čísla 0457, 0458, 0459, 0460

Předměty, sestávající z nálože specifického tvaru bez pouzdra, vyrobené z trhaviny s plastickým pojivem. Neobsahují roznětné prostředky. Používají se jako součást munice jako jsou bojové hlavice.

NÁLOŽE, VÝBUŠNÉ, PRŮMYSLOVÉ, bez rozbušky: UN čísla 0442, 0443, 0444, 0445

Předměty sestávající z nálože výbuštiny schopné detonace, bez roznětného prostředku. Používají se ke svařování, plátování a tvarování výbuchem nebo pro jiné metalurgické procesy.

NÁBOJKY PRO TECHNICKÉ ÚČELY: UN čísla 0275, 0276, 0323, 0381

Předměty jsou určeny k vyvolání mechanických účinků. Sestávají z pouzdra s náloží z deflagrující výbuštiny a roznětného prostředku. Plynné produkty deflagrace slouží k nafukování, k podélnému

nebo rotačnímu pohybu nebo k aktivaci funkce přepážek, ventilů nebo spínačů nebo k vystřelování upevňovacích prvků nebo hasicích prostředků.

NÁLOŽKY PŘÍDAVNÉ, VÝBUŠNÉ: UN číslo 0060

Předměty sestávající z malé odnímatelné počinové náložky umístěné v dutině střely mezi zapalovačem a trhavinovou náplní.

NÁPLNĚ HNACÍ: UN čísla 0271, 0272, 0415, 0491

Předměty sestávající z hnací náplně, v jakékoliv fyzikální formě, s pláštěm nebo bez pláště. Slouží jako součást raketových motorů nebo ke snížení odporu vzduchu u střel.

NÁPLNĚ HNACÍ, PRO DĚLA: UN čísla 0242, 0279, 0414

Hnací náplně, v jakékoli fyzikální formě, pro dělenou dělostřeleckou munici.

NÝTY, VÝBUŠNÉ: UN číslo 0174

Předměty sestávající z malé náplně výbušniny uvnitř kovového nýtu.

OKTOLIT (OKTOL) suchý, nebo vlhčený méně než 15% hm. vody: UN číslo: 0266

Látka sestávající z těsné směsi 1,3,5,7-tetranitro-1,3,5,7-tetrazacyklooktanu (HMX) a trinitrotoluenu (TNT).

OKTONAL: UN číslo 0496

Látka sestávající z těsné směsi 1,3,5,7-tetranitro-1,3,5,7-tetrazacyklooktanu, trinitrotoluenu (TNT) a hliníku.

PENTOLIT, suchý nebo vlhčený méně než 15 % hm. vody: UN číslo 0151

Látka sestává z těsné směsi pentaeritroltetranitratu (PETN) a trinitrotoluenu (TNT).

PLYNOVÉ GENERÁTORY AIRBAGŮ, nebo MODULY AIRBAGŮ nebo PŘEDPÍNAČE BEZPEČNOSTNÍCH PÁSŮ : UN číslo 0503

Předměty, obsahující pyrotechnické látky, které se používají v automobilech jako součásti záchranných prostředků, jako jsou airbagy nebo bezpečnostní pásy.

POHONNÁ HMOTA, KAPALNÁ: UN čísla 0495, 0497

Látka, sestávající z deflagrující kapalné výbušniny, která se používá k reaktivnímu pohonu.

POHONNÁ HMOTA, TUHÁ: UN čísla 0498, 0499, 0501

Látka, sestávající z deflagrující pevné výbušniny, která se používá k reaktivnímu pohonu.

PRACH BEZDÝMNÝ: UN čísla 0160, 0161, 0509

Látka, s obsahem nitrocelulózy jako hlavní složkou, která se používá jako pohonná hmota. Tento pojem zahrnuje jednosložkové bezdýmné prachy (samotná nitrocelulóza (NC)), dvousložkové bezdýmné prachy (jako NC s nitroglycerinem (NG)) a trojsložkové bezdýmné prachy (jako NC/NG/nitroguanidin).

POZNÁMKA: *Bezdýmný prach litý, lisovaný nebo balený v pytlících je uveden pod pojmem NÁPLNĚ HNACÍ PRO DĚLA nebo SLOŽE HNACÍ.*

PRACH ČERNÝ, LISOVANÝ nebo PRACH ČERNÝ, V PELETÁCH: UN číslo 0028

Látka sestávající z tvarovaného černého prachu.

PRACH ČERNÝ, zrnitý nebo moučkový: UN číslo 0027

Látka sestávající z těsné směsi dřevěného uhlí nebo jiného zdroje uhlíku a dusičnanu draselného nebo dusičnanu sodného se sírou nebo bez ní.

PRACHOVINA SUROVÁ, VLNĚNÁ, nejméně 17 % hm. alkoholu
PRACHOVINA SUROVÁ, VLNĚNÁ nejméně 25 % hm. vody: UN čísla 0433, 0159

Látka sestávající z nitrocelulózy a nejvýše 60 % nitroglycerínu nebo jiné kapalné organické nitrolátky nebo jejich směsi.

PROSTŘEDKY SIGNÁLNÍ, DÝMOVÉ: UN čísla 0196, 0197, 0313, 0487, 0507

Předměty, které obsahují pyrotechnické látky a vyvíjejí dým. Mohou také obsahovat zařízení k vysílání akustických signálů.

PROSTŘEDKY SIGNÁLNÍ RUČNÍ: UN čísla 0191, 0373

Přenosné prostředky, které obsahují pyrotechnické látky, a které vydávají visuální signály nebo výstražná znamení. Pod toto pojmenování spadají také malé světlice, jako dálniční světlice, železniční světlice nebo malé světlice pro lodě v tísni.

PROSTŘEDKY SIGNÁLNÍ, TÍSŇOVÉ, lodní: UN čísla 0194, 0195, 0505, 0506

Předměty, které obsahují pyrotechnické látky a jsou určeny k vytváření signálů ve formě zvukového efektu, plamene nebo dýmu nebo kombinace těchto efektů.

PŘEDMĚTY, PYROFORICKÉ: UN číslo 0380

Předměty obsahující pyroforní látku, která je ve styku se vzduchem schopná samovznícení a výbušnou látku nebo složku. Toto pojmenování nezahrnuje předměty obsahující bílý fosfor.

PŘEDMĚTY PYROTECHNICKÉ, pro technické účely: UN čísla 0428, 0429, 0430, 0431, 0432

Předměty, které obsahují pyrotechnické látky. Jsou používány pro technické účely, jako je vývin tepla, vývin plynu nebo pro divadelní efekty a pod.

PŘEDMĚTY, VÝBUŠNÉ, VELMI NECITLIVÉ (EEI): UN číslo 0486

Předměty, které obsahují jen zvlášť necitlivé látky, které při normálních přepravních podmínkách vykazují jen nepatrnou pravděpodobnost náhodného roznětu nebo přenosu detonace a obstály ve zkušební sérii 7 dle Příručky zkoušek a kritérií.

POZNÁMKA: *Následující předměty nespádají pod toto pojmenování: všechny druhy munice; ZAŘÍZENÍ UVOLŇOVACÍ, VÝBUŠNÁ; VÝROBKY ZÁBAVNÉ PYROTECHNIKY; TRÁSKAVKY, ŽELEZNIČNÍ; SVĚTLICE, POZEMNÍ; SVĚTLICE, LETECKÉ; NÁBOJE, SIGNÁLNÍ; ŘEZAČKY, KABELŮ, VÝBUŠNÉ; PROSTŘEDKY, SIGNÁLNÍ, RUČNÍ; PROSTŘEDKY, SIGNÁLNÍ, DÝMOVÉ; PROSTŘEDKY SIGNÁLNÍ, TÍSŇOVÉ; NÝTY, VÝBUŠNÉ. Tyto předměty jsou v tomto glosáři uvedeny zvlášť.*

PUMY, S HOŘLAVOU KAPALINOU, s trhací náplní: UN čísla 0399, 0400

Předměty, které jsou shazovány z letadel. Sestávají z nádržky obsahující hořlavou kapalinu a trhací nálož.

PUMY, s trhací náplní: UN čísla 0033, 0291

Výbušné předměty, které jsou shazovány z letadel. Obsahují roznětné prostředky, které nemají nejméně dvě účinná pojistná zařízení.

PUMY, s trhací náplní: UN čísla 0034, 0035

Výbušné předměty, které jsou shazovány z letadel. Buď neobsahují roznětné prostředky, nebo obsahují roznětné prostředky, které mají nejméně dvě účinná pojistná zařízení.

PUMY, ZÁBLESKOVÉ: UN číslo 0037

Výbušné předměty, které jsou shazovány z letadel pro dosažení krátkodobě působícího intenzivního osvětlení pro fotografické účely. Obsahují nálož detonující výbušniny s roznětnými prostředky, které nemají nejméně dvě účinná pojistná zařízení.

PUMY, ZÁBLESKOVÉ: UN číslo 0038

Výbušné předměty, které jsou shazovány z letadel pro dosažení krátkodobě působícího intenzivního osvětlení pro fotografické účely. Obsahují nálož detonující výbušniny bez roznětných prostředků nebo s roznětnými prostředky, které mají nejméně dvě účinná pojistná zařízení.

PUMY, ZÁBLESKOVÉ: UN číslo 0039, 0299

Výbušné předměty, které jsou shazovány z letadel pro dosažení krátkodobě působícího intenzivního osvětlení pro fotografické účely. Obsahují zábleskovou slož.

RAKETOVÉ MOTORY: UN čísla 0186, 0280, 0281

Předměty sestávající z výbušniny, obvykle tuhé pohonné hmoty, která je umístěna ve válci opatřeném jednou nebo více tryskami. Jsou určeny k pohonu raket nebo řízených střel.

RAKETOVÉ MOTORY S HYPERGOLY, s nebo bez výmetné náplně: UN čísla 0250, 0322

Předměty sestávající z válce s jednou nebo více tryskami, který obsahuje hypergolicickou pohonnou látku. Jsou určeny k pohonu raket nebo řízených střel.

RAKETOVÉ MOTORY S KAPALNÝM PALIVEM: UN čísla 0395, 0396

Předměty sestávající z válce s jednou nebo více tryskami, který obsahuje kapalné palivo. Jsou určeny k pohonu raket nebo řízených střel.

RAKETY s inertní hlavicí UN čísla: 0183, 0502

Předměty sestávající z raketového motoru a nevýbušné hlavice. Toto pojmenování zahrnuje také řízené střely.

RAKETY, S KAPALNÝM PALIVEM s trhací náplní: UN čísla 0397, 0398

Předměty, sestávající z kapalného paliva a válce opatřeného jednou nebo více tryskami, ke kterým je připevněna bojová hlavice. Toto pojmenování zahrnuje také řízené střely.

RAKETY, s trhací náplní: UN čísla 0180, 0295

Předměty sestávající z raketového motoru a bojové hlavice s roznětnými prostředky, které nemají nejméně dvě účinná pojistná zařízení. Toto pojmenování zahrnuje také řízené střely.

RAKETY, s trhací náplní: UN čísla 0181, 0182

Předměty sestávající z raketového motoru a bojové hlavice bez roznětných prostředků nebo s roznětnými prostředky, které mají nejméně dvě účinná pojistná zařízení. Toto pojmenování zahrnuje také řízené střely.

RAKETY, s výmetnou náplní: UN čísla 0436, 0437, 0438

Předměty sestávající z raketového motoru a náložky sloužící k výmetu užitečného nákladu z hlavice rakety. Toto pojmenování zahrnuje také řízené střely.

RAKETY, TAHAČE LAN: UN čísla 0238, 0240, 0453

Předměty sestávající z raketového motoru, které jsou určeny k roztahování lan.

ROZBUŠKOVÉ SESTAVY, NEELEKTRICKÉ, pro trhací práce: UN čísla 0360, 0361, 0500

Neelektrické rozbušky opatřené prostředky, kterými jsou uváděny v činnost jako jsou zápalnice, bleskovice, mikrobleskovice a detonační trubice. Mohou být mžikové nebo časované. Pod toto pojmenování spadají detonační zařízení s bleskovicí.

ROZBUŠKY, ELEKTRICKÉ pro trhací práce: UN čísla 0030, 0255, 0456

Předměty, které jsou určeny zejména k počinu průmyslových trhavin. Rozbušky mohou být mžikové i časované. Elektrické rozbušky se uvádějí v činnost elektrickým proudem.

ROZBUŠKY, NEELEKTRICKÉ pro trhací práce: UN čísla 0029, 00267, 0455

Předměty, které jsou určeny zejména k počinu průmyslových trhavin. Rozbušky mohou být mžikové i časované. Neelektrické rozbušky se uvádějí v činnost zápalnicí, bleskovicí, mikrobleskovicí, detonační trubici nebo jinými roznětnými prostředky. Pod toto pojmenování spadají detonační zařízení bez bleskovice.

ROZBUŠKY, PRO MUNICI: UN 0073,00364, 0365, 0366.

Předměty sestávající z malého kovového nebo plastového pouzdra, které obsahuje výbušninu jako azid olovnatý, PETN nebo směs výbušnin. Jsou určeny k počinu detonačních zařízení.

ROZRUŠOVACÍ ZAŘÍZENÍ, VÝBUŠNÁ, pro ropné vrty, bez rozbušky: UN číslo 0099

Předměty sestávající z trhavinové nálože v pouzdře, bez roznětného prostředku. Používají se k rozrušení horniny v okolí vrtného otvoru, pro usnadnění výtoku ropy z horniny.

ŘEZAČKY KABELŮ, VÝBUŠNÉ: UN číslo 0070

Předměty sestávající ze zařízení s nožovým ostřím, které je vymršťováno malou náloží deflagrační výbušninou na kovadlinu.

SLOŽ PYROTECHNICKÁ, ZÁBLESKOVÁ: UN čísla 0094, 0305

Pyrotechnická slož, která po zážehu produkuje intenzivní světlo.

SOUČÁSTI ROZNĚTNÝCH ŘETÉZCŮ, J.N.: UN čísla 0382, 0383, 0384, 0461

Předměty, obsahující výbušninu, určené k přenosu detonace nebo deflagrace v zapalovačích munice.

STOPINA: UN číslo 0101

Předmět sestávající z bavlněných vláken obalených jemně zrněným černým prachem. Hoří vnějším plamenem a používá se k zážehu pyrotechnických předmětů atd. Může být uzavřena v papírové trubici pro získání okamžitého efektu.

STOPOVKY PRO MUNICI: UN čísla 0212, 0306

Uzavřené předměty, které obsahují pyrotechnické látky. Slouží k zviditelnění dráhy letu střely.

STŘELY, inertní se stopovkou: UN čísla 0345, 0424, 0425

Předměty jako granáty nebo střely, které jsou vystřelovány z děl nebo jiných dělostřeleckých zbraní, pušek nebo jiných malorážových střelných zbraní.

STŘELY, s trhací náplní: UN čísla 0167, 0324

Předměty jako granáty nebo střely, které jsou vystřelovány z děl nebo jiných dělostřeleckých zbraní. Obsahují roznětné prostředky, které nemají nejméně dvě účinná pojistná zařízení.

STŘELY, s trhací náplní: UN čísla 0168, 0169, 0344

Předměty jako granáty nebo střely, které jsou vystřelovány z děl nebo jiných dělostřeleckých zbraní. Neobsahují roznětné prostředky nebo obsahují roznětné prostředky, které mají nejméně dvě účinná pojistná zařízení.

STŘELY, s trhavou náložkou nebo výmetnou náplní: UN čísla 0346, 0347

Předměty jako granáty nebo střely, které jsou vystřelovány z děl nebo jiných dělostřeleckých zbraní. Střely neobsahují roznětné prostředky nebo obsahují roznětné prostředky, které mají nejméně dvě účinná pojistná zařízení. Používají se k rozhozu značkovacího barviva nebo jiných nevýbušných látek

STŘELY, s trhavou náložkou nebo výmetnou náplní: UN čísla 0426, 0427

Předměty jako granáty nebo střely, které jsou vystřelovány z děl nebo jiných dělostřeleckých zbraní. Střely obsahují roznětné prostředky, které nemají nejméně dvě účinná pojistná zařízení. Používají se k rozhozu značkovacího barviva nebo jiných nevýbušných látek.

STŘELY, s trhavou náložkou nebo výmetnou náplní: UN čísla 0434, 0435

Předměty jako granáty nebo střely, které jsou vystřelovány z děl nebo jiných dělostřeleckých zbraní, pušek nebo jiných malorážových střelných zbraní. Používají se k rozhozu značkovacího barviva nebo jiných nevýbušných látek.

SVĚTLICE, LETECKÉ: UN čísla 0093, 0403, 0404, 0420, 0421

Předměty, obsahující pyrotechnické látky, které jsou určeny ke shazování z letadel. Používají se k osvětlovacím, identifikačním, signálním nebo varovným účelům.

SVĚTLICE, POZEMNÍ: UN čísla 0092, 0418, 0419

Předměty, obsahující pyrotechnické látky, které jsou určeny k používání na zemi. Používají se k osvětlovacím, identifikačním, signálním nebo varovným účelům.

TORPÉDA, S KAPALNÝM PALIVEM, s nebo bez trhací nálože: UN číslo 0449

Předměty sestávající z kapalného výbušného pohonného systému k pohonu torpéda ve vodě, s nebo bez bojové hlavice; nebo předměty sestávající z kapalného nevýbušného pohonného systému k pohonu torpéda ve vodě a z bojové hlavice.

TORPÉDA, S KAPALNÝM PALIVEM s inertní hlavicí: UN číslo 0450

Předměty sestávající z kapalného výbušného pohonného systému k pohonu torpéda ve vodě a z inertní hlavice.

TORPÉDA, s trhací náplní: UN číslo 0329

Předměty sestávající z výbušného pohonného systému k pohonu torpéda ve vodě a z bojové hlavice. Bojová hlavice neobsahuje roznětné prostředky nebo obsahuje roznětné prostředky, které mají nejméně dvě účinná pojistná zařízení.

TORPÉDA, s trhací náplní: UN číslo 0330

Předměty sestávající z výbušného nebo nevýbušného pohonného systému, k pohonu torpéda ve vodě a z bojové hlavice. Bojová hlavice obsahuje roznětné prostředky, které mají méně než dvě účinná pojistná zařízení.

TORPÉDA, s trhací náplní: UN číslo 0451

Předměty sestávající z nevýbušného pohonného systému, k pohonu torpéda ve vodě a z bojové hlavice. Bojová hlavice neobsahuje roznětné prostředky nebo obsahuje roznětné prostředky, které mají nejméně dvě účinná pojistná zařízení.

TRHAVÉ NÁLOŽKY, výbušné: UN číslo 0043

Předměty, sestávající z malé náložky výbušniny. Slouží k roztržení pláště střel nebo jiné munice, aby se mohla rozptýlit jejich náplň.

TRHAVINA, TYP A: UN číslo 0081

Látky sestávající z kapalných nitroesterů, takových jako nitroglycerin nebo směsi takových látek. Obsahují kromě toho jednu nebo více těchto složek: nitrocelulózu, dusičnan amonný nebo jiné anorganické dusičnany, aromatické nitrosloučeniny nebo hořlavé látky, jako dřevěnou moučku nebo hliníkový prášek. Kromě toho mohou obsahovat inertní součásti, jako je křemelina a přísady, jako barviva a stabilizátory. Trhaviny mají konzistenci práškovou, želatinovou, plastickou nebo poloplastickou. Pod toto pojmenování spadají také dynamity, trhací želatiny, želatinové dynamity.

TRHAVINA, TYP B: UN čísla 0082, 0331

Látky sestávající ze

- (a) směsi dusičnanu amonného nebo jiných anorganických dusičnanů s výbušninami takovými jako trinitrotoluen (TNT), mohou také obsahovat jiné látky, jako dřevěnou moučku a hliníkový prášek; nebo
- (b) směsi z dusičnanu amonného nebo jiných anorganických dusičnanů s jinými hořlavými, nevýbušnými látkami.

V obou případech mohou trhaviny obsahovat inertní součásti, jako křemelinu a přísady, jako barviva a stabilizátory. Tyto trhaviny nesmějí obsahovat nitroglycerin nebo podobné kapalné nitroestery nebo chlorečnany.

TRHAVINA, TYP C: UN číslo 0083

Látky sestávající ze směsi chlorečnanu draselného nebo chlorečnanu sodného nebo chloristanu draselného nebo chloristanu sodného nebo chloristanu amonného a organických nitrosloučenin nebo hořlavých látek, jako dřevěná moučka, hliníkový prášek nebo uhlovodíky. Látky mohou kromě toho obsahovat inertní součásti jako křemelinu a přísady jako barviva a stabilizátory. Tyto trhaviny nesmějí obsahovat nitroglycerin nebo podobné kapalné nitroestery.

TRHAVINA, TYP D: UN číslo 0084

Látky sestávající ze směsi organických nitrosloučenin a hořlavých látek, jako uhlovodíků a hliníkového prášku. Látky mohou obsahovat inertní součásti jako křemelinu a přísady jako barviva a stabilizátory. Tyto trhaviny nesmějí obsahovat nitroglycerin nebo podobné kapalné nitroestery, chlorečnany a dusičnan amonný. Pod toto pojmenování spadají plastické trhaviny.

TRHAVINA, TYP E: UN čísla 0241, 0332

Látky sestávající z vody, jako hlavní součásti a vysokého podílu dusičnanu amonného nebo jiných oxidačních prostředků, které mohou být v roztoku. Ostatními součástmi mohou být nitrosloučeniny jako trinitrotoluen, uhlovodíky nebo hliníkový prášek. Mohou obsahovat inertní součásti, jako křemelinu a přísady, jako barviva a stabilizátory. Pod toto pojmenování spadají emulzní trhaviny, trhaviny typu slurry a „vodní gely“.

TRITONAL: UN číslo 0390

Látka sestává ze směsi trinitrotoluen (TNT) a hliníku.

TŘASKAVKY, ŽELEZNIČNÍ: UN čísla 0192, 0193, 0492, 0493

Předměty, obsahující pyrotechnickou látku, které při nárazu vybuchují se silným zvukovým efektem. Předměty jsou určeny k umístění na železničních kolejích.

VÝROBKY ZÁBAVNÉ PYROTECHNIKY: UN čísla 0333, 0334, 0335, 0336, 0337

Pyrotechnické předměty určené pro zábavné účely.

VZORKY, VÝBUŠNÉ, kromě třaskavin: UN číslo 0190

Nové nebo již existující výbušné látky nebo předměty, které dosud nejsou přiřazeny k žádnému pojmenování v kapitole 3.2, tabulce A, které jsou přepravovány v malém množství v souladu s pokyny příslušného orgánu mimo jiné k pokusným, klasifikačním, výzkumným a vývojovým účelům, za účelem kontroly jakosti nebo jako obchodní vzorek.

POZNÁMKA: Výbušné látky nebo předměty, které již jsou jmenovitě uvedené v kapitole 3.2, tabulce A, pod tento pojem nespádají.

ZÁPALKOVÉ ŠROUBY: UN čísla 0319, 0320, 0376

Předměty sestávající ze zápalky pro zážeh a přídavné náplně deflagrující výbušniny, jako je černý prach. Používají se k zážehu hnací náplně v nábojnicích pro děla atd.

ZÁPALKY, KALÍŠKOVÉ: UN čísla 0044, 0377, 0378

Předměty sestávající se z kovových nebo plastových kalíšků, které obsahují malé množství třaskavé složky, která se snadno zažehuje úderem. Slouží jako zažehový prostředek v malorážových nábojích a v narázových zápalkách hnacích náplní.

ZÁPALNICE: UN číslo 0066

Předmět, který se buď sestává z textilních vláken obalených černým prachem nebo jinou rychle hořící pyrotechnickou složkou a z pružného ochranného povlaku nebo z duše z černého prachu opředené pružnými textilními vlákny. Předmět hoří podélně otevřeným plamenem a slouží k přenosu zážehu z jednoho zařízení k náloži nebo k zažehovači.

ZÁPALNICE, BEZPEČNOSTNÍ: UN číslo 0105

Předmět, sestávající z duše z jemnozrnného černého prachu, která je omotaná ohebným textilním vláknem. Je opatřený jedním nebo více ochrannými obaly a po zažehnutí hoří stanovenou rychlostí bez jakéhokoliv vnějšího výbušného účinku.

ZÁPALNICE, trubičková, s kovovým pláštěm: UN číslo 0103

Předmět sestávající z kovové trubičky s duší z deflagrující výbušniny.

ZAPALOVAČE, DETONAČNÍ: UN čísla 0106, 0107, 0257, 0367

Předměty, s výbušnými díly, určené k vyvolání detonace v municích. Obsahují mechanické, elektrické, chemické nebo hydrostatické zařízení k vyvolání detonace. Obvykle obsahují pojistná zařízení.

ZAPALOVAČE, DETONAČNÍ s pojistným zařízením: UN čísla 0408, 0409, 0410

Předměty, s výbušnými díly, určené k vyvolání detonace v municích. Obsahují mechanické, elektrické, chemické nebo hydrostatické zařízení k vyvolání detonace. Detonační zapalovače musí obsahovat nejméně dvě účinná pojistná zařízení.

ZAPALOVAČE, ZÁŽEHOVÉ: UN čísla 0316, 0317, 0368

Předměty, s třaskavými složkami, určené k vyvolání deflagrace v municích. Obsahují mechanické, elektrické, chemické nebo hydrostatické zařízení k vyvolání deflagrace. Obvykle obsahují pojistná zařízení.

ZAŘÍZENÍ, AKTIVOVATELNÁ VODOU, s trhavou náložkou, výmetnou nebo hnací náplní: UN čísla 0248, 0249

Předměty, jejichž funkce je závislá na fyzikálně-chemické reakci jejich složek s vodou.

ZAŘÍZENÍ UVOLŇOVACÍ, VÝBUŠNÁ: UN číslo 0173

Předměty sestávající z malé výbušné náložky s roznětným prostředkem a tyče nebo spojovacího dílu. Přeražením tyče nebo spojovacího dílu se zařízení uvede rychle v činnost.

ZÁŽEHOVAČE: UN čísla 0121, 0314, 0315, 0454

Předměty, které obsahují jednu nebo více výbušných látek, které jsou určeny k vyvolání deflagrace ve výbušných zařízeních. Do činnosti mohou být uváděny chemicky, elektricky nebo mechanicky.

POZNÁMKA: *Následující předměty nespádají pod tento pojem: ZÁPALNICE, ZÁPALNICE trubičková; ZÁPALNICE BEZPEČNOSTNÍ; ZÁPALKY KALÍŠKOVÉ; STOPINA; ZÁPALKOVÉ ŠROUBY; ZAŽEHOVAČE ZÁPALNIC. Tyto jsou v tomto glosáři uvedeny zvlášť.*

ZAŽEHOVAČE ZÁPALNIC: UN číslo 0131

Předměty různé konstrukce, které se uvádějí v činnost třením, úderem nebo elektricky a které slouží k zažehnutí zápalnice.

2.2.2 Třída 2 Plyny**2.2.2.1 Kritéria**

2.2.2.1.1 Název třídy 2 zahrnuje čisté plyny, směsi plynů, směsi jednoho nebo více plynů s jednou nebo více jinými látkami, jakož i předměty, které takové látky obsahují.

Plyny jsou látky, které:

- (a) při 50 °C mají tenzi par vyšší než 300 kPa (3 bary), nebo
- (b) při 20 °C a standardním tlaku 101,3 kPa jsou zcela plynné.

POZNÁMKA 1: UN 1052 FLUOROVODÍK, BEZVODÝ je však látkou třídy 8.

POZNÁMKA 2: Čistý plyn smí obsahovat jiné složky, které pocházejí z výrobního procesu nebo které jsou přidávány, aby zachovaly stabilitu výrobku, za předpokladu, že koncentrace těchto složek nemění zařazení nebo přepravní podmínky, jako stupeň plnění, plnicí tlak nebo zkušební tlak.

POZNÁMKA 3: J.N. položky v pododdíle 2.2.2.3 mohou zahrnovat čisté plyny, jakož i směsi plynů.

2.2.2.1.2 Látky a předměty třídy 2 jsou rozděleny následovně:

1. *Stlačený plyn:* plyn, který, je-li naplněn pod tlakem pro přepravu, je zcela plynný při teplotě -50 °C; tato kategorie zahrnuje všechny plyny s kritickou teplotou -50 °C nebo nižší;
2. *Zkapalněný plyn:* plyn, který, je-li naplněn pod tlakem pro přepravu, je částečně kapalný při teplotách nad -50 °C. Rozlišuje se:
 - Vysokotlaký zkapalněný plyn:* plyn s kritickou teplotou nad -50 °C a nejvýše +65 °C; a
 - Nízkotlaký zkapalněný plyn:* plyn s kritickou teplotou nad +65 °C;
3. *Hluboce zchlazený zkapalněný plyn:* plyn, který, je-li naplněn pro přepravu, je částečně zkapalněn v důsledku své nízké teploty;
4. *Rozpuštěný plyn:* plyn, který, je-li naplněn pod tlakem pro přepravu, je rozpuštěn v kapalném rozpouštědle;
5. Aerosoly a malé nádoby obsahující plyn (plynové kartuše);
6. Jiné předměty obsahující plyn pod tlakem;
7. Plyny, které nejsou pod tlakem, podléhající zvláštním předpisům (vzorky plynů);
8. Chemické látky pod tlakem: kapaliny, pasty nebo prášky natlakované s hnací látkou, která splňuje definici stlačeného nebo zkapalněného plynu a jejich směsí.

2.2.2.1.3 Látky a předměty (kromě aerosolů a chemických látek pod tlakem) třídy 2 jsou podle svých nebezpečných vlastností přiřazeny k jedné z následujících skupin:

- A dusivé
- O podporující hoření
- F hořlavé
- T toxické
- TF toxické, hořlavé
- TC toxické, žíravé

TO	toxické, podporující hoření
TFC	toxické, hořlavé, žíravé
TOC	toxické, podporující hoření, žíravé.

Jestliže podle těchto kritérií mají plyny nebo směsi plynů nebezpečné vlastnosti, které lze přiřadit více než jedné skupině, mají skupiny označené písmenem T přednost před všemi ostatními skupinami. Skupiny označené písmenem F mají přednost před skupinami označenými písmeny A nebo O.

POZNÁMKA 1: Ve *Vzorových předpisech OSN, v IMDG Code a v Technických instrukcích ICAO* jsou plyny zařazovány na základě svého hlavního nebezpečí do jedné z následující tří podtříd:

Podtřída 2.1: Hořlavé plyny (odpovídá skupinám, které jsou označeny písmenem F)

Podtřída 2.2: Nehořlavé, netoxické plyny (odpovídá skupinám, které jsou označeny písmeny A nebo O)

Podtřída 2.3: Toxické plyny (odpovídá skupinám, které jsou označeny písmeny T, tzn. T, TF, TC, TO, TFC a TOC)

POZNÁMKA 2: Malé nádoby obsahující plyn (UN číslo 2037) musí být přiřazeny dle nebezpečí plynoucího z jejich obsahu ke skupinám A až TOC. K aerosolům (UN číslo 1950) viz 2.2.2.1.6. K chemickým látkám pod tlakem (UN čísel 3500 až 3505) viz 2.2.2.1.7.

POZNÁMKA 3: Žíravé plyny se považují za toxické, a proto se zařazují do skupiny TC, TFC nebo TOC.

POZNÁMKA 4: Směsi, které obsahují více než 21% obj. kyslíku, se zařazují jako směsi podporující hoření.

2.2.2.1.4 Pokud v kapitole 3.2, tabulce A jmenovitě uvedená směs třídy 2 odpovídá různým kritériím uvedeným v 2.2.2.1.2 a 2.2.2.1.5, je třeba tuto směs zařadit dle těchto kritérií a přiřadit ji k vhodné J.N. položce.

2.2.2.1.5 Látky a předměty (kromě aerosolů) třídy 2 jmenovitě neuvedené v kapitole 3.2, tabulce A je třeba přiřadit podle 2.2.2.1.2 a 2.2.2.1.3 k hromadné položce uvedené v pododdíle 2.2.2.3. Platí následující kritéria:

Dusivé plyny

Plyny nepodporující hoření, nehořlavé a netoxické, které zředují nebo vypuzují kyslík, který je za normálních podmínek přítomen v ovzduší.

Hořlavé plyny

Plyny, které při teplotě 20 °C a standardním tlaku 101,3 kPa:

- jsou zápalné ve směsi s nejvýše 13 % obj. plynu se vzduchem, nebo
- mají rozsah hořlavosti se vzduchem nejméně 12 procentních bodů bez ohledu na spodní mez hořlavosti.

Hořlavost musí být stanovena za pomoci zkoušek nebo výpočtů dle metod schválených ISO (viz normu ISO 10156:2010).

Pokud jsou pro použití těchto metod k dispozici pouze nedostatečné údaje, mohou být použity rovnocenné metody zkoušek, pokud jsou uznány příslušným orgánem země původu.

Není-li země původu smluvní stranou ADR, musí být tyto metody uznány příslušným orgánem prvního státu smluvní strany ADR, který přijde do styku se zásilkou.

Plyny podporující hoření

Plyny, které mohou obecně přívodem kyslíku způsobit nebo podpořit hoření jiných látek účinněji než vzduch. Jsou to čisté plyny nebo směsi plynů s oxidační mohutností větší než 23,5 %, určenou metodou uvedenou v ISO 10156:2010.

Toxické plyny

POZNÁMKA: Plyny, které kvůli své žíravosti částečně nebo úplně odpovídají kritériím pro toxicitu, musí být zařazeny jako toxické. K možnému vedlejšímu nebezpečí žíravosti, viz také kritéria pod nadpisem „Žíravé plyny“.

Plyny:

- (a) o nichž je známo, že mají takový toxický nebo žíravý účinek na člověka, že představují nebezpečí pro jeho zdraví; nebo
- (b) o kterých se předpokládá, že mají toxický nebo žíravý účinek na člověka, protože při zkouškách podle pododdílu 2.2.61.1 vykazují hodnotu LC₅₀ pro akutní toxicitu nejvýše 5000 ml/m³ (ppm).

Pro zařazení směsí plynů (včetně par látek jiných tříd) může být použit následující vzorec:

$$LC_{50} \text{ toxická (směs)} = \frac{1}{\sum_{i=1}^n \frac{f_i}{T_i}}$$

přičemž f_i = molární zlomek i-té části směsi.

T_i = index toxicity i - té části směsi.
Hodnota T_i odpovídá hodnotě LC₅₀ dle P200 pododdílu 4.1.4.1.

Pokud hodnota LC₅₀ není v P200 pododdílu 4.1.4.1 uvedena, je třeba použít hodnotu LC₅₀, která je uvedena ve vědecké literatuře.

Pokud hodnota LC₅₀ není známa, vypočítá se index toxicity na základě nejnižší hodnoty LC₅₀ látek s podobnými fyziologickými a chemickými účinky, nebo, je-li to jediná možnost, na základě pokusů.

Žíravé plyny

Plyny nebo směsi plynů, které kvůli svým žíravým účinkům zcela odpovídají kritériím pro toxicitu, je třeba zařadit jako toxické s vedlejším nebezpečím žíravosti.

Směs plynů, která je z důvodu svých kombinovaných účinků žíravosti a toxicity považována za toxickou, představuje vedlejší nebezpečí žíravosti, jestliže je z lidské zkušenosti známo, že je směs škodlivá pro kůži, oči nebo sliznice, nebo je-li hodnota LC₅₀ žíravých částí směsi při výpočtu podle následujícího vzorce nejvýše 5000 ml/m³ (ppm):

$$LC_{50} \text{ žíravá (směs)} = \frac{1}{\sum_{i=1}^n \frac{f_{Ci}}{T_{Ci}}}$$

přičemž f_{Ci} = molární zlomek i- té žíravé části směsi.

T_{Ci} = index toxicity i- té žíravé části směsi.

Hodnota T_{Ci} odpovídá hodnotě LC₅₀ dle P200 pododdílu 4.1.4.1.

Pokud hodnota LC₅₀ není v P200 pododdílu 4.1.4.1 uvedena, je třeba použít hodnotu LC₅₀, která je uvedena ve vědecké literatuře.

Pokud hodnota LC₅₀ není známa, vypočítá se index toxicity na základě nejnižší hodnoty LC₅₀ látek s podobnými fyziologickými a chemickými účinky, nebo, je-li to jediná možnost, na základě pokusů.

2.2.2.1.6 Aerosoly

Aerosoly (UN číslo 1950) se přiřazují k jedné z následujících skupin podle svých nebezpečných vlastností takto:

A	dusivé
O	podporující hoření
F	hořlavé
T	toxické
C	žiravé
CO	žiravé, podporující hoření
FC	hořlavé, žiravé
TF	toxické, hořlavé
TC	toxické, žiravé
TO	toxické, podporující hoření
TFC	toxické, hořlavé, žiravé
TOC	toxické, podporující hoření, žiravé.

Zařazení závisí na povaze obsahu aerosolového rozprašovače.

POZNÁMKA: Plyny, které vyhovují definici toxických plynů podle 2.2.2.1.5 a plynů identifikovaných v tabulce 2 pokynu pro balení P200 poznámkou c „Je považován za pyroformní“ v pododdílu 4.1.4.1, nesmějí být použity jako hnací náplň v aerosolovém rozprašovači. Aerosoly s obsahem splňujícím kritéria pro obalovou skupinu I z hlediska toxicity nebo žiravosti nejsou připuštěny k přepravě.

Platí tato kritéria:

- Přiřazení ke skupině A se provede, pokud obsah nespĺňuje kritéria pro žádnou jinou skupinu podle pododstavců b) až f) dále;
- Přiřazení ke skupině O se provede, pokud aerosol obsahuje plyn podporující hoření podle 2.2.2.1.5;
- Přiřazení ke skupině F se provede, jestliže obsah zahrnuje nejméně 85 % hm. hořlavých složek a chemické spalné teplo je nejméně 30 kJ/g. Přiřazení se neprovede, jestliže obsah zahrnuje nejvýše 1 % hm. hořlavých složek a spalné teplo je menší než 20 kJ/g. Jinak musí být aerosol odzkoušen na hořlavost zkouškami popsány v Příručce zkoušek a kritérií, části III, oddílu 31. Lehce hořlavé a hořlavé aerosoly musí být přiřazeny ke skupině F.

POZNÁMKA: Hořlavé složky jsou hořlavé kapaliny, hořlavé tuhé látky nebo hořlavé plyny a směsi plynů, jak jsou definovány v poznámkách 1 až 3 pododdílu 31.1.3 části III Příručky zkoušek a kritérií. Tento pojem nezahrnuje pyroformní látky, látky schopné samoohřevu ani látky reagující s vodou. Chemické spalné teplo se určí jedním z následujících postupů: ASTM D 240, ISO/FDIS 13943:1999 (E/F) 86.1 až 86.3 nebo NFPA 30B.

- d) Přiřazení ke skupině T se provede, pokud je obsah, s výjimkou hnací náplně aerosolového rozprašovače, zařazen do třídy 6.1, obalových skupin II nebo III;
- e) Přiřazení ke skupině C se provede, pokud obsah, s výjimkou hnací náplně aerosolového rozprašovače, splňuje kritéria pro třídu 8, obalové skupiny II nebo III;
- f) Pokud jsou splněna kritéria pro více než jednu skupinu mezi skupinami O, F, T a C, provede se přiřazení k příslušné skupině CO, FC, TF, TC, TO, TFC nebo TOC.

2.2.2.1.7 Chemické látky pod tlakem

Chemické látky pod tlakem (UN čísel 3500 až 3505) se přiřazují k jedné z následujících skupin podle svých nebezpečných vlastností takto:

- A dusivé
- F hořlavé
- T toxické
- C žíravé
- FC hořlavé, žíravé
- TF toxické, hořlavé.

Zařazení závisí na nebezpečných vlastnostech komponentů v různých stavech:

Hnací látka;

Kapalina; nebo

Tuhá látka.

POZNÁMKA 1: Plyny, které vyhovují definici toxických plynů nebo plynů podporujících hoření podle 2.2.2.1.5, nebo plyny identifikované v tabulce 2 pokynu pro balení P200 v 4.1.4.1 poznámkou c „Je považován za pyroforní“, nesmějí být používány jako hnací látka pro chemické látky pod tlakem.

POZNÁMKA 2: Chemické látky pod tlakem, jejichž obsah splňuje kritéria pro obalovou skupinu I z hlediska toxicity nebo žíravosti, nebo jejichž obsah splňuje jak kritéria pro obalovou skupinu II nebo III z hlediska toxicity, tak i kritéria pro obalovou skupinu II nebo III z hlediska žíravosti, nesmějí být přijímány k přepravě pod těmito UN čísly.

POZNÁMKA 3: Chemické látky pod tlakem s komponentami odpovídajícími vlastnostem třídy 1; znečistlivěné výbušné kapaliny třídy 3; samovolně se rozkládající látky a znečistlivěné tuhé výbušné látky třídy 4.1; třída 4.2; třída 4.3; třída 5.1; třída 5.2; třída 6.2 nebo třída 7 nesmějí být používány pro přepravu pod těmito UN čísly.

POZNÁMKA 4: Chemické látky pod tlakem v aerosolovém rozprašovači musí být přepravovány pod UN číslem 1950.

Platí tato kritéria:

- (a) Přiřazení ke skupině A se provede, pokud obsah nespĺňuje kritéria pro žádnou jinou skupinu podle pododstavců (b) až (e) dále;
- (b) Přiřazení ke skupině F se provede, jestliže jeden z komponentů, kterým může být čistá látka nebo směs, musí být klasifikován jako hořlavý. Hořlavé komponenty jsou hořlavé kapaliny a kapalně směsi, hořlavé tuhé látky a tuhé směsi nebo hořlavé plyny a směsi plynů splňující následující kritéria:
 - (i) Hořlavá kapalina je kapalina s bodem vzplanutí nejvýše 93 °C;
 - (ii) Hořlavá tuhá látka je tuhá látka, která splňuje kritéria uvedená v 2.2.41.1;
 - (iii) Hořlavý plyn je plyn, který splňuje kritéria uvedená v 2.2.2.1.5;

- (c) Přiřazení ke skupině T se provede, pokud je obsah, s výjimkou hnací látky, zařazen jako nebezpečné věci třídy 6.1, obalových skupin II nebo III;
- (d) Přiřazení ke skupině C se provede, pokud je obsah, s výjimkou hnací látky, zařazen jako nebezpečné věci třídy 8, obalových skupin II nebo III;
- (e) Pokud jsou splněna kritéria pro dvě skupiny mezi skupinami F, T a C, provede se přiřazení ke skupinám FC nebo TF, jak je to náležité.

2.2.2.2 Plynů nepřipustěné k přepravě

2.2.2.2.1 Chemicky nestálé látky třídy 2 jsou připuštěny k přepravě jen tehdy, byla-li učiněna potřebná opatření k zabránění všech možností nebezpečné reakce za normálních podmínek přepravy, jako např. rozkladu, přeměny nebo polymerizaci. Za tímto účelem je zvláště třeba dbát na to, aby nádoby a cisterny neobsahovaly látky, které by tyto reakce mohly podporovat.

2.2.2.2.2 Následující látky a směsi nejsou připuštěny k přepravě:

- UN 2186 - CHLOROVODÍK, HLUBOCE ZCHLAZENÝ, KAPALNÝ;
- UN 2421 – OXID DUSITÝ;
- UN 2455 - METHYLNITRIT;
- hluboce zchlazené zkapalněné plyny, kterým nelze přiřadit klasifikační kódy 3A, 3O nebo 3F;
- rozpuštěné plyny, které nemohou být přiřazeny pod UN čísla 1001, 2073 nebo 3318;
- aerosoly, u nichž jsou jako hnací náplně použity plyny, které jsou toxické podle 2.2.2.1.5 nebo pyroforní podle pokynu pro balení P200 v pododdílu 4.1.4.1;
- aerosoly s obsahem splňujícím kritéria pro obalovou skupinu I z hlediska toxicity nebo žíravosti (viz oddíly 2.2.61 a 2.2.8);
- malé nádoby obsahující plyny, které jsou velmi toxické (LC_{50} nižší než 200 ppm) nebo pyroforní podle pokynu pro balení P200 v pododdílu 4.1.4.1.

2.2.2.3 Seznam hromadných položek

Stlačené plyny		
Klasifikační kód	UN číslo	Pojmenování látek nebo předmětů
1 A	1956	PLYN STLAČENÝ, J.N.
1 O	3156	PLYN STLAČENÝ, PODPORUJÍCÍ HOŘENÍ, J.N.
1 F	1964 1954	UHLOVODÍKY, PLYNNÉ, SMĚS, STLAČENÁ, J.N. PLYN, STLAČENÝ HOŘLAVÝ, J.N.
1 T	1955	PLYN, STLAČENÝ, TOXICKÝ, J.N.
1 TF	1953	PLYN, STLAČENÝ, TOXICKÝ, HOŘLAVÝ, J.N.
1 TC	3304	PLYN, STLAČENÝ, TOXICKÝ, ŽÍRAVÝ, J.N.
1 TO	3303	PLYN, STLAČENÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, J.N.
1 TFC	3305	PLYN, STLAČENÝ, TOXICKÝ, HOŘLAVÝ, ŽÍRAVÝ, J.N.
1 TOC	3306	PLYN, STLAČENÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, ŽÍRAVÝ, J.N.

Zkapalněné plyny		
Klasifikační kód	UN číslo	Pojmenování látek nebo předmětů
2 A	1058	PLYNY ZKAPALNĚNÉ, nehořlavé, s přidáním dusíku, oxidu uhličitého nebo vzduchu
	1078	PLYN JAKO CHLADICÍ PROSTŘEDEK, J.N., jako směsi plynů s pojmenováním R..., které mají jako: směs F1 při 70 °C tenzi par nepřesahující 1,3 MPa (13 bar) a při 50 °C hustotu, která odpovídá minimálně hustotě dichlorfluormethanu (1,30 kg/l); směs F2 při 70 °C tenzi par nepřesahující 1,9 MPa (19 bar) a při 50 °C hustotu, která odpovídá minimálně hustotě dichlorfluormethanu (1,21 kg/l); směs F3 při 70 °C tenzi par nepřesahující 3 MPa (30 bar) a při 50 °C hustotu, která odpovídá minimálně hustotě chlordifluormethanu (1,09 kg/l); POZN.: Trichlorfluormethan (chladicí prostředek R11), 1,1,2-Trichlor-1,2,2-trifluorethan (chladicí prostředek R 113), 1,1,1-Trichlor-2,2,2-trifluorethan (chladicí prostředek R 113a), 1-Chlor-1,2,2-trifluorethan (chladicí prostředek R133) a 1-Chlor-1,1,2-trifluorethan (chladicí prostředek R133b) nejsou látkami třídy 2, mohou však být částmi směsí F1 až F3
	1968	INSEKTICID, PLYNNÝ, J.N.
	3163	PLYN ZKAPALNĚNÝ, J.N.
	3157	PLYN ZKAPALNĚNÝ, PODPORUJÍCÍ HOŘENÍ, J.N.
2 O		
2 F	1010	SMĚSI BUTADIENŮ A UHLOVODÍKŮ, STABILIZOVANÉ, které mají při teplotě 70 °C tenzi par nepřesahující 1,1 MPa (11 bar) a jejichž hustota neklesne při 50 °C pod hodnotu 0,525 kg/l POZN. Butadieny, stabilizované, jsou také zařazeny pod UN číslo 1010, viz tabulku A kapitoly 3.2.
	1060	METHYLACETYLEN A PROPADIEN, směs, STABILIZOVANÁ, jako směsi methylacetylenu a propadienu s uhlovodíky, kterými jsou: Směs P1 obsahující nejvýše 63 % obj. methylacetylenu a propadienu a nejvýše 24 % obj. propanu a propenu, přičemž procentuální podíl nasycených uhlovodíků C ₄ musí být nejméně 14 % obj.; Směs P2 obsahující nejvýše 48 % obj. methylacetylenu a propadienu a nejvýše 50 % obj. propanu a propenu, přičemž procentuální podíl nasycených uhlovodíků C ₄ musí být nejméně 5 % obj.; jakož i směsi propadienu s 1 % až 4 % methylacetylenu

Zkapalněné plyny (pokračování)		
Klasifikační kód	UN číslo	Pojmenování látek nebo předmětů
2 F	1965	UHLOVODÍKY PLYNNÉ, SMĚS, ZKAPALNĚNÁ, J.N., které jsou jako směsi: Směs A při 70 °C tenzi par nejvýše 1,1 MPa (11bar) a při 50 °C hustotu nejméně 0,525 kg/l Směs A 01 při 70 °C tenzi par nejvýše 1,6 MPa (16 bar) a při 50 °C hustotu nejméně 0,516 kg/l Směs A 02 při 70 °C tenzi par nejvýše 1,6 MPa (16 bar) a při 50 °C hustotu nejméně 0,505 kg/l Směs A 0 při 70 °C tenzi par nejvýše 1,6 MPa (16bar) a při 50 °C hustotu nejméně 0,495 kg/l Směs A 1 při 70 °C tenzi par nejvýše 2,1 MPa (21bar) a při 50 °C hustotu nejméně 0,485 kg/l Směs B 1 při 70 °C tenzi par nejvýše 2,6 MPa (26bar) a při 50 °C hustotu nejméně 0,474 kg/l Směs B 2 při 70 °C tenzi par nejvýše 2,6 MPa (26bar) a při 50 °C hustotu nejméně 0,463 kg/l Směs B při 70 °C tenzi par nejvýše 2,6 MPa (26bar) a při 50 °C hustotu nejméně 0,450 kg/l Směs C při 70 °C tenzi par nejvýše 3,1 MPa (31bar) a při 50 °C hustotu nejméně 0,440 kg/l POZN. 1. Pro výše uvedené směsi jsou také přípustná jako označení látek následující obchodní pojmenování: pro směsi A, A01, A02, a A0: BUTAN, pro směs C: PROPAN. POZN. 2. Jestliže předchází nebo následuje námořní nebo letecká přeprava, smí být pro UN 1965 UHLOVODÍKY PLYNNÉ, SMĚS, ZKAPALNĚNÁ, J.N. použita alternativní položka UN 1075 PLYNY ROPNÉ, ZKAPALNĚNÉ
	3354	INSEKTICID PLYNNÝ, HOŘLAVÝ, J.N.
	3161	PLYN ZKAPALNĚNÝ, HOŘLAVÝ, J.N.
2 T	1967	INSEKTICID PLYNNÝ, TOXICKÝ, J.N.
	3162	PLYN ZKAPALNĚNÝ, TOXICKÝ, J.N.
2 TF	3355	INSEKTICID PLYNNÝ, TOXICKÝ, HOŘLAVÝ, J.N.
	3160	PLYN ZKAPALNĚNÝ TOXICKÝ, HOŘLAVÝ, J.N.
2 TC	3308	PLYN ZKAPALNĚNÝ, TOXICKÝ, ŽÍRAVÝ, J.N.
2 TO	3307	PLYN ZKAPALNĚNÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, J.N.
2 TFC	3309	PLYN ZKAPALNĚNÝ, TOXICKÝ, HOŘLAVÝ, ŽÍRAVÝ, J.N.
2 TOC	3310	PLYN ZKAPALNĚNÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, ŽÍRAVÝ, J.N.

Hluboce zchlazené zkapalněné plyny		
Klasifikační kód	UN číslo	Pojmenování látek nebo předmětů
3 A	3158	PLYN, HLUBOCE ZCHLAZENÝ, KAPALNÝ, J.N.
3 O	3311	PLYN, HLUBOCE ZCHLAZENÝ, KAPALNÝ, PODPORUJÍCÍ HOŘENÍ, J.N.
3 F	3312	PLYN, HLUBOCE ZCHLAZENÝ, KAPALNÝ, HOŘLAVÝ, J.N.

Rozpuštěné plyny		
Klasifikační kód	UN čísla	Pojmenování látek nebo předmětů
4		K přepravě jsou přípustněny jen látky jmenovitě uvedené v tabulce A kapitoly 3.2.

Aerosoly a nádoby, malé, obsahující plyn		
Klasifikační kód	UN číslo	Pojmenování látek nebo předmětů
5	1950	AEROSOLY
	2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrného ventilu, které nelze opětovně plnit

Jiné předměty, které obsahují plyn pod tlakem		
Klasifikační kód	UN číslo	Pojmenování látek nebo předmětů
6 A	2857	STROJE CHLADÍČI, obsahující nehořlavé, netoxické plyny nebo roztoky amoniaku (UN 2672)
	3164	PŘEDMĚTY POD PNEUMATICKÝM TLAKEM (s nehořlavým plynem) nebo
	3164	PŘEDMĚTY POD HYDRAULICKÝM TLAKEM (s nehořlavým plynem)
6 F	3150	PŘÍSTROJE MALÉ, POHÁNĚNÉ PLYNNÝM UHLOVODÍKEM, s odběrním ventilem, nebo
	3150	NÁDOBKY S PLYNNÝM UHLOVODÍKEM, OPAKOVANĚ PLNITELNÉ, PRO MALÉ PŘÍSTROJE, s odběrním ventilem
	3478	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ , obsahující zkapalněný hořlavý plyn nebo
	3478	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZAŘÍZENÍCH , obsahující zkapalněný hořlavý plyn nebo
	3478	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZAŘÍZENÍMI, obsahující zkapalněný hořlavý plyn
	3479	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ , obsahující vodík v kovovém hydridu nebo
	3479	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZAŘÍZENÍCH, obsahující vodík v kovovém hydridu nebo
	3479	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZAŘÍZENÍMI, obsahující vodík v kovovém hydridu

Vzorky plynů		
Klasifikační kód	UN číslo	Pojmenování látek nebo předmětů
7 F	3167	VZOREK PLYNU, NESTLAČENÝ, HOŘLAVÝ, J.N., který není hluboce zchlazený
7 T	3169	VZOREK PLYNU, NESTLAČENÝ, TOXICKÝ, J.N., který není hluboce zchlazený
7 TF	3168	VZOREK PLYNU, NESTLAČENÝ, TOXICKÝ, HOŘLAVÝ, J.N., který není hluboce zchlazený

Chemické látky pod tlakem		
Klasifikační kód	UN číslo	Pojmenování látky nebo předmětu
8 A	3500	CHEMICKÁ LÁTKA POD TLAKEM, J.N.
8 F	3501	CHEMICKÁ LÁTKA POD TLAKEM, HOŘLAVÁ, J.N.
8 T	3502	CHEMICKÁ LÁTKA POD TLAKEM, TOXICKÁ, J.N.
8 C	3503	CHEMICKÁ LÁTKA POD TLAKEM, ŽÍRAVÁ, J.N.
8 TF	3504	CHEMICKÁ LÁTKA POD TLAKEM, HOŘLAVÁ, TOXICKÁ, J.N.
8 FC	3505	CHEMICKÁ LÁTKA POD TLAKEM, HOŘLAVÁ, ŽÍRAVÁ, J.N.

2.2.3 Třída 3 Hořlavé kapaliny

2.2.3.1 Kritéria

2.2.3.1.1 Název třídy 3 zahrnuje látky, jakož i předměty, které obsahují látky této třídy, které:

- jsou kapalné podle odstavce (a) definice pojmu "kapalina" v oddíle 1.2.1;
- mají při 50 °C tenzi par nejvýše 300 kPa (3 bary) a při 20 °C a standardním tlaku 101,3 kPa nejsou zcela plynné; a
- mají bod vzplanutí nejvýše 60 °C (viz pododdíl 2.3.3.1 k odpovídající zkoušce).

Název třídy 3 zahrnuje také kapaliny a tuhé látky v roztaveném stavu s bodem vzplanutí nad 60 °C, které jsou podány k přepravě nebo přepravovány zahřáté na teplotu rovnající se jejich bodu vzplanutí nebo vyšší. Tyto látky jsou přiřazeny k UN číslu 3256.

Název třídy 3 zahrnuje také znečitlivěné kapalné výbušné látky. Znečitlivěné kapalné výbušné látky jsou látky, které jsou ve vodě nebo v jiných kapalinách rozpuštěny nebo rozptýleny tak, aby vytvořily homogenní kapalnou směs, která už nemá výbušné vlastnosti. V tabulce A kapitoly 3.2 jsou tyto položky pod UN čísly 1204, 2059, 3064, 3343, 3357 a 3379.

POZNÁMKA 1: Látky s bodem vzplanutí vyšším než 35 °C, které za podmínek zkoušky hořením stanovených v Příručce zkoušek a kritérií, části III, pododdílu 32.2.5, samostatně nehoří, nejsou látkami třídy 3; jsou-li však tyto látky podány k přepravě nebo přepravovány zahřáté na teplotu rovnající se jejich bodu vzplanutí nebo vyšší, jsou látkami třídy 3.

POZNÁMKA 2: Odchytkou od 2.2.3.1.1 se považují paliva pro vznětové motory, plynový olej nebo topný olej (lehký) včetně synteticky vyrobených produktů s bodem vzplanutí nad 60 °C až do nejvýše 100 °C za látky třídy 3, UN čísla 1202.

POZNÁMKA 3: Kapaliny, které jsou při vdechnutí velmi toxické, s bodem vzplanutí pod 23 °C a toxické látky s bodem vzplanutí 23 °C nebo vyšším jsou látkami třídy 6.1 (viz 2.2.61.1).

POZNÁMKA 4: Hořlavé kapalné látky a přípravky, používané jako pesticidy, které jsou velmi toxické, toxické nebo slabě toxické a mají bod vzplanutí 23 °C nebo vyšší, jsou látkami třídy 6.1 (viz 2.2.61.1).

2.2.3.1.2 Látky a předměty třídy 3 jsou rozděleny následovně:

- F Hořlavé kapaliny bez vedlejšího nebezpečí a předměty obsahující takové látky;
- F1 Hořlavé kapaliny s bodem vzplanutí nejvýše 60 °C;
 - F2 Hořlavé kapaliny s bodem vzplanutí nad 60 °C, přepravované nebo podávané k přepravě při teplotě rovnající se jejich bodu vzplanutí nebo vyšší (zahřáté látky);
 - F3 Předměty obsahující hořlavé kapaliny
- FT Hořlavé kapaliny, toxické;
- FT1 Hořlavé kapaliny, toxické;
 - FT2 Pesticidy;
- FC Hořlavé kapaliny, žíravé;
- FTC Hořlavé kapaliny, toxické, žíravé.
- D Znečitlivěné kapalné výbušné látky.

2.2.3.1.3 Látky a předměty zařazené do třídy 3 jsou uvedeny v tabulce A kapitoly 3.2. Látky, které nejsou jmenovitě uvedeny v tabulce A kapitoly 3.2 musí být přiřazeny k příslušné položce v pododdíle 2.2.3.3 a k odpovídající obalové skupině podle ustanovení tohoto oddílu. Hořlavé kapaliny musí být přiřazeny k jedné z následujících obalových skupin podle stupně nebezpečí, který představují pro přepravu:

Obalová skupina	Bod vzplanutí (uzavřený kelímeček)	Teplota začátku varu
I	--	≤ 35 °C
II ^a	< 23 °C	> 35 °C
III ^a	≥ 23 °C a ≤ 60 °C	> 35 °C

^a Viz též 2.2.3.1.4.

Pro kapalinu s vedlejším nebezpečím (vedlejšími nebezpečími) se musí zohlednit obalová skupina určená podle výše uvedené tabulky a obalová skupina vyplývající ze závažnosti vedlejšího (vedlejších) nebezpečí; klasifikace a obalová skupina se potom určí podle tabulky převažujících nebezpečí v pododdílu 2.1.3.10.

2.2.3.1.4

Kapalné nebo viskózní směsi a přípravky, včetně těch, které obsahují nejvýše 20 % nitrocelulózy s obsahem dusíku v sušině nejvýše 12,6 %, smějí být přiřazeny k obalové skupině III, jestliže jsou splněny následující požadavky:

- (a) výška vrstvy rozpouštědla, která se oddělí při dělicí zkoušce rozpouštědla, musí činit méně než 3% celkové výšky zkušební vzorku (viz Příručku zkoušek a kritérií, část III, pododdíl 32.5.1); a
- (b) viskozita² a bod vzplanutí musí odpovídat následující tabulce:

Extrapolovaná kinematická viskozita v (při stříhové rychlosti blízké 0) mm^2/s při 23 °C	Doba výtoku t podle ISO 2431:1993		Bod vzplanutí v °C
	v s	při průměru výtokové trysky v mm	
20 < v ≤ 80	20 < t ≤ 60	4	nad 17
80 < v ≤ 135	60 < t ≤ 100	4	nad 10
135 < v ≤ 220	20 < t ≤ 32	6	nad 5
220 < v ≤ 300	32 < t ≤ 44	6	nad - 1
300 < v ≤ 700	44 < t ≤ 100	6	nad - 5
700 < v	100 < t	6	- 5 a níže

POZNÁMKA: Směsi s více než 20 %, ale nejvýše 55 % nitrocelulózy, s obsahem dusíku nejvýše 12,6 % v suché hmotě jsou látkami, které jsou přiřazeny k UN číslu 2059.

Směsi s bodem vzplanutí pod 23 °C

- s více než 55 % nitrocelulózy s jakýmkoli obsahem dusíku, nebo
- s nejvýše 55 % nitrocelulózy s obsahem dusíku vyšším než 12,6 % v suché hmotě

jsou látkami třídy 1 (UN číslo 0340 nebo 0342) nebo třídy 4.1 (UN číslo 2555, 2556 nebo 2557).

2.2.3.1.5

Netoxické, nežiravé a životní prostředí neohrožující roztoky a homogenní směsi s bodem vzplanutí 23 °C nebo vyšším (viskózní látky, jako barvy a laky, vyjma látek obsahujících více než 20 % nitrocelulózy) v nádobách o vnitřním objemu menším než 450 litrů nepodléhají předpisům ADR, jestliže při dělicí zkoušce rozpouštědla (viz Příručku zkoušek a kritérií, část III, pododdíl 32.5.1) výška oddělené vrstvy rozpouštědla činí méně než 3 % celkové výšky a jestliže látky při 23 °C ve výtokovém kelímku podle normy ISO 2431:1993 s tryskou průměru 6 mm vykazují dobu výtoku:

- (a) nejméně 60 sekund, nebo
- (b) nejméně 40 sekund a neobsahují více než 60% látek třídy 3.

2.2.3.1.6

Spadají-li látky třídy 3 vlivem příměsí do jiných kategorií nebezpečnosti než těch, do kterých patří látky jmenovitě uvedené v tabulce A kapitoly 3.2, přiřadí se tyto směsi nebo roztoky k položkám, ke kterým na základě svého skutečného nebezpečí patří.

² Stanovení viskozity: Jestliže předmětná látka nemá gravitační vlastnosti kapaliny nebo není-li metoda s použitím výtokového kelímku vhodná ke stanovení viskozity, musí být použit viskozimetr s proměnnou stříhovou rychlostí, aby mohly být stanoveny koeficienty dynamické viskozity látky při 23 °C u řady hodnot stříhových rychlostí. Zjištěné hodnoty v závislosti na stříhových rychlostech musí být extrapolovány na hodnotu stříhové rychlosti 0. Tímto způsobem stanovená dynamická viskozita dělena hustotou dává zdánlivou kinematickou viskozitu při stříhové rychlosti blízké 0.

POZNÁMKA: K zařazování roztoků a směsí (jako jsou přípravky a odpady) viz také oddíl 2.1.3.

2.2.3.1.7 Na základě zkušebních postupů podle pododdílu 2.3.3.1 a oddílu 2.3.4 a kritérií uvedených v 2.2.3.1.1 se může také zjistit, zda je jmenovitě uvedený roztok nebo jmenovitě uvedená směs, popřípadě roztok nebo směs, který(á) obsahuje jmenovitě uvedenou látku, takové povahy, že tento roztok nebo tato směs nepodléhá ustanovením pro tuto třídu (viz také oddíl 2.1.3).

2.2.3.2 *Látky nepřipustitelné k přepravě*

2.2.3.2.1 Látky třídy 3, které snadno peroxidují (jako ethery nebo určité heterocyklické kyslíkaté látky), smějí být přepravovány jen tehdy, jestliže jejich obsah peroxidu nepřekročí 0,3 % přepočítáno na peroxid vodíku (H₂O₂). Obsah peroxidu se stanoví podle pododdílu 2.3.3.3.

2.2.3.2.2 Chemicky nestálé látky třídy 3 je dovoleno přepravovat jen tehdy, byla-li učiněna potřebná opatření k zabránění nebezpečnému rozkladu nebo polymeraci během přepravy. Za tímto účelem je zejména nutno zajistit, aby nádoby a cisterny neobsahovaly látky, které by takové reakce mohly podporovat.

2.2.3.2.3 Znečtivěné kapalné výbušné látky, které nejsou uvedeny v tabulce A kapitoly 3.2, nejsou připuštěny k přepravě jako látky třídy 3.

2.2.3.3 Seznam hromadných položek

Vedlejší nebezpečí	Klasifikační kód	UN číslo	Pojmenování látek nebo předmětů	
Hořlavé kapaliny a předměty obsahující takové látky				
Bez vedlejšího nebezpečí	F	1133	LEPIDLA, s hořlavou kapalnou látkou	
		1136	OLEJE DEHTOVÉ, HOŘLAVÉ	
		1139	ROZTOK OCHRANNÉHO NÁTĚRU (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako ochranný nástřík spodků karoserií vozidel, vnitřní nátěry sudů)	
		1169	EXTRAKTY AROMATICKÉ, KAPALNÉ	
		1197	EXTRAKTY CHUŤOVÉ, KAPALNÉ	
		1210	BARVA TISKAŘSKÁ hořlavá nebo PŘÍSLUŠENSTVÍ	
		1210	TISKAŘSKÝCH BAREV, (včetně ředidel a rozpouštědel tiskařských barev), HOŘLAVÉ	
		1263	BARVA (včetně barev, lakových barev, emailových laků, mořidel, šelakových roztoků, fermeží, leštících prostředků, kapalných plnidel a kapalných základů pro laky)	
		1263	PŘÍSLUŠENSTVÍ BAREV (včetně ředidel a rozpouštědel)	
		1266	VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly	
		1293	TINKTURY, LÉKAŘSKÉ	
		F1	1306	PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ
			1866	ROZTOK PRYSKYŘICE, hořlavý
			1999	DEHTY KAPALNÉ, včetně silničních olejů a ředěných asfaltů
			3065	NÁPOJE ALKOHOLICKÉ
			1224	KETONY KAPALNÉ, J.N.
			1268	DESTILÁTY ROPNÉ, J.N. nebo PRODUKTY ROPNÉ, J.N.
			1987	ALKOHOLY, J.N.
			1989	ALDEHYDY, J.N.
			2319	UHLOVODÍKY TERPENICKÉ, J.N.
			3271	ETHERY, J.N.
			3272	ESTERY, J.N.
			3295	UHLOVODÍKY, KAPALNÉ, J.N.
			3336	THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, J.N. nebo
			3336	SMĚSI THIOLŮ (merkaptanů), KAPALNÉ, HOŘLAVÉ, J.N.
			1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N.
	F2	3256	LÁTKA ZAHŘÁTÁ, KAPALNÁ, HOŘLAVÁ, J.N., s bodem vzplanutí nad 60° C	
	F3	3269	PRYSKYŘICE POLYESTEROVÉ, VÍCESLOŽKOVÉ	
		3473	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo	
		3473	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZAŘÍZENÍ nebo	
		3473	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZAŘÍZENÍM	
	FT1	1228	THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, TOXICKÉ, J.N. nebo	
		1228	SMĚSI THIOLU (merkaptanů), KAPALNÉ, HOŘLAVÉ, TOXICKÉ, J.N.	
		1986	ALKOHOLY, HOŘLAVÉ, TOXICKÉ, J.N.	
		1988	ALDEHYDY, HOŘLAVÉ, TOXICKÉ, J.N.	
		2478	ISOKYANÁTY, HOŘLAVÉ, TOXICKÉ, J.N. nebo	
		2478	ISOKYANÁT, ROZTOK, HOŘLAVÝ, TOXICKÝ, J.N.	
		3248	LÉČIVA KAPALNÁ, HOŘLAVÁ, TOXICKÁ, J.N.	
		3273	NITRILY, HOŘLAVÉ, TOXICKÉ, J.N.	
		1992	LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, J.N.	
Toxické FT		2758	PESTICID-KARBAMÁT, KAPALNÝ, HOŘLAVÝ, TOXICKÝ	
		2760	PESTICID NA BÁZI ARZÉNU, KAPALNÝ, HOŘLAVÝ,	

Pesticid (s bodem vzplanutí pod 23 °C)	FT2	2762	TOXICKÝ PESTICID-ORGANICKÁ SLOUČENINA CHLORU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ
		2764	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ
		2772	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ
		2776	PESTICID NA BÁZI MĚDI, KAPALNÝ, HOŘLAVÝ, TOXICKÝ
		2778	PESTICID NA BÁZI RTUTI, KAPALNÝ, HOŘLAVÝ, TOXICKÝ
		2780	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, HOŘLAVÝ, TOXICKÝ
		2782	PESTICID NA BÁZI BÍPYRIDILU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ
		2784	PESTICID- ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ
		3024	PESTICID-DERIVÁT KUMARINU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ
		3346	PESTICID-DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, HOŘLAVÝ, TOXICKÝ
		3350	PESTICID-PYRETHROID, KAPALNÝ, HOŘLAVÝ, TOXICKÝ
		3021	PESTICID KAPALNÝ, HOŘLAVÝ, TOXICKÝ, J.N.
POZNAMKA: Přiřazení pesticidu pod položku se provádí na základě aktivní složky, fyzikálního stavu pesticidu a podle všech možných vedlejších nebezpečí, která může představovat.			
Žíravé	FC	3469	BARVA, HOŘLAVÁ, ŽÍRAVÁ (včetně laků, emailů, mořidel, šelaku a fermeží, leštidel a kapalných základových složek laků) nebo
		3469	LÁTKA POMOCNÁ K VÝROBĚ BAREV, HOŘLAVÁ, ŽÍRAVÁ (včetně ředidel a složek odstraňovačů)
		2733	AMINY, HOŘLAVÉ, ŽIRAVÉ, J.N. nebo
		2733	POLYAMINY, HOŘLAVÉ, ŽIRAVÉ, J.N.
		2985	CHLORSILANY, HOŘLAVÉ, ŽIRAVÉ, J.N.
		3274	ALKOHOLÁTY, ROZTOKY v alkoholu, J.N.
		2924	LÁTKA HOŘLAVÁ, KAPALNÁ, ŽÍRAVÁ, J.N.
Toxické, žíravé	FTC	3286	LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, ŽÍRAVÁ, J.N.
Znecitlivěné výbušné Kapaliny	D	3343	NITROGLYCERIN, SMĚS, ZNECITLIVĚNÁ, KAPALNÁ, HOŘLAVÁ, J.N., s nejvýše 30 % hm. nitroglycerinu
		3357	NITROGLYCERIN, SMĚS, ZNECITLIVĚNÁ, KAPALNÁ, J.N., s nejvýše 30 % hm. nitroglycerinu
		3379	LÁTKA ZNECITLIVĚNÁ, VÝBUŠNÁ, KAPALNÁ, J.N.

2.2.41 Třída 4.1 Hořlavé tuhé látky, samovolně se rozkládající látky a znečitlivěné tuhé výbušné látky

2.2.41.1 Kritéria

2.2.41.1.1 Název třídy 4.1 zahrnuje hořlavé látky a předměty a znečitlivěné výbušné látky, které jsou tuhými látkami podle písmene a) definice "tuhý" uvedené v oddíle 1.2.1, jakož i samovolně se rozkládající tuhé nebo kapalné látky.

Třídy 4.1 jsou přiřazeny :

- lehce hořlavé tuhé látky a předměty (viz 2.2.41.1.3 až 2.2.41.1.8);
- samovolně se rozkládající tuhé nebo kapalné látky (viz 2.2.41.1.9 až 2.2.41.1.17);
- znečitlivěné tuhé výbušné látky (viz 2.2.41.1.18);
- látky příbuzné samovolně se rozkládajícím látkám (viz 2.2.41.1.19).

2.2.41.1.2 Látky a předměty třídy 4.1 se dále dělí následovně :

F Hořlavé tuhé látky bez vedlejšího nebezpečí:

- F1 organické
- F2 organické, roztavené
- F3 anorganické

FO Hořlavé tuhé látky, podporující hoření

FT Hořlavé tuhé látky, toxické:

- FT1 organické, toxické
- FT2 anorganické, toxické

FC Hořlavé tuhé látky, žíravé:

- FC1 organické, žíravé
- FC2 anorganické, žíravé

D Znečitlivěné tuhé výbušné látky bez vedlejšího nebezpečí

DT Znečitlivěné tuhé výbušné látky, toxické

SR Samovolně se rozkládající látky:

- SR1 nevyžadující řízení teploty
- SR2 vyžadující řízení teploty.

Hořlavé tuhé látky

Definice a vlastnosti

2.2.41.1.3 *Hořlavé tuhé látky* jsou lehce hořlavé tuhé látky a tuhé látky, které se mohou zapálit třením.

Lehce hořlavé tuhé látky jsou práškovité, zrnité nebo pastovité látky, které jsou nebezpečné, jestliže se po krátkém styku se zápalným zdrojem, jako např. s hořící zápalkou, mohou snadno zapálit a plamen se po zapálení rychle rozšiřuje. Nebezpečí přitom nemusí vycházet jen z ohně, nýbrž také z toxických zplodin hoření. Kovové prášky jsou kvůli obtížím při hašení ohně zvláště nebezpečné, protože normální hasící prostředky, jako oxid uhličitý nebo voda, mohou zvětšit nebezpečí.

Klasifikace

- 2.2.41.1.4** Látky a předměty zařazené jako hořlavé tuhé látky třídy 4.1 jsou uvedeny v tabulce A kapitoly 3.2. Přiřazení organických látek a předmětů, které nejsou v tabulce A kapitoly 3.2 jmenovitě uvedeny, pod příslušnou položku pododdílu 2.2.41.3, podle ustanovení kapitoly 2.1, se může provést na základě zkušenosti nebo na základě výsledků zkušebních postupů podle Příručky zkoušek a kritérií, části III, pododdílu 33.2.1. Přiřazení jmenovitě neuvedených anorganických látek musí být provedeno na základě výsledků zkušebních postupů podle Příručky zkoušek a kritérií, části III, pododdílu 33.2.1, přičemž musí být zohledněny rovněž zkušenosti, vedou-li k přísnějšímu zařazení.
- 2.2.41.1.5** Jestliže se jmenovitě neuvedené látky na základě zkušebních postupů podle Příručky zkoušek a kritérií, části III, pododdílu 33.2.1 přiřazují k jedné z položek uvedených v pododdíle 2.2.41.3, platí následující kritéria:

- (a) Práškovité, zrnité nebo pastovité látky, s výjimkou kovových prášků nebo prášků kovových slitin, se klasifikují jako lehce hořlavé látky třídy 4.1, jestliže se mohou snadno zapálit po krátkém styku se zápalným zdrojem (např. hořící zápalkou), nebo jestliže se plamen po zapálení rychle rozšiřuje, doba vyhoření je menší než 45 sekund na měrnou vzdálenost 100 mm, nebo rychlost vyhoření je větší než 2,2 mm/s.
- (b) Kovové prášky nebo prášky kovových slitin se přiřadí ke třídě 4.1, jestliže mohou být zapáleny při styku s plamenem a reakce se rozšíří na celou délku vzorku za 10 minut nebo méně.

Tuhé látky, které se mohou zapálit třením, se musí zařadit do třídy 4.1 analogicky k existujícím položkám (např. zápalkám) nebo v souladu s příslušným zvláštním ustanovením.

- 2.2.41.1.6** Na základě zkušebních postupů podle Příručky zkoušek a kritérií, části III, oddílu 33.2.1 a kritérií uvedených v 2.2.41.1.4 a 2.2.41.1.5 se může také zjistit, zda je jmenovitě uvedená látka takové povahy, že nepodléhá předpisům pro tuto třídu.
- 2.2.41.1.7** Spadají-li látky třídy 4.1 vlivem příměsí do jiných kategorií nebezpečnosti, než těch, do kterých patří látky jmenovitě uvedené v tabulce A kapitoly 3.2, přiřadí se tyto směsi k položkám, ke kterým na základě svého skutečného nebezpečí patří.

POZNÁMKA: K zařazování roztoků a směsí (jako jsou přípravky a odpady) viz také oddíl 2.1.3.

Přiřazení k obalovým skupinám

- 2.2.41.1.8** Hořlavé tuhé látky zařazené pod různé položky tabulky A kapitoly 3.2 musí být přiřazeny k obalovým skupinám II nebo III na základě zkušebních postupů Příručky zkoušek a kritérií, části III, pododdílu 33.2.1 podle těchto kritérií:
- (a) Lehce hořlavé tuhé látky, které mají při zkoušce dobu vyhoření menší než 45 sekund na měrnou vzdálenost 100 mm, jsou přiřazeny k obalové skupině II, proběhl-li plamen navlhčenou zónou; přiřazeny k obalové skupině III, jestliže navlhčená zóna zastaví šíření plamene po dobu nejméně 4 minut.
- (b) Kovové prášky nebo prášky kovových slitin jsou přiřazeny k obalové skupině II, jestliže se reakce při zkoušce rozšíří po celé délce vzorku za 5 minut nebo méně; přiřazeny k obalové skupině III, jestliže se reakce při zkoušce rozšíří po celé délce vzorku za více než 5 minut.

U tuhých látek, které mohou vzplanout třením, musí být jejich přiřazení k obalové skupině provedeno v analogii k existujícím položkám nebo podle odpovídajícího zvláštního ustanovení.

Samovolně se rozkládající látky*Definice*

- 2.2.41.1.9** Pro účely ADR jsou samovolně se rozkládající látky tepelně nestálé látky, které se mohou i bez přítomnosti kyslíku (vzduchu) silně exotermicky rozkládat. Látky se nepovažují za samovolně se rozkládající látky třídy 4.1, jestliže:
- (a) jsou výbušnými látkami dle kritérií pro třídu 1;

- (b) jsou látkami podporujícími hoření podle přiřazovacího postupu pro třídu 5.1 (viz pododdíl 2.2.51.1), s výjimkou toho, že směsi látek podporujících hoření, které obsahují nejméně 5 % hořlavých organických látek, musí být podrobeny klasifikačnímu postupu definovanému v POZNÁMCE 2;
- (c) jsou organickými peroxidy podle kritérií pro třídu 5.2 (viz pododdíl 2.2.52.1);
- (d) jejich rozkladné teplo je menší než 300 J/g; nebo
- (e) jejich teplota samourychlujícího se rozkladu (SADT) (viz POZNÁMKA 3 níže) je vyšší než 75 °C pro kus o hmotnosti 50 kg.

POZNÁMKA 1: Rozkladné teplo může být určeno libovolnou mezinárodně uznávanou metodou, např. dynamickou diferenční kalorimetrií a adiabatickou kalorimetrií.

POZNÁMKA 2: *Směsi látek podporujících hoření splňující kritéria třídy 5.1, které obsahují nejméně 5 % hořlavých organických látek, ale které nesplňují kritéria uvedená výše pod písmeny (a), (c), (d) nebo (e), musí být podrobeny klasifikačnímu postupu pro samovolně se rozkládající látky.*

Směs vykazující vlastnosti samovolně se rozkládající látky typu B až F musí být zařazena jako samovolně se rozkládající látka třídy 4.1.

Směs vykazující vlastnosti samovolně se rozkládající látky typu G podle zásady uvedené v pododdílu 20.4.3 (g) části II Příručky zkoušek a kritérií musí být posouzena pro zařazení jako látka třídy 5.1 (viz 2.2.51.1).

POZNÁMKA 3: Teplota samourychlujícího se rozkladu (SADT) je nejnižší teplota, při které může dojít k samovolnému rozkladu látky v obalu používaném během přepravy. Potřebné předpisy k určení této teploty jsou obsaženy v Příručce zkoušek a kritérií, části II, kapitole 20 a oddílu 28.4.

POZNÁMKA 4: Všechny látky, které vykazují vlastnosti samovolně se rozkládajících látek, musí být zařazeny jako takové, i když vykazují podle 2.2.42.1.5 pozitivní výsledek zkoušky pro zařazení do třídy 4.2.

Vlastnosti

2.2.41.1.10

Rozklad samovolně se rozkládajících látek může být vyvolán teplem, stykem s katalytickými nečistotami (např. kyselinami, sloučeninami těžkých kovů, zásadami), třením nebo nárazem. Rychlost rozkladu se zvyšuje se stoupající teplotou a je rozdílná podle druhu látky. Rozklad může mít, zvláště jestliže nedojde k zapálení, za následek vývin toxických plynů nebo par. U určitých samovolně se rozkládajících látek musí být teplota řízena. Některé samovolně se rozkládající látky se mohou především pod uzavřením výbušně rozkládat. Tato vlastnost může být zmenšena přidáním ředidel nebo použitím vhodných obalů. Určité samovolně se rozkládající látky prudce hoří. Samovolně se rozkládající látky jsou například určité sloučeniny níže uvedených typů:

alifatické azosloučeniny (-C-N=N-C-)
organické azidy (-C-N₃);
diazoniové soli (-CN₂⁺ Z⁻);
N - nitroso sloučeniny (-N-N=O); a
aromatické sulfohydrazidy (-SO₂-NH-NH₂).

Tento výčet není úplný; látky s jinými reaktivními skupinami a některé směsi látek mohou mít podobné vlastnosti.

Klasifikace

2.2.41.1.11

Samovolně se rozkládající látky jsou na základě svého stupně nebezpečnosti rozděleny do sedmi typů. Typy samovolně se rozkládajících látek začínají od typu A, který není připuštěn k přepravě v obalu, ve kterém byl zkoušen, až po typ G, který nepodléhá ustanovením pro samovolně se rozkládající látky třídy 4.1. Zařazení samovolně se rozkládajících látek typů B až F přímo závisí na největším přípustném množství v jednom obalu. Zásady pro zařazování, jeho postupy, zkušební metody a kritéria a vzor vhodného zkušebního protokolu jsou uvedeny v Příručce zkoušek a kritérií, části II.

2.2.41.1.12 Již zařazené samovolně se rozkládající látky, které jsou připuštěny k přepravě v obalech, jsou uvedeny v pododdílu 2.2.41.4, ty, které jsou již připuštěny k přepravě ve velkých nádobách pro volně ložené látky (IBC), jsou uvedeny v pododdílu 4.1.4.2, pokynu pro balení IBC520 a ty, které jsou již připuštěny k přepravě v cisternách podle kapitoly 4.2, jsou uvedeny v pododdílu 4.2.5.2, pokynu pro přemístitelné cisterny T23. Každá uvedená připuštěná látka je přiřazena k druhové položce tabulky A kapitoly 3.2 (UN čísla 3221 až 3240) a udávají se příslušná vedlejší nebezpečí a poznámky obsahující informace pro přepravu.

Tyto hromadné položky udávají :

- typy samovolně se rozkládajících látek B až F, viz 2.2.41.1.11;
- skupenství (kapalné/ tuhé) ; a
- řízení teploty (je-li vyžadováno), viz 2.2.41.1.17.

Klasifikace samovolně se rozkládajících látek uvedených v pododdíle 2.2.41.4 se provádí na základě technicky čisté látky (pokud není uvedena koncentrace menší než 100 %).

2.2.41.1.13 Klasifikaci samovolně se rozkládajících látek, které nejsou uvedeny v pododdílu 2.2.41.4, pododdílu 4.1.4.2, pokynu pro balení IBC520 nebo v pododdílu 4.2.5.2, pokynu pro přemístitelné cisterny T23, jakož i jejich přiřazení k hromadné položce musí provést příslušný orgán země původu na základě zkušebního protokolu. Osvědčení o schválení musí obsahovat klasifikaci a odpovídající přepravní podmínky. Jestliže země původu není smluvní stranou ADR, musí zařazení a přepravní podmínky uznat příslušný orgán prvního státu smluvní strany ADR, který přijde do styku se zásilkou.

2.2.41.1.14 Aktivační přísady, jako zinkové sloučeniny, se mohou přidat k některým samovolně se rozkládajícím látkám ke změně jejich reakční schopnosti. Podle druhu a koncentrace aktivační přísady může poklesnout tepelná stálost, což může mít za následek změnu výbušných vlastností. Pokud dojde ke změně jedné z těchto vlastností, je třeba nový přípravek posoudit podle klasifikačního postupu.

2.2.41.1.15 Vzorky samovolně se rozkládajících látek nebo přípravků samovolně se rozkládajících látek, které nejsou uvedeny v pododdíle 2.2.41.4, pro které není k dispozici úplná sada výsledků zkoušek a které je nutno přepravit k provedení dalších zkoušek a hodnocení, je třeba zařadit pod odpovídající položku samovolně se rozkládajících látek typu C, jestliže

- podle dostupných údajů není vzorek nebezpečnější než samovolně se rozkládající látka typu B;
- vzorek je zabalen podle způsobu balení OP2 a množství na dopravní jednotku nepřesahuje 10 kg;
- dostupné údaje ukazují, že řízená teplota, pokud je, je dostatečně nízká, aby se zabránilo nebezpečnému rozkladu a zároveň dostatečně vysoká, aby se předešlo nebezpečnému oddělování (separaci) fází.

Znecitlivění

2.2.41.1.16 Pro zajištění bezpečné přepravy samovolně se rozkládajících látek, jsou tyto v mnoha případech znecitlivěny ředidlem. Jestliže je pevně stanoven procentní podíl látky, vztahuje se k podílu hmotnosti, zaokrouhlenému na nejbližší celé číslo. Jestliže je použito ředidlo, musí být samovolně se rozkládající látka spolu s ředidlem vyzkoušena, a to v koncentraci a formě užívaných k přepravě. Ředidla, která mohou dovolit samovolně se rozkládající látce koncentrovat se na nebezpečný stupeň při úniku z obalu, se nesmějí používat. Každé použité ředidlo se musí snášet se samovolně se rozkládající látkou. Z toho hlediska jsou tuhá nebo kapalná ředidla snášitelná, jestliže nemají žádné nepříznivé účinky na tepelnou stálost a druh nebezpečnosti samovolně se rozkládající látky. Kapalná ředidla v přípravcích vyžadujících řízení teploty (viz 2.2.41.1.14) musí mít bod varu nejméně 60 °C a bod vzplanutí nejméně 5 °C. Bod varu kapaliny musí být o nejméně 50 °C vyšší než řízená teplota samovolně se rozkládající látky.

Ustanovení o řízení teploty

2.2.41.1.17 Určité samovolně se rozkládající látky smějí být přepravovány pouze za podmínek řízené teploty. Řízenou teplotou se rozumí nejvyšší teplota, při které mohou být samovolně se rozkládající látky bezpečně přepravovány. Předpokládá se, že teplota bezprostředního okolí kusu přesáhne během

přepravy hodnotu 55 °C pouze na relativně krátkou dobu za 24-hodinový časový interval. V případě výpadku systému řízení teploty, může být nutné provést nouzová opatření. Kritická teplota je teplota, při níž musí být provedena nouzová opatření. Řízená a kritická teplota jsou odvozeny od teploty samourchlujícího se rozkladu SADT (viz tabulku 1). SADT musí být stanovena za účelem rozhodnutí, zda látka musí být přepravována při řízené teplotě. Předpisy pro stanovení SADT jsou obsaženy v Příručce zkoušek a kritérií, části II, kapitole 20 a oddílu 28.4.

Tabulka 1: Odvození řízených a kritických teplot

Druh nádoby	SADT ^a	Řízená teplota	Kritická teplota
Samostatné obaly a IBC	20 °C a méně	o 20 °C nižší než SADT	o 10 °C nižší než SADT
	20 °C až 35 °C	o 15 °C nižší než SADT	o 10 °C nižší než SADT
	více než 35 °C	o 10 °C nižší než SADT	o 5 °C nižší než SADT
Cisterny	nejvýše 50 °C	o 10 °C nižší než SADT	o 5 °C nižší než SADT

^a SADT látky zabalené pro přepravu

Při řízené teplotě se musí přepravovat samovolně se rozkládající látky, u kterých SADT nepřekračuje 55 °C. Řízené a kritické teploty jsou uvedeny v pododdílu 2.2.41.4. Skutečná teplota při přepravě smí být nižší než řízená teplota, avšak musí být zvolena tak, aby nedošlo k nebezpečnému oddělování (separaci) fází.

Znecitlivěné tuhé výbušné látky

- 2.2.41.1.18** Znecitlivěné tuhé výbušné látky jsou látky, které jsou navlhčeny vodou nebo alkoholy, nebo jsou zředěny jinými látkami tak, aby se potlačily jejich výbušné vlastnosti. Takové položky jsou v tabulce A kapitoly 3.2 označeny následujícími UN čísly: 1310, 1320, 1321, 1322, 1336, 1337, 1344, 1347, 1348, 1349, 1354, 1355, 1356, 1357, 1517, 1571, 2555, 2556, 2557, 2852, 2907, 3317, 3319, 3344, 3364, 3365, 3366, 3367, 3368, 3369, 3370, 3376, 3380 a 3474.

Látky příbuzné samovolně se rozkládajícím látkám

- 2.2.41.1.19** Látky, které

(a) jsou podle výsledků sérií zkoušek 1 a 2 předběžně přiřazeny ke třídě 1, avšak podle výsledků série zkoušek 6 jsou vyřaty z platnosti třídy 1,

(b) nejsou samovolně se rozkládajícími látkami třídy 4.1, a

(c) nejsou látkami třídy 5.1 nebo 5.2,

jsou rovněž přiřazeny ke třídě 4.1, a to k položkám UN čísel 2956, 3241, 3242 a 3251.

2.2.41.2 Látky nepřipustěné k přepravě

- 2.2.41.2.1** Chemicky nestálé látky třídy 4.1 jsou připuštěny k přepravě pouze tehdy, pokud byla provedena potřebná opatření zabraňující jejich nebezpečnému rozkladu nebo polymeraci během přepravy. Za tímto účelem se musí dbát zvláště na to, aby nádoby a cisterny neobsahovaly žádné látky, které by tyto reakce mohly podporovat.

- 2.2.41.2.2** Hořlavé tuhé látky, podporující hoření, které jsou přiřazeny k UN číslu 3097, nejsou k přepravě připuštěny, ledaže by odpovídaly předpisům pro třídu 1 (viz také pododdíl 2.1.3.7).

- 2.2.41.2.3** Následující látky nejsou k přepravě připuštěny :

- samovolně se rozkládající látky typu A [viz Příručku zkoušek a kritérií, část II, odstavec 20.4.2 (a)];
- sulfidy fosforu, které nejsou prosty žlutého nebo bílého fosforu;
 - jiné, než v tabulce A kapitoly 3.2 uvedené znecitlivěné tuhé výbušné látky;
 - anorganické hořlavé látky v roztaveném stavu, s výjimkou UN 2448 SÍRA, ROZTAVENÁ;

2.2.41.3 Seznam hromadných položek

Vedlejší nebezpečí	Klasifikační Kód	UN číslo	Pojmenování látky nebo předmětů		
bez vedlejšího nebezpečí	Organické F1	3175	LÁTKY TUHÉ, OBSAHUJÍCÍ HOŘLAVÉ KAPALNÉ LÁTKY, J.N.		
		1353	VLÁKNA IMPREGNOVANÁ SLABĚ NITKOVANOU CELULÓZOU, J.N.		
		1353	TKANINY IMPREGNOVANÉ SLABĚ NITKOVANOU CELULÓZOU, J.N.		
		1325	LÁTKA HOŘLAVÁ, TUHÁ, ORGANICKÁ, J.N.		
hořlavé tuhé látky F	Organické Rztavené F2	3176	LÁTKA HOŘLAVÁ, TUHÁ, ORGANICKÁ, ROZTAVENÁ, J.N.		
		3089	PRAŠEK KOVOVÝ, HOŘLAVÝ, J.N. ^{a b}		
	Anorganické F3	3181	SOLI ORGANICKÝCH SLOUČENIN, KOVOVÉ, HOŘLAVÉ, J.N.		
		3182 3178	HYDRIDY KOVŮ, HOŘLAVÉ, J.N. ^c LÁTKA HOŘLAVÁ, TUHÁ, ANORGANICKÁ, J.N.		
podporující hoření	FO	3097	LÁTKA HOŘLAVÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N. (k přepravě nepřipustěny, viz 2.2.41.2.2)		
		Toxické FT	Organické FT1	2926	LÁTKA HOŘLAVÁ, TUHÁ, TOXICKÁ, ORGANICKÁ, J.N.
			Anorganické FT2	3179	LÁTKA HOŘLAVÁ, TUHÁ, TOXICKÁ, ANORGANICKÁ, J.N.
		žiravé FC	Organické FC1	2925	LÁTKA HOŘLAVÁ, TUHÁ, ŽIRAVÁ, ORGANICKÁ, J.N.
			Anorganické FC2	3180	LÁTKA HOŘLAVÁ, TUHÁ, ŽIRAVÁ, ANORGANICKÁ, J.N.
z necitlivě tuhé výbušné látky	bez vedlejšího nebezpečí D	3319	NITROGLYCERIN SMĚS, ZNECITLIVĚNÁ, TUHÁ, J.N., s více než 2hm.-%, ale nejvýše 10hm.% nitroglycerinu		
		3344	PENTAERYTHRITETRANITRÁT (PENTAERYTHRITOLTETRANITRÁT; PENTAERYTHRIT-TETRANITRÁT; PENTAERYTHRITOL-TETRANITRÁT; PETN) SMĚS, ZNECITLIVĚNÁ, TUHÁ, J.N., s více než 10 % hm., ale nejvýše 20 % hm. PETN		
		3380	LÁTKA ZNECITLIVĚNÁ, VÝBUŠNÁ, TUHÁ, J.N.		
	Toxické DT	jen v kapitole 3.2 tabulce A uvedené látky jsou připuštěny k přepravě jako látky třídy 4.1			
		3221	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ TYP A, KAPALNÁ LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ TYP A TUHÁ LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP B	(k přepravě nepřipustěné viz 2.2.41.2.3)	
		3222	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP B		
		3223	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP C		
		3224	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP C		

Samovolně se rozkládající látky SR	nevyžadující řízení teploty SR1	3225	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP D	
		3226 3227	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ TUHÁ, TYP D LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ KAPALNÁ, TYP E	
		3228 3229	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ TUHÁ, TYP E LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ KAPALNÁ, TYP F	
		3230	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ TUHÁ, TYP F	
			LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TYP G, KAPALNÁ S ŘÍZENOU TEPLOTOU	}
			LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TYP G, TUHÁ S ŘÍZENOU TEPLOTOU	
				(nepodléhá platným předpisům pro třídu 4.1 viz. 2.2.41.1.11)
	vyžadující řízení teploty SR2	3231	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP B, S ŘÍZENÍM TEPLoty	
		3232	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP B, S ŘÍZENÍM TEPLoty	
		3233	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ KAPALNÁ, TYP C, S ŘÍZENÍM TEPLoty	
		3234	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ TUHÁ, TYP C, S ŘÍZENÍM TEPLoty	
		3235	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ KAPALNÁ, TYP D, S ŘÍZENÍM TEPLoty	
		3236	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP D, S ŘÍZENÍM TEPLoty	
		3237	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP E, S ŘÍZENÍM TEPLoty	
		3238	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP E, S ŘÍZENÍM TEPLoty	
		3239	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP F, S ŘÍZENÍM TEPLoty	
		3240	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP F, S ŘÍZENÍM TEPLoty	

^a Kovy a slitiny kovů v práškové nebo jiné hořlavé formě, které jsou samozápalné, jsou látkami třídy 4.2

^b Kovy a slitiny kovů v práškové nebo jiné hořlavé formě, které ve styku s vodou vyvíjejí hořlavé plyny, jsou látkami třídy 4.3

^c Hydridy kovů, které ve styku s vodou vyvíjejí hořlavé plyny, jsou látkami třídy 4.3. Tetrahydroboritan hliníkový nebo tetrahydroboritan hliníkový v přístrojích je látkou třídy 4.2, UN čísla 2870.

2.2.41.4 Seznam již zařazených samovolně se rozkládajících látek v obalech

Kódy „OP1“ až „OP8“ uvedené ve sloupci „Způsob balení“ se vztahují ke způsobům balení v pododdílu 4.1.4.1, pokynu pro balení P520 (viz též pododdíl 4.1.7.1). Samovolně se rozkládající látky, které se mají přepravovat, musí odpovídat klasifikaci a řízeným a kritickým teplotám (odvozeným od SADT), jak jsou uvedeny. K látkám připuštěným v IBC viz pododdíl 4.1.4.2, pokyn pro balení IBC520 a k látkám připuštěným v cisternách podle kapitoly 4.2, viz pododdíl 4.2.5.2, pokyn pro přemístitelné cisterny T23.

POZNÁMKA: Zatřídění uvedené v této tabulce se zakládá na technicky čisté látce (s výjimkou případů, kde je udána koncentrace nižší než 100 %). Pro jiné koncentrace může být látka zařazena rozdílně podle postupů uvedených v části II Příručky zkoušek a kritérií a v 2.2.41.1.17.

SAMOVOLNĚ SE ROZKLÁDAJÍCÍ LÁTKA	Koncentrace (%)	Způsob balení	Řízená teplota (°C)	Kritická teplota (°C)	UN číslo	Poznámky
ACETON-PYROGALLOL KOPOLYMER 2-DIAZO-1-NAFTOL-5-SULFONÁT	100	OP8			3228	
AZOFORMAMID (1,1AZOBIFORMAMID), PŘÍPRAVEK, TYP B, VYŽADUJÍCÍ ŘÍZENÍ TEPLoty	< 100	OP5			3232	(1) (2)
AZOFORMAMID (1,1AZOBIFORMAMID), PŘÍPRAVEK TYP C	< 100	OP6			3224	(3)
AZOFORMAMID (1,1AZOBIFORMAMID), PŘÍPRAVEK, TYP C, VYŽADUJÍCÍ ŘÍZENÍ TEPLoty	< 100	OP6			3234	(4)
AZOFORMAMID (1,1AZOBIFORMAMID), PŘÍPRAVEK TYP D	< 100	OP7			3226	(5)
AZOFORMAMID (1,1AZOBIFORMAMID), PŘÍPRAVEK, TYP D, VYŽADUJÍCÍ ŘÍZENÍ TEPLoty	< 100	OP7			3236	(6)
2,2'-AZODI(2,4-DIMETHYL-4-METOXYVALERONITRIL)	100	OP7	-5	+5	3236	
2,2'-AZODI(2,4-DIMETHYLVALERONITRIL)	100	OP7	+10	+15	3236	
2,2'-AZODI-(ETYL-2-METHYLPROPIONÁT)	100	OP7	+20	+25	3235	
1,1'-AZODI-(HEXAHYDROBENZONITRIL)	100	OP7			3226	
2,2'-AZODI-(ISOBUTYRONITRIL)	100	OP6	+40	+45	3234	
2,2'-AZODI-(ISOBUTYRONITRIL), jako pasta na vodní bázi	≤ 50	OP6			3224	
2,2'-AZODI(2-METHYLBUTYRONITRIL)	100	OP7	+35	+40	3236	
BENZEN-1.3-DISULFONYLHYDRAZID, jako pasta	52	OP7			3226	
BENZENSULFONYLHYDRAZID	100	OP7			3226	
4-(BENZYL(ETHYL)AMINO)-3-TETRACHLOROZINEČNATAN	100	OP7			3226	
4-(BENZYL(METHYL)AMINO)-3-ETOXYBENZENDIAZONIUM-ZINKOCHLORID	100	OP7	+40	+45	3236	

SAMOVLNĚ SE ROZKLÁDAJÍCÍ LÁTKA	Koncen- trace (%)	Způsob balení	Řízená teplota (°C)	Kritická teplota (°C)	UN- číslo	Poz- námky
3-CHLOR- 4(DIETHYLAMINO)BENZENDIAZONIUM TETRACHLOROZINEČNATAN	100	OP7			3226	
2-DIAZO-1-NAFTOL-4-SULFONYLCHLORID	100	OP5			3222	(2)
2-DIAZO-1-NAFTOL-5-SULFONYLCHLORID	100	OP5			3222	(2)
2-DIAZO-1-NAFTOL-ESTER KYSELINY SULFONOVÉ, SMĚS, TYP D	< 100	OP7			3226	(9)
2,5-DIBUTOXY-4-(4-MORFOLINYL)- BENZENDIAZONIUM, TETRACHLORZINKÁT (2:1)	100	OP8			3228	
2,5-DIETOXY-4-MORFOLINO BENZEN- DIAZONIUM-ZINKOCHLORID	67-100	OP7	+35	+40	3236	
2,5-DIETOXY-4-MORFOLINO- BENZENDIAZONIUM-ZINKOCHLORID	66	OP7	+40	+45	3236	
2,5-DIETOXY-4-MORFOLINO BENZEN- DIAZONIUM-TETRAFLUOROBORÁT	100	OP7	+30	+35	3236	
2,5-DIETOXY-4-(4-MORFOLINYL)- BENZENDIAZONIUM-SULFÁT	100	OP7			3226	
2,5-DIETOXY-4-(FENYLSULFONYL)-BENZEN- DIAZONIUM-ZINKOCHLORID	67	OP7	+40	+45	3236	
DIETHYLENGLYKOL-BIS- (ALYLKARBONÁT)+DIISOPROPYLPEROXYDI KARBONÁT	≥88 ≤12	OP8	-10	0	3237	
2,5-DIMETOXY-4-(4- METHYLFENYLSULFONYL)-BENZEN- DIAZONIUM-ZINKOCHLORID	79	OP7	+40	+45	3236	
4-(DIMETHYLAMINO)-BENZENDIAZONIUM TRICHLORZINKÁT (-1)	100	OP8			3228	
4-DIMETHYLAMINO-6-(2-DIMETYLAMINO- ETOXY)TOLUEN-2-DIAZONIUM- ZINKOCHLORID	100	OP7	+40	+45	3236	
N,N'-DINITROSO-N,N'-DIMETHYL- TETRAFTALAMID, jako pasta	72	OP6			3224	
N,N'-DINITROSOPENTAMETHYLEN- TETRAMIN	82	OP6			3224	(7)
DIFENYLOXID-4,4'-DISULFONYLHYDRAZID	100	OP7			3226	
4-(DIPROPYLAMINO)BENZENDIAZONIUM- ZINKOCHLORID	100	OP7			3226	
2-(N,N'-ETOXYKARBONYLFENYLAMINO) -3- METOXY-4-(N-METHYL-A- CYKLOHEXYLAMINO)-BENZENDIAZONIUM- ZINKOCHLORID	63-92	OP7	+40	+45	3236	

SAMOVLNĚ SE ROZKLÁDAJÍCÍ LÁTKA	Koncen- trace (%)	Způsob balení	Řízená teplota (°C)	Kritická teplota (°C)	UN- číslo	Poz- námky
2-(N,N ETOXYKARBONYLFENYLAMINO) -3-METOXY-4-(N-METHYL-A-CYKLO-HEXYLAMINO)-BENZENDIAZONIUM-ZINKOCHLORID	62	OP7	+35	+40	3236	
N-FORMYL-2-(NITROMETHYLEN)-1,3-PERHYDROTHIAZIN	100	OP7	+45	+50	3236	
2-(2HYDROXYETOXY)-1-(PYROLIDIN-1-YL)-BENZEN-4-DIAZONIUM-ZINKOCHLORID	100	OP7	+45	+50	3236	
3-(2-HYDROXYETOXY)-4-(PYROLIDIN-1-YL)-BENZENDIAZONIUM-ZINKOCHLORID	100	OP7	+40	+45	3236	
2-(N,N-METHYLAMINOETHYL-KARBONYL)-4-(3,4-DIMETHYLFENYL SULFONYL) BENZENDIAZONIUM HYDROGEN SULFÁT	96	OP7	+45	+50	3236	
4-METHYLBENZENSULFONYLHYDRAZID	100	OP7			3226	
3-METYL-4-(PYROLIDIN-1-YL)-BENZENDIAZONIUM-TETRAFLUOROBORÁT	95	OP6	+45	+50	3234	
4-NITROFENOL	100	OP7	+35	+40	3236	
LÁTKA SAMOVLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, VZOREK		OP2			3223	(8)
LÁTKA SAMOVLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, VZOREK VYŽADUJÍCÍ ŘÍZENÍ TEPLoty		OP2			3233	(8)
LÁTKA SAMOVLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, VZOREK		OP2			3224	(8)
LÁTKA SAMOVLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, VZOREK VYŽADUJÍCÍ ŘÍZENÍ TEPLoty		OP2			3234	(8)
2-DIAZO-1-NAFTOL-4-SULFONÁT SODNÝ	100	OP7			3226	
2-DIAZO-1-NAFTOL-5-SULFONÁT SODNÝ	100	OP7			3226	
TETRAMINOPALADIUM-(II)-NITRÁT	100	OP6	+30	+35	3234	

Poznámky :

- (1) Azoformamid-přípravky, které splňují kritéria Příručky zkoušek a kritérií, odstavce 20.4.2 (b). Řízená a kritická teplota musí být stanoveny postupem uvedeným v 2.2.41.1.17.
- (2) Vyžaduje se bezpečnostní značka označující vedlejší nebezpečí "VÝBUŠNÝ" podle vzoru č.1 (viz 5.2.2.2.2).
- (3) Azoformamid-přípravky, které splňují kritéria Příručky zkoušek a kritérií, odstavce 20.4.2 (c).
- (4) Azoformamid-přípravky, které splňují kritéria Příručky zkoušek a kritérií, odstavce 20.4.2 (c). Řízená a kritická teplota musí být stanoveny postupem uvedeným v 2.2.41.1.17.
- (5) Azoformamid-přípravky, které splňují kritéria Příručky zkoušek a kritérií, odstavce 20.4.2 (d).
- (6) Azoformamid-přípravky, které splňují kritéria Příručky zkoušek a kritérií, odstavce 20.4.2 (d). Řízená a kritická teplota musí být stanoveny postupem uvedeným v 2.2.41.1.17.
- (7) Se snášenlivým ředidlem s bodem varu nejméně 150 °C.
- (8) Viz 2.2.41.1.15.
- (9) Tato položka platí pro směsi esterů kyseliny 2-diazo-1-naftol-4-sulfonové a kyseliny 2-diazo-1-naftol-5-sulfonové, které splňují kritéria Příručky zkoušek a kritérií, odstavce 20.4.2 (d).

2.2.42 Třída 4.2 Samozápalné látky**2.2.42.1 Kritéria**

2.2.42.1.1 Název třídy 4.2 zahrnuje:

- *pyroforní látky*, což jsou látky včetně směsí a roztoků (kapalné nebo tuhé), které při styku se vzduchem již v malých množstvích vzplanou do 5 minut. Toto jsou látky třídy 4.2, které jsou nejvíce náchylné k samovznícení; a
- *látky a předměty schopné samoohřevu*, což jsou látky a předměty včetně směsí a roztoků, které jsou ve styku se vzduchem bez přívodu energie schopné se zahřívat. Tyto látky mohou vzplanout jen ve velkých množstvích (kilogramech) a po dlouhé době (hodiny nebo dny).

2.2.42.1.2 Látky a předměty třídy 4.2 se dělí následovně:

S	Samozápalné látky bez vedlejšího nebezpečí:
	S1 organické, kapalné
	S2 organické, tuhé
	S3 anorganické, kapalné
	S4 anorganické, tuhé
	S5 organokovové
SW	Samozápalné látky, které ve styku s vodou vyvíjejí hořlavé plyny
SO	Samozápalné látky, podporující hoření
ST	Samozápalné látky, toxické
	ST1 organické, toxické, kapalné
	ST2 organické, toxické, tuhé
	ST3 anorganické, toxické, kapalné
	ST4 anorganické, toxické, tuhé
SC	Samozápalné látky, žíravé
	SC1 organické, žíravé, kapalné
	SC2 organické, žíravé, tuhé
	SC3 anorganické, žíravé, kapalné
	SC4 anorganické, žíravé, tuhé

Vlastnosti

2.2.42.1.3 Samozahřívání látky je proces, při němž postupná reakce této látky s kyslíkem (ve vzduchu) vytváří teplo. Jestliže je množství vytvořeného tepla větší než množství tepelných ztrát, bude teplota látky narůstat, což může vést po latentní periodě k samovznícení a hoření.

Klasifikace

2.2.42.1.4 Látky a předměty zařazené do třídy 4.2 jsou uvedeny v tabulce A kapitoly 3.2. Přiřazení látek a předmětů, které nejsou v tabulce A kapitoly 3.2 jmenovitě uvedeny, pod příslušnou specifickou J.N. položku pododdílu 2.2.42.3, podle ustanovení kapitoly 2.1, může být provedeno na základě zkušeností nebo na základě výsledků zkušebních postupů podle Příručky zkoušek a kritérií, části III, oddílu 33.3. Přiřazení k všeobecným J.N. položkám třídy 4.2 se musí provést na základě výsledků zkušebních postupů podle Příručky zkoušek a kritérií, části III, oddílu 33.3; přitom se musí přihlídnout také ke zkušenostem, jestliže vedou k přísnějšímu zařazení.

2.2.42.1.5 Jestliže se jmenovitě neuvedené látky nebo předměty na základě zkušebních postupů podle Příručky zkoušek a kritérií, části III, oddílu 33.3 přiřazují k jedné z položek uvedených v pododdíle 2.2.42.3, platí následující kritéria:

- (a) samozápalné (pyroforní) tuhé látky se přiřadí ke třídě 4.2, jestliže vzplanou při pádu s výšky 1 m nebo do 5 minut poté, nebo
- (b) samozápalné (pyroforní) kapalně látky se přiřadí ke třídě 4.2, jestliže
- nanesené na inertní nosný materiál vzplanou do 5 minut, nebo
 - v případě negativního výsledku zkoušky podle (i), po nanesení na vrubkovaný suchý filtrační papír (Whatman-filtr č. 3), tento do 5 minut zapálí nebo zuhelnatí;
- (c) látky, u nichž dojde u krychlového vzorku o straně 10 cm při zkušební teplotě 140 °C do 24 hodin k samovznícení nebo stoupnutí teploty nad 200 °C, se přiřadí ke třídě 4.2. Toto kritérium se zakládá na samozápalné teplotě dřevěného uhlí, která činí 50 °C pro krychlový vzorek 27 m³. Látky s vyšší samozápalnou teplotou než 50 °C pro objem 27 m³ se ke třídě 4.2 nepřijadí.

POZNÁMKA 1: Látky, které budou přepravovány v kusech o objemu nepřesahujícím 3 m³, nespádají do třídy 4.2, pokud při zkoušce provedené na krychlovém vzorku o straně 10 cm při teplotě 120 °C nedojde do 24 hodin k samovznícení nebo ke stoupnutí teploty nad 180 °C.

POZNÁMKA 2: Látky, které budou přepravovány v kusech o objemu nepřesahujícím 450 l, nespádají do třídy 4.2, pokud při zkoušce provedené na krychlovém vzorku o straně 10 cm při teplotě 100 °C nedojde do 24 hodin k samovznícení nebo ke stoupnutí teploty nad 160 °C.

POZNÁMKA 3: Jelikož organokovové látky mohou být v závislosti na svých vlastnostech zařazeny do třídy 4.2 nebo 4.3 s dodatečnými vedlejšími nebezpečími, je pro tyto látky uveden v oddílu 2.3.5 zvláštní klasifikační postupový diagram.

- 2.2.42.1.6** Spadají-li látky třídy 4.2 vlivem příměsí do jiných kategorií nebezpečnosti než těch, do kterých patří látky jmenovitě uvedené látky v tabulce A kapitoly 3.2, přiřadí se tyto směsi k položkám, ke kterým na základě svého skutečného nebezpečí patří.

POZNÁMKA: K zařazování roztoků a směsí (jako jsou přípravky a odpady) viz oddíl 2.1.3.

- 2.2.42.1.7** Na základě zkušebních postupů podle Příručky zkoušek a kritérií, části III, oddílu 33.3 a kritérií uvedených v 2.2.42.1.5 se může také zjistit, zda je jmenovitě uvedená látka takové povahy, že nepodléhá předpisům pro tuto třídu.

Přiřazení k obalovým skupinám

- 2.2.42.1.8** Látky a předměty zařazené pod různé položky tabulky A kapitoly 3.2 musí být přiřazeny k obalovým skupinám I, II nebo III na základě zkušebních postupů Příručky zkoušek a kritérií, části III, oddílu 33.3 podle těchto kritérií:

- (a) samozápalné (pyroforní) látky se přiřadí k obalové skupině I;
- (b) látky a předměty schopné samoohřevu, u nichž dojde u krychlového vzorku o straně 2,5 cm při zkušební teplotě 140 °C do 24 hodin k samovznícení nebo ke stoupnutí teploty nad 200 °C, se přiřadí k obalové skupině II;
látky s teplotou samovznícení vyšší než 50 °C pro objem 450 l se nemusí přiřadit k obalové skupině II;
- (c) látky méně schopné samoohřevu, u nichž u krychlového vzorku o straně 2,5 cm nedojde za podmínek uvedených pod bodem b) k jmenovaným jevům, ale u krychlového vzorku o straně 10 cm při zkušební teplotě 140 °C dojde do 24 hodin k samovznícení nebo ke stoupnutí teploty nad 200 °C, se přiřadí k obalové skupině III.

2.2.42.2 *Látky nepřipustěné k přepravě*

Následující látky nejsou připuštěny k přepravě:

- UN 3255 terc- BUTYLHYPOCHLORID; a
- tuhé látky schopné samoohřevu, podporující hoření, přiřazené k UN číslu 3127, ledaže by odpovídaly ustanovením pro třídu 1 (viz pododíl 2.1.3.7).

2.2.42.3 Seznam hromadných položek

Vedlejší nebezpečí	Klasifikační Kód	UN číslo	Pojmenování látek nebo předmětů	
Samozápalné látky				
bez vedlejšího nebezpečí	organická	kapalná S1	2845 LÁTKA PYROFORNÍ, KAPALNÁ, ORGANICKÁ, J.N. 3183 LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ORGANICKÁ, J.N.	
		tuhá S2	1373 VLÁKNA nebo TKANINY, ŽIVOČIŠNÉHO, ROSTLINÉHO NEBO SYNTETICKÉHO PŮVODU, J.N. impregnované olejem 2006 PLASTY NA BÁZI NITROCELULÓZY, SCHOPNÉ SAMOOHŘEVU, J.N. 3313 PIGMENTY SCHOPNÉ SAMOOHŘEVU, ORGANICKÉ 2846 LÁTKA PYROFORNÍ, TUHÁ, ORGANICKÁ, J.N. 3088 LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ORGANICKÁ, J.N.	
	anorganická	kapalná S3	3194 LÁTKA PYROFORNÍ, KAPALNÁ, ANORGANICKÁ, J.N. 3186 LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ANORGANICKÁ, J.N.	
		tuhá S4	1383 KOV PYROFORNÍ, J.N. nebo. 1383 SLITINA PYROFORNÍ, J.N. 1378 KATALYZÁTOR KOVOVÝ, VLNĚNÝ, s viditelným přebytkem kapaliny 2881 KATALYZÁTOR KOVOVÝ, SUCHÝ 3189 ^a PRÁŠEK KOVOVÝ, SCHOPNÝ SAMOOHŘEVU, J.N. 3205 ALKOHOLÁTY KOVU ALKALICKÝCH ZEMIN, J.N. 3200 LÁTKA PYROFORNÍ, TUHÁ, ANORGANICKÁ, J.N. 3190 LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ANORGANICKÁ, J.N.	
		organokovová S5	3392 SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, PYROFORNÍ, J.N. 3391 SLOUČENINA ORGANOKOVOVÁ, TUHÁ, PYROFORNÍ, J.N. 3400 SLOUČENINA ORGANOKOVOVÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	
		reagující s vodou		
		SW	3394 SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, PYROFORNÍ, REAGUJÍCÍ S VODOU, J.N. 3393 SLOUČENINA ORGANOKOVOVÁ, TUHÁ, PYROFORNÍ, REAGUJÍCÍ S VODOU, J.N.	
		podporující hoření		
		SO	3127 LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N. (nepřipuštěna k přepravě, viz pododíl 2.2.42.2)	

toxická	Organická	Kapalná	ST1	3184	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, TOXICKÁ, ORGANICKÁ, J.N.
		Tuhá	ST2	3128	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, TOXICKÁ, ORGANICKÁ, J.N.
	anorganická	Kapalná	ST3	3187	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, TOXICKÁ, ANORGANICKÁ, J.N.
		Tuhá	ST4	3191	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, TOXICKÁ, ANORGANICKÁ, J.N.
žiravá	Organická	Kapalná	SC1	3185	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.
SC		Tuhá	SC2	3126	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.
	anorganická	Kapalná	SC3	3188	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.
		Tuhá	SC4	3206	ALKOHOLÁTY ALKALICKÝCH KOVŮ, SCHOPNÉ SAMOOHŘEVU, ŽÍRAVÉ, J.N.
				3192	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.

POZN:^a

Kovový prach a prášek, které nejsou toxické a nejsou v samozápalné formě, avšak ve styku s vodou vyvíjejí hořlavé plyny, jsou látkami třídy 4.3.

2.2.43 Třída 4.3 Látky, které ve styku s vodou vyvíjejí hořlavé plyny**2.2.43.1 Kritéria**

2.2.43.1.1 Název třídy 4.3 zahrnuje látky, které při reakci s vodou vyvíjejí hořlavé plyny, náchylné k vytváření výbušných směsí se vzduchem, jakož i předměty, které takové látky obsahují.

2.2.43.1.2 Látky a předměty třídy 4.3 se dělí následovně:

W Látky, které ve styku s vodou vyvíjejí hořlavé plyny, bez vedlejšího nebezpečí, jakož i předměty, které takové látky obsahují:

W1 kapalně
W2 tuhé
W3 předměty

WF1 Látky, které ve styku s vodou vyvíjejí hořlavé plyny, kapalně, hořlavé

WF2 Látky, které ve styku s vodou vyvíjejí hořlavé plyny, tuhé, hořlavé

WS Látky, které ve styku s vodou vyvíjejí hořlavé plyny, tuhé, schopné samoohřevu

WO Látky, které ve styku s vodou vyvíjejí hořlavé plyny, tuhé, podporující hoření

WT Látky, které ve styku s vodou vyvíjejí hořlavé plyny, toxické:

WT1 kapalně
WT2 tuhé

WC Látky, které ve styku s vodou vyvíjejí hořlavé plyny, žíravé:

WC1 kapalně
WC2 tuhé

WFC Látky, které ve styku s vodou vyvíjejí hořlavé plyny, hořlavé, žíravé.

Vlastnosti

2.2.43.1.3 Určité látky mohou ve styku s vodou vyvíjet hořlavé plyny, které mohou se vzduchem vytvářet výbušné směsi. Takové směsi se snadno zapálí všemi obvyklými zapalovacími zdroji, např. otevřeným ohněm, jiskrami pocházejícími z nářadí, nechráněnou žárovkou atd. Přitom vytvořené tlakové vlny a plameny mohou ohrozit lidi a životní prostředí. Ke zjištění, zda látka reaguje s vodou takovým způsobem, že se vytváří nebezpečné množství plynů, které mohou být hořlavé, se použije zkušební postup popsáný v 2.2.43.1.4. Tento zkušební postup nesmí být použit u pyroforních látek.

Klasifikace

2.2.43.1.4 Látky a předměty zařazené do třídy 4.3 jsou uvedeny v tabulce A kapitoly 3.2. Přřazení látek a předmětů, které nejsou tabulce A kapitoly 3.2 jmenovitě uvedeny, k příslušné položce pododdílu 2.2.43.3, podle ustanovení kapitoly 2.1, se provede na základě výsledků zkušebního postupu podle Příručky zkoušek a kritérií, části III, oddílu 33.4; přitom musí být zohledněny i zkušenosti, pokud vedou k přísnějšímu zařazení.

2.2.43.1.5 Jestliže se jmenovitě neuvedené látky přiřazují na základě zkušební postupu podle Příručky zkoušek a kritérií, části III, oddílu 33.4 k jedné z položek uvedených v pododdíle 2.2.43.3, platí následující kritéria:

Látka se přiřadí ke třídě 4.3, pokud:

(a) se během některé fáze zkoušky uvolněný plyn sám vznítí, nebo

(b) je rychlost uvolňování hořlavého plynu větší než 1 litr na kilogram zkoušené látky za hodinu.

POZNÁMKA: Jelikož organokovové látky mohou být v závislosti na svých vlastnostech zařazeny do třídy 4.2 nebo 4.3 s dodatečnými vedlejšími nebezpečími, je pro tyto látky uveden v oddílu 2.3.5 zvláštní klasifikační postupový diagram.

- 2.2.43.1.6** Pokud látky třídy 4.3 spadají vlivem příměsí do jiných kategorií nebezpečnosti, než těch, do kterých patří látky jmenovitě uvedené v tabulce A kapitoly 3.2, je třeba tyto směsi přiřadit k položkám, ke kterým patří na základě svého skutečného nebezpečí.

POZNÁMKA: K zařazení roztoků a směsí (jako jsou přípravky a odpady) viz také oddíl 2.1.3.

- 2.2.43.1.7** Na základě zkušebních postupů podle Příručky zkoušek a kritérií, části III, oddílu 33.4 a kritérií uvedených v 2.2.43.1.5 se může také zjistit, zda je jmenovitě uvedená látka takové povahy, že nepodléhá předpisům pro tuto třídu.

Přiřazení k obalovým skupinám

- 2.2.43.1.8** Látky a předměty zařazené pod různé položky tabulky A kapitoly 3.2 musí být přiřazeny k obalovým skupinám I, II nebo III na základě zkušebních postupů Příručky zkoušek a kritérií, části III, oddílu 33.4 podle těchto kritérií:

- (a) K obalové skupině I se přiřadí každá látka, která při teplotě okolí prudce reaguje s vodou, přičemž vyvinutý plyn se může sám vznítit, nebo jestliže při teplotě okolí snadno reaguje s vodou, přičemž množství vyvinutého hořlavého plynu je větší nebo se rovná 10 litrům na kg látky za 1 minutu.
- (b) K obalové skupině II se přiřadí každá látka, která při teplotě okolí snadno reaguje s vodou, přičemž nejvyšší množství vyvinutého hořlavého plynu je větší nebo se rovná 20 litrům na kg látky za hodinu, a nespĺňuje kritéria pro obalovou skupinu I.
- (c) K obalové skupině III se přiřadí každá látka, která při teplotě okolí pomalu reaguje s vodou, přičemž nejvyšší množství vyvinutého hořlavého plynu je větší nebo se rovná 1 litru na kg látky za hodinu, a nespĺňuje kritéria pro obalovou skupinu I nebo II.

2.2.43.2 *Látky nepřipuštené k přepravě*

Tuhé látky reagující s vodou, podporující hoření, přiřazené k UN číslu 3133 nejsou připušteny k přepravě, ledaže by odpovídaly ustanovením pro třídu 1 (viz také pododdíl 2.1.3.7).

2.2.43.3 Seznam hromadných položek

Vedlejší nebezpečí	Klasifikační Kód	UN číslo	Pojmenování látek nebo předmětů
Látky které ve styku s vodou vyvíjejí hořlavé plyny			
bez vedlejšího nebezpečí	kapalné	W1	1389 AMALGAM ALKALICKÝCH KOVŮ, KAPALNÝ
			1391 DISPERSE ALKALICKÝCH KOVŮ nebo 1391 DISPERSE KOVŮ ALKALICKÝCH ZEMIN 1392 AMALGAM KOVŮ ALKALICKÝCH ZEMIN, KAPALNÝ 1420 SLITINY DRASLÍKU, KOVOVÉ, KAPALNÉ 1421 SLITINA ALKALICKÝCH KOVŮ, KAPALNÁ, J.N. 1422 SLITINY DRASLÍKU A SODÍKU, KAPALNÉ 3398 SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N. 3148 LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, J.N.
W	Tuhé	W2 ^{a)}	1390 AMIDY ALKALICKÝCH KOVŮ 3401 AMALGAM ALKALICKÝCH KOVŮ, TUHÝ 3402 AMALGAM KOVŮ ALKALICKÝCH ZEMIN, TUHÝ 3170 PRODUKTY VEDLEJŠÍ Z VÝROBY HLINÍKU nebo 3170 PRODUKTY VEDLEJŠÍ Z TAVENÍ HLINÍKU 3403 SLITINY DRASLÍKU, KOVOVÉ, TUHÉ 3404 SLITINY DRASLÍKU A SODÍKU, TUHÉ 1393 SLITINA KOVŮ ALKALICKÝCH ZEMIN, J.N. 1409 HYDRIDY KOVŮ REAGUJÍCÍ S VODOU, J.N. 3208 LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, J.N. 3395 SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N. 2813 LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, J.N.
			předměty
kapalné, hořlavé		WF1	3399 SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.
			3482 DISPERSE ALKALICKÝCH KOVŮ, HOŘLAVÁ nebo 3482 DISPERSE KOVŮ ALKALICKÝCH ZEMIN, HOŘLAVÁ
tuhé, hořlavé		WF2	3396 SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.
			3132 LÁTKA HOŘLAVÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.

tuhé, schopné samoohřevu	WS^{b)}	3397	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.
		3209	LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.
		3135	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.
podporující hoření	WO	3133	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N. (nepřipustěna k přepravě viz pododdíl 2.2.43.2)
toxické WT	kapalné WT1	3130	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, TOXICKÁ, J.N.
	Tuhé WT2	3134	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, TOXICKÁ, J.N.
žiravé WC	kapalné WC1	3129	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, ŽIRAVÁ, J.N.
	Tuhé WC2	3131	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, ŽIRAVÁ, J.N.
hořlavé, žiravé	WFC^{c)}	2988	CHLORSILANY, REAGUJÍCÍ S VODOU, HOŘLAVÉ, ŽIRAVÉ, J.N. (není k dispozici žádná další hromadná položka s tímto klasifikačním kódem; pokud je potřebné přiřazení k hromadnému pojmenování s klasifikačním kódem, určí se podle tabulky převažujících nebezpečí v pododdíle 2.1.3.10)

^a Kovy a slitiny kovů, které ve styku s vodou nevyvíjejí hořlavé plyny a nejsou pyroforní nebo schopné samoohřevu, ale jsou lehce hořlavé, jsou látkami třídy 4.1. Kovy alkalických zemin a slitiny kovů alkalických zemin v pyroforní formě jsou látkami třídy 4.2. Kovový prach a prášek v pyroforní formě jsou látkami třídy 4.2. Kovy a slitiny kovů v pyroforní formě jsou látkami třídy 4.2. Sloučeniny fosforu s těžkými kovy, jako železem, mědí atd., nepodléhají ustanovením ADR.

^b Kovy a slitiny kovů v pyroforní formě jsou látkami třídy 4.2.

^c Chlorsilany s bodem vzplanutí pod 23 °C, které ve styku s vodou nevyvíjejí hořlavé plyny, jsou látkami třídy 3. Chlorsilany s bodem vzplanutí 23 °C nebo vyšším, které ve styku s vodou nevyvíjejí hořlavé plyny, jsou látkami třídy 8.

2.2.51 Třída 5.1 Látky podporující hoření**2.2.51.1 Kritéria**

2.2.51.1.1 Název třídy 5.1 zahrnuje látky, které ač samy nejsou nezbytně hořlavé, mohou všeobecně uvolňováním kyslíku vyvolat nebo podporovat hoření jiných látek, jakož i předměty, které takové látky obsahují.

2.2.51.1.2 Látky třídy 5.1, jakož i předměty, které takové látky obsahují, se dělí následovně:

O Látky podporující hoření bez vedlejšího nebezpečí nebo předměty, které takové látky obsahují:

O1 kapalně
O2 tuhé
O3 předměty

OF Látky podporující hoření, tuhé, hořlavé

OS Látky podporující hoření, tuhé, schopné samoohřevu

OW Látky podporující hoření, tuhé, které ve styku s vodou vyvíjejí hořlavé plyny

OT Látky podporující hoření, toxické

OT1 kapalně
OT2 tuhé

OC Látky podporující hoření, žíravé

OC1 kapalně
OC2 tuhé

OTC Látky podporující hoření, toxické, žíravé.

2.2.51.1.3 Látky a předměty zařazené do třídy 5.1 jsou uvedeny v tabulce A kapitoly 3.2. Látky a předměty, které nejsou jmenovitě uvedeny v této tabulce, mohou být přiřazeny k příslušné položce pododdílu 2.2.51.3 podle ustanovení kapitoly 2.1 na základě zkoušek, postupů a kritérií uvedených v 2.2.51.1.6 až 2.2.51.1.9 a podle Příručky zkoušek a kritérií, části III, oddílu 34.4. Pokud se výsledky zkoušek liší od získaných zkušeností, musí se dát přednost získaným zkušenostem před výsledky zkoušek.

2.2.51.1.4 Spadají-li látky třídy 5.1 vlivem příměsí do jiných kategorií nebezpečnosti, než těch, do kterých patří látky jmenovitě uvedené v tabulce A kapitoly 3.2, přiřadí se tyto směsi k položkám, ke kterým patří na základě svého skutečného nebezpečí.

POZNÁMKA: K zařazování roztoků a směsí (jako jsou přípravky a odpady) viz také oddíl 2.1.3.

2.2.51.1.5 Na základě zkušebních postupů podle Příručky zkoušek a kritérií, části III, oddílu 34.4 a kritérií uvedených v 2.2.51.1.6 až 2.2.51.1.9 se může také zjistit, zda je jmenovitě uvedená látka takové povahy, že nepodléhá předpisům pro tuto třídu.

Tuhé látky podporující hoření

Klasifikace

2.2.51.1.6 Jestliže se tuhé látky podporující hoření, které nejsou jmenovitě uvedeny v tabulce A kapitoly 3.2, přiřazují k jedné z položek pododdílu 2.2.51.3 na základě zkušebního postupu podle Příručky zkoušek a kritérií, části III, pododdílu 34.4.1, platí následující kritéria:

Tuhou látku je nutno přiřadit ke třídě 5.1, jestliže ve směsi s celulózou v hmotnostním poměru 4:1 nebo 1:1 vzplane nebo hoří nebo vykazuje stejnou nebo kratší průměrnou dobu hoření, než je průměrná doba hoření směsi bromičnanu draselného s celulózou v hmotnostním poměru 3:7.

Přiřazení k obalovým skupinám

2.2.51.1.7 Tuhé látky podporující hoření zařazené pod různé položky tabulky A kapitoly 3.2 musí být přiřazeny k obalovým skupinám I, II nebo III na základě zkušebních postupů Příručky zkoušek a kritérií, části III, pododdílu 34.4.1 podle těchto kritérií:

- (a) Obalová skupina I: každá látka, která ve směsi s celulózu v hmotnostním poměru 4:1 nebo 1:1 vykazuje kratší průměrnou dobu hoření, než je průměrná doba hoření směsi bromičnanu draselného s celulózu v hmotnostním poměru 3:2;
- (b) Obalová skupina II: každá látka, která ve směsi s celulózu v hmotnostním poměru 4:1 nebo 1:1 vykazuje stejnou nebo kratší průměrnou dobu hoření, než je průměrná doba hoření směsi bromičnanu draselného s celulózu v hmotnostním poměru 2:3, a kritéria pro obalovou skupinu I nejsou splněna;
- (c) Obalová skupina III: každá látka, která ve směsi s celulózu v hmotnostním poměru 4:1 nebo 1:1 vykazuje stejnou nebo kratší průměrnou dobu hoření, než je průměrná doba hoření směsi bromičnanu draselného s celulózu v hmotnostním poměru 3:7, a kritéria pro obalové skupiny I a II nejsou splněna.

Kapalné látky podporující hoření

Klasifikace

2.2.51.1.8 Jestliže se kapalné látky podporující hoření, které nejsou jmenovitě uvedeny v tabulce A kapitoly 3.2, přiřazují k jedné z položek pododdílu 2.2.51.3 na základě zkušebního postupu podle Příručky zkoušek a kritérií, části III, pododdílu 34.4.2, platí následující kritéria:

Kapalnou látku je nutno přiřadit ke třídě 5.1, jestliže ve směsi s celulózu v hmotnostním poměru 1:1 vykazuje nárůst tlaku nejméně 2070 kPa (přetlak) a vykazuje stejnou nebo kratší průměrnou dobu zvyšování tlaku než směs 65% vodného roztoku kyseliny dusičné s celulózu v hmotnostním poměru 1:1.

Přiřazení k obalovým skupinám

2.2.51.1.9 Kapalné látky podporující hoření zařazené pod různé položky tabulky A kapitoly 3.2 musí být přiřazeny k obalovým skupinám I, II nebo III na základě zkušebních postupů Příručky zkoušek a kritérií, části III, pododdílu 34.4.2 podle těchto kritérií:

- a) Obalová skupina I: každá látka, která ve směsi s celulózu v hmotnostním poměru 1:1 se sama vznítí, nebo vykazuje kratší průměrnou dobu zvýšení tlaku než směs 50% kyseliny chloristé s celulózu v hmotnostním poměru 1:1;
- b) Obalová skupina II: každá látka, která ve směsi s celulózu v hmotnostním poměru 1:1 vykazuje stejnou nebo kratší průměrnou dobu zvyšování tlaku než směs 40% vodného roztoku chlorečnanu sodného s celulózu v hmotnostním poměru 1:1, a kritéria pro obalovou skupinu I nejsou splněna;
- c) Obalová skupina III: každá látka, která ve směsi s celulózu v hmotnostním poměru 1:1 vykazuje stejnou nebo kratší průměrnou dobu zvyšování tlaku než směs 65% vodného roztoku kyseliny dusičné s celulózu v hmotnostním poměru 1:1, a kritéria pro obalové skupiny I a II nejsou splněna.

2.2.51.2 **Látky nepřípuštěné k přepravě**

2.2.51.2.1 Chemicky nestálé látky třídy 5.1 jsou k přepravě přípuštěny jen tehdy, jestliže byla provedena potřebná opatření k zabránění jejich nebezpečnému rozkladu nebo polymeraci během přepravy. Za tímto účelem musí být dbáno zvláště na to, aby nádoby a cisterny neobsahovaly žádné látky, které by mohly tyto reakce podporovat.

2.2.51.2.2 Následující látky a směsi nejsou přípuštěny k přepravě :

- Tuhé látky podporující hoření, schopné samoohřevu, přiřazené k UN číslu 3100, tuhé látky podporující hoření, reagující s vodou, přiřazené k UN číslu 3121 a tuhé látky podporující

hoření, hořlavé, přiřazené k UN číslu 3137, ledaže by odpovídaly předpisům pro třídu 1 (viz také pododíl 2.1.3.7);

- Peroxid vodíku, nestabilizovaný nebo peroxid vodíku, vodné roztoky, nestabilizované, s více než 60 % peroxidu vodíku;
- Tetranitromethan, nezbavený hořlavých nečistot;
- Roztoky kyseliny chloristé s více než 72 % (hmotnosti) kyseliny nebo směsi kyseliny chloristé s jakoukoli kapalinou, kromě vody;
- Roztoky kyseliny chlorečné s více než 10 % kyseliny chlorečné nebo směsi kyseliny chlorečné s jakoukoli kapalinou, kromě vody;
- Halogenované sloučeniny fluoru, jiné než UN 1745 FLUORID BROMIČNÝ, UN 1746 FLUORID BROMITÝ a UN 2495 FLUORID JODIČNÝ třídy 5.1, jakož i UN 1749 FLUORID CHLORITÝ a UN 2548 FLUORID CHLOREČNÝ třídy 2;
- Chlorečnan amonný a jeho vodné roztoky a směsi chlorečnanu s amonnou solí;
- Chloritan amonný a jeho vodné roztoky a směsi chloritanu s amonnou solí;
- Směsi chlornanu s amonnou solí;
- Bromičnan amonný a jeho vodné roztoky a směsi bromičnanu s amonnou solí;
- Manganistan amonný a jeho vodné roztoky a směsi manganistanu s amonnou solí;
- Dusičnan amonný s více než 0,2 % hořlavých látek (včetně všech organických látek počítaných jako uhlík), ledaže je složkou látek nebo předmětů třídy 1;
- Hnojiva s obsahem dusičnanu amonného (pro stanovení obsahu dusičnanu amonného musí být všechny ionty dusičnanu, pro které je ve směsi molekulární ekvivalent amonných iontů, počítány jako dusičnan amonný) nebo s obsahem hořlavých látek vyšším, než jsou hodnoty uvedené ve zvláštním ustanovení 307, vyjma za podmínek platných pro třídu 1;
- Dusitan amonný a jeho vodné roztoky a směsi anorganického dusitanu s amonnou solí;
- Směsi dusičnanu draselného, dusitanu sodného a amonné soli.

2.2.51.3 Seznam hromadných položek

	Klasifikační Kód	UN číslo	Pojmenování látek a předmětů
<i>Látky podporující hoření a předměty obsahující takové látky</i>			
bez vedlejšího nebezpečí O	kapalné O1	3210	CHLOREČNANY ANORGANICKÉ, VODNÝ ROZTOK, J.N.
		3211	CHLORISTANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
		3213	BROMIČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
		3214	MANGANISTANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
		3216	PERSÍRANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
	tuhé O2	3218	DUSIČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
		3219	DUSITANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
		3139	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, J.N.
		1450	BROMIČNANY, ANORGANICKÉ, J.N.
		1461	CHLOREČNANY, ANORGANICKÉ, J.N.
předměty O3	1462	CHLORITANY, ANORGANICKÉ, J.N.	
	1477	DUSIČNANY, ANORGANICKÉ, J.N.	
	1481	CHLORISTANY, ANORGANICKÉ, J.N.	
	1482	MANGANISTANY, ANORGANICKÉ, J.N.	
	1483	PEROXIDY, ANORGANICKÉ, J.N.	
		2627	DUSITANY, ANORGANICKÉ, J.N.
		3212	CHLORNANY, ANORGANICKÉ, J.N.
		3215	PERSÍRANY, ANORGANICKÉ, J.N.
		1479	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, J.N.
		3356	GENERÁTOR KYSLÍKOVÝ, CHEMICKÝ
hořlavé, tuhé	OF	3137	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, HOŘLAVÁ J.N. (Nepřipustěna k přepravě, viz pododíl 2.2.51.2)
tuhé, schopné samoohřevu	OS	3100	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N. (Nepřipustěna k přepravě, viz 2.2.51.2)
tuhé, reagující s vodou	OW	3121	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, REAGUJÍCÍ S VODOU, J.N. (Nepřipustěna k přepravě, viz 2.2.51.2)
toxické OT	kapalné	OT1	3099 LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, TOXICKÁ, J.N.
	tuhé	OT2	3087 LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, TOXICKÁ, J.N.
žiravé OC	kapalné	OC1	3098 LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ ŽÍRAVÁ, J.N.
	tuhé	OC2	3085 LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, ŽÍRAVÁ, J.N.
toxické, žiravé		OTC	(není k dispozici žádná hromadná položka s tímto klasifikačním kódem; pokud je potřebné přiřazení k hromadné položce s klasifikačním kódem, určí se podle tabulky převažujících nebezpečí v pododíle 2.1.3.10)

2.2.52 Třída 5.2: Organické peroxidy

2.2.52.1 Kritéria

2.2.52.1.1 Název třídy 5.2 zahrnuje organické peroxidy a přípravky organických peroxidů.

2.2.52.1.2 Látky třídy 5.2 se dělí následovně:

- P1 Organické peroxidy, nevyžadující řízení teploty
- P2 Organické peroxidy, vyžadující řízení teploty

Definice

2.2.52.1.3 Organické peroxidy jsou organické látky, které obsahují dvojmocnou skupinu -O-O- a na které může být nahlíženo jako na deriváty peroxidu vodíku, ve kterých je nahrazen jeden nebo oba atomy vodíku organickými radikály.

Vlastnosti

2.2.52.1.4 Organické peroxidy se mohou exotermicky rozkládat při normální nebo zvýšené teplotě. Rozklad může být vyvolán působením tepla, třením, nárazem nebo stykem s nečistotami (např. kyselinami, sloučeninami těžkých kovů, aminy). Rychlost rozkladu stoupá s teplotou a závisí na složení organického peroxidu. Při rozkladu se mohou vyvíjet škodlivé nebo hořlavé páry nebo plyny. Pro některé organické peroxidy je povinné řízení teploty během přepravy. Některé organické peroxidy se mohou, zvláště pod uzavřením, rozkládat výbušným způsobem. Tato vlastnost se může změnit přidáním ředidel nebo použitím vhodných obalů. Mnoho organických peroxidů prudce hoří. Oči nesmí přijít do styku s organickými peroxidy. Některé organické peroxidy mohou již po velmi krátkém styku způsobit vážné poškození rohovky nebo mohou mít žíravé účinky na pokožku.

POZNÁMKA: Zkušební postupy k určení hořlavosti organických peroxidů jsou obsaženy v Příručce zkoušek a kritérií, části III, pododdílu 32.4. Jelikož organické peroxidy mohou při zahřátí prudce reagovat, doporučuje se určit jejich bod vzplanutí za použití zkušebních vzorků malých rozměrů, jak je popsáno v normě ISO 3679:1983.

Klasifikace

2.2.52.1.5 Každý organický peroxid se pokládá za zařazený do třídy 5.2, ledaže by přípravek organického peroxidu:

- (a) neobsahoval více než 1,0 % aktivního kyslíku pro nejvýše 1,0 % peroxidu vodíku;
- (b) neobsahoval více než 0,5 % aktivního kyslíku pro více než 1,0 %, nejvýše však 7 % peroxidu vodíku.

POZNÁMKA: Obsah aktivního kyslíku (%) v přípravku organického peroxidu se vypočítá ze vzorce:

$$16 \times \sum (n_i \times c_i / m_i),$$

kde

- n_i = počet peroxykupin na molekulu organického peroxidu i ;
- c_i = koncentrace (% hmotnosti) organického peroxidu i ;
- m_i = molekulová hmotnost organického peroxidu i .

2.2.52.1.6 Organické peroxidy se rozdělují na základě jejich stupně nebezpečnosti do sedmi typů. Typy jsou v rozsahu od typu A, který není připuštěn k přepravě v obalu, v němž byl podroben zkoušce, až k typu G, který nepodléhá ustanovením pro organické peroxidy třídy 5.2. Klasifikace typů B až F je v přímém vztahu k nejvyššímu dovolenému množství v jednom kusu. Zásady pro zařazování látek, které nejsou uvedeny v pododdíle 2.2.52.4, jsou obsaženy v Příručce zkoušek a kritérií, části II.

2.2.52.1.7 Již zařazené organické peroxidy, které jsou připuštěny k přepravě v obalech jsou uvedeny v pododdílu 2.2.52.4, ty, které jsou již připuštěny k přepravě ve velkých nádobách pro volně ložené látky (IBC), jsou uvedeny v pododdílu 4.1.4.2, pokynu pro balení IBC520 a ty, které jsou již připuštěny k přepravě v cisternách podle kapitol 4.2 a 4.3 jsou uvedeny v pododdílu 4.2.5.2, pokynu

pro přemístitelné cisterny T23. Každá uvedená přípustná látka je přiřazena k druhové položce tabulky A kapitoly 3.2 (UN čísla 3101 až 3120) a udávají se příslušná vedlejší nebezpečí a poznámky obsahující informace pro přepravu.

Tyto druhové položky udávají:

- typ (B až F) organického peroxidu (viz 2.2.52.1.6);
- fyzikální stav (kapalný/tuhý); a
- řízenou teplotu (pokud se vyžaduje), viz 2.2.52.1.15 až 2.2.52.1.18.

Směsi těchto přípravků mohou být zařazeny shodně s typem organického peroxidu, který je nejnebezpečnějším komponentem směsi, a přepravovány podle podmínek platných pro tento typ. Jestliže však dva stabilní komponenty mohou vytvářet tepelně méně stabilní směs, je třeba určit teplotu samourchlujícího se rozkladu (SADT) směsi, a pokud je to nutné, řízenou teplotu a kritickou teplotu, odvozené od SADT podle 2.2.52.1.16.

2.2.52.1.8 Zařazení organických peroxidů, přípravků nebo směsí organických peroxidů, které nejsou uvedeny v pododdílu 2.2.52.4, pododdílu 4.1.4.2, pokynu pro balení IBC520 nebo pododdílu 4.2.5.2, pokynu pro přemístitelné cisterny T23, jakož i jejich přiřazení k hromadné položce musí být provedeno příslušným orgánem země původu. Osvědčení o schválení musí obsahovat zařazení a odpovídající přepravní podmínky. Jestliže země původu není smluvní stranou ADR, musí být zařazení a přepravní podmínky uznány příslušným orgánem prvního státu smluvní strany ADR, který přijde do styku se zásilkou.

2.2.52.1.9 Vzorky organických peroxidů nebo přípravků organických peroxidů, které nejsou uvedeny v pododdíle 2.2.52.4, pro něž není k dispozici úplná sada výsledků zkoušek a které se přepravují za účelem dalších zkoušek nebo vyhodnocení, se přiřadí k jedné z vhodných položek pro organické peroxidy typu C za předpokladu, že :

- z údajů, které jsou k dispozici, vyplývá, že vzorek není nebezpečnější než organický peroxid typu B,
- vzorek je balen podle způsobu balení OP2 a množství na dopravní jednotku není větší než 10 kg.
- z údajů, které jsou k dispozici, vyplývá, že řízená teplota, pokud je, je dostatečně nízká, aby se zabránilo nebezpečnému rozkladu a dostatečně vysoká, aby nedošlo k nebezpečné separaci fází.

Znecitlivění organických peroxidů

2.2.52.1.10 K zajištění bezpečnosti během přepravy se organické peroxidy často znecitliví organickými kapalnými nebo tuhými látkami, anorganickými tuhými látkami nebo vodou. Jestliže je předepsán procentuální podíl látky, vztahuje se k podílu hmotnosti, zaokrouhlenému na nejbližší celé číslo. Všeobecně se znecitlivění musí provést tak, aby při úniku nemohlo dojít k nebezpečné koncentraci organického peroxidu.

2.2.52.1.11 Pokud není pro jednotlivý přípravek organického peroxidu stanoveno jinak, platí pro ředidla, která se použijí ke znecitlivění, následující definice:

- Ředidla typu A jsou organické kapaliny, snášenlivé s organickým peroxidem, které mají bod varu nejméně 150 °C. Ředidla typu A se mohou používat pro znecitlivění všech organických peroxidů.
- Ředidla typu B jsou organické kapaliny, snášenlivé s organickým peroxidem, které mají bod varu nižší než 150 °C, nejméně však 60 °C, a bod vzplanutí nejméně 5 °C.

Ředidla typu B se mohou používat pro znecitlivění všech organických peroxidů za podmínky, že bod varu kapaliny je nejméně o 60 °C vyšší než SADT v kusu o hmotnosti 50 kg.

2.2.52.1.12 Ředidla, která nepatří k typu A nebo B, smějí být přidána k přípravkům organických peroxidů uvedeným v pododdíle 2.2.52.4, pokud jsou s nimi snášenlivá. Avšak úplné nebo částečně

nahrazení ředidla typu A nebo B jiným ředidlem s rozdílnými vlastnostmi vyžaduje nové přehodnocení přípravku organického peroxidu podle normálního klasifikačního postupu pro třídu 5.2.

2.2.52.1.13 Voda smí být přidávána ke znečtivění jen těch organických peroxidů, u kterých je v pododdíle 2.2.52.4 nebo v povolení příslušného orgánu podle 2.2.52.1.8 uveden dovětek „s vodou“ nebo jako „jako stabilní disperse ve vodě“. Vzorky organických peroxidů nebo přípravků organických peroxidů, které nejsou uvedeny v pododdíle 2.2.52.4, smějí být rovněž znečtivěny vodou za podmínky, že jsou splněny požadavky 2.2.52.1.9.

2.2.52.1.14 Organické a anorganické tuhé látky smějí být použity ke znečtivění organických peroxidů, pokud se s nimi snáší. Kapalné a tuhé látky se považují za snášenlivé, pokud nepříznivě nepůsobí ani na tepelnou stabilitu, ani na druh nebezpečí přípravku organického peroxidu.

Ustanovení o řízení teploty

2.2.52.1.15 Určité organické peroxidy smějí být přepravovány pouze za podmínek řízené teploty. Řízenou teplotou se rozumí nejvyšší teplota, při které mohou být organické peroxidy bezpečně přepravovány. Předpokládá se, že teplota bezprostředního okolí kusu přesáhne během přepravy hodnotu 55 °C pouze na relativně krátkou dobu za 24-hodinový časový interval. V případě výpadku systému řízení teploty, může být nutné provést nouzová opatření. Kritická teplota je teplota, při níž musí být provedena nouzová opatření.

2.2.52.1.16 Řízená a kritická teplota jsou odvozeny od teploty samourychlujícího se rozkladu SADT (viz tabulku 1), která je definovaná jako nejnižší teplota, při níž může dojít k samourychlujícímu se rozkladu pro látku v obalu použitým během přepravy. SADT musí být stanovena za účelem rozhodnutí, zda látka musí být přepravována při řízené teplotě. Předpisy pro stanovení SADT jsou obsaženy v Příručce zkoušek a kritérií, části II, oddílu 20 a pododdílu 28.4.

Tabulka 1: Odvození řízených a kritických teplot

Druh nádoby	SADT ^a	Řízená teplota	Kritická teplota
Samostatné obaly a IBC	20 °C a méně	o 20 °C nižší než SADT	o 10 °C nižší než SADT
	20 °C až 35 °C	o 15 °C nižší než SADT	o 10 °C nižší než SADT
	více než 35 °C	o 10 °C nižší než SADT	o 5 °C nižší než SADT
Cisterny	nejvýše 50 °C	o 10 °C nižší než SADT	o 5 °C nižší než SADT

^a SADT látky zabalené pro přepravu

2.2.52.1.17 Tyto organické peroxidy musí být přepravovány při řízené teplotě:

- organické peroxidy typů B a C se SADT ≤ 50 °C;
- organické peroxidy typu D se SADT ≤ 50 °C, vykazující střední účinek při zahřívání v uzavřeném prostoru, nebo se SADT ≤ 45 °C, vykazující při zahřívání v uzavřeném prostoru malý nebo žádný účinek; a
- organické peroxidy typů E a F se SADT ≤ 45 °C.

POZNÁMKA: Předpisy pro stanovení účinků při zahřívání v uzavřeném prostoru jsou uvedeny v Příručce zkoušek a kritérií, části II, oddílu 20 a pododdílu 28.4.

2.2.52.1.18 Řízené a kritické teploty jsou uvedeny v pododdílu 2.2.52.4. Skutečná teplota během přepravy smí být nižší než řízená teplota, avšak musí být stanovena tak, aby nedošlo k nebezpečnému oddělování (separaci) fází.

2.2.52.2 *Látky nepřípuštěné k přepravě*

Organické peroxidy typu A není podle ustanovení třídy 5.2 dovoleno přepravovat [viz Příručku zkoušek a kritérií, část II, odstavec 20.4.3 (a)];

2.2.52.3 Seznam hromadných položek

Klasifikační Kód	UN-číslo	Pojmenování látek nebo předmětů
Organické peroxidy		
nevyžadující řízení P1 teploty		PEROXID ORGANICKÝ TYP A, KAPALNÝ (není připuštěn k přepravě, viz 2.2.52.2)
		PEROXID ORGANICKÝ TYP A, TUHÝ (není připuštěn k přepravě, viz 2.2.52.2)
	3101	PEROXID ORGANICKÝ TYP B, KAPALNÝ
	3102	PEROXID ORGANICKÝ TYP B, TUHÝ
	3103	PEROXID ORGANICKÝ TYP C, KAPALNÝ
	3104	PEROXID ORGANICKÝ TYP C, TUHÝ
	3105	PEROXID ORGANICKÝ TYP D, KAPALNÝ
	3106	PEROXID ORGANICKÝ TYP D, TUHÝ
	3107	PEROXID ORGANICKÝ TYP E, KAPALNÝ
	3108	PEROXID ORGANICKÝ TYP E, TUHÝ
vyžadující řízení teploty P2	3109	PEROXID ORGANICKÝ TYP F, KAPALNÝ
	3110	PEROXID ORGANICKÝ TYP F, TUHÝ
		PEROXID ORGANICKÝ TYP G, KAPALNÝ (nepodléhá předpisům třídy 5.2, viz 2.2.52.1.6)
		PEROXID ORGANICKÝ TYP G, TUHÝ (nepodléhá předpisům třídy 5.2, viz 2.2.52.1.6)
	3111	PEROXID ORGANICKÝ TYP B, KAPALNÝ, S ŘÍZENÍM TEPLoty
	3112	PEROXID ORGANICKÝ TYP B, TUHÝ, S ŘÍZENÍM TEPLoty
	3113	PEROXID ORGANICKÝ TYP C, KAPALNÝ, S ŘÍZENÍM TEPLoty
	3114	PEROXID ORGANICKÝ TYP C, TUHÝ, S ŘÍZENÍM TEPLoty
	3115	PEROXID ORGANICKÝ TYP D, KAPALNÝ, S ŘÍZENÍM TEPLoty
	3116	PEROXID ORGANICKÝ TYP D, TUHÝ, S ŘÍZENÍM TEPLoty
3117	PEROXID ORGANICKÝ TYP E, KAPALNÝ, S ŘÍZENÍM TEPLoty	
3118	PEROXID ORGANICKÝ TYP E, TUHÝ, S ŘÍZENÍM TEPLoty	
3119	PEROXID ORGANICKÝ TYP F, KAPALNÝ, S ŘÍZENÍM TEPLoty	
3120	PEROXID ORGANICKÝ TYP F, TUHÝ, S ŘÍZENÍM TEPLoty	

2.2.52.4 Seznam již zařazených organických peroxidů v obalech

Kódy „OP1“ až „OP8“ uvedené ve sloupci „Způsob balení“ se vztahují ke způsobům balení v pododdílu 4.1.4.1, pokynu pro balení P520 (viz též 4.1.7.1). Organické peroxidy, které se mají přepravovat, musí odpovídat klasifikaci a řízením a kritickým teplotám (odvozeným od SADT), jak jsou uvedeny. K látkám připuštěným v IBC viz 4.1.4.2, pokyn pro balení IBC520 a k látkám připuštěným v cisternách podle kapitol 4.2 a 4.3 viz 4.2.5.2, pokyn pro přemístitelné cisterny T23.

ORGANICKÝ PEROXID	Koncentrace (%)	Ředidlo Typ A (%)	Ředidlo Typ B (%) ¹⁾	Inertní tuhá látka (%)	Voda (%)	Způsob balení	Rizená teplota (°C)	Kritická teplota (°C)	UN-číslo druhé položky	Vedlejší nebezpečí a poznámky
ACETYLACETONPEROXID	≤ 42 ≤ 32 jako pasta	≥ 48			≥ 8	OP7			3105 3106	2) 20)
ACETYLCYKLOHEXANSULFONYL-PEROXID	≤ 82 ≤ 32		≥ 68		≥ 12	OP4 OP7	-10 -10	0 0	3112 3115	3)
terc-AMYLHYDROPEROXID	≤ 88	≥ 6			≥ 6	OP8			3107	
terc-AMYLPEROXYACETÁT	≤ 62	≥ 38				OP7			3105	
terc-AMYLPEROXYBENZOÁT	≤ 100					OP5			3103	
terc-AMYLPEROXY-2-ETHYLHEXANOÁT	≤ 100					OP7	+20	+25	3115	
terc-AMYLPEROXY-2-ETHYLHEXYLKARBONÁT	≤ 100					OP7			3105	
terc-AMYLPEROXY ISOPROPYL KARBONÁT	≤ 77	≥ 23				OP5			3103	
terc-PEROXYNEODEKANOÁT	≤ 77		≥ 23			OP7	0	+10	3115	
"	≤ 47	≥				OP8	0	+10	3119	
terc-AMYL PEROXY PIVALÁT	≤ 77		≥ 23			OP5	+10	+15	3113	
terc-AMYLPEROXY-3,5-TRIMETHYLHEXANOÁT	≤ 100					OP7			3105	
terc-BUTYLKUMYLPEROXID	> 42 – 100 ≤ 52			≥ 48		OP8			3107 3108	
n-BUTYL-4,4-DI-(terc-BUTYLPEROXY)-VALERÁT	> 52 – 100 ≤ 52			≥ 48		OP5 OP8			3103 3108	
terc-BUTYLHYDROPEROXID	> 79 – 90 ≤ 80	≥ 20			≥ 10	OP5 OP7			3103 3105	13) 4) 13)
"	≤ 79 ≤ 72				> 14 ≥ 28	OP6 OP8			3107 3109	13) 23) 13)
terc-BUTYLHYDROPEROXID + DI-terc-BUTYLPEROXID	< 82 + > 9				≥ 7	OP5			3103	13)
terc-BUTYLMONOPEROXYMALEÁT	> 52 – 100 ≤ 52	≥ 48				OP5 OP6			3102 3103	3)
"	≤ 52			≥ 48		OP8			3108	
"	≤ 52 jako pasta					OP8			3108	
terc-BUTYLPEROXYACETÁT	> 52 – 77 > 32 – 52 ≤ 32	≥ 23 ≥ 48				OP5 OP6			3101 3103	3)
"	≤ 32	≥ 68				OP8			3109	
terc-BUTYLPEROXYBENZOÁT	> 77 – 100 > 52 – 77					OP5 OP7			3103 3105	
"	≤ 52	≥ 23				OP7			3106	
terc-BUTYLPEROXYBUTYLFUIMARÁT	≤ 52	≥ 48				OP7			3105	
terc-BUTYLPEROXYKROTONÁT	≤ 77	≥ 23				OP7			3105	

ORGANICKÝ PEROXID	Koncentrace (%)	Ředitlo Typ A (%)	Ředitlo Typ B (%) ¹⁾	Inertní tuhá látka (%)	Voda (%)	Způsob balení	Řízená teplota (°C)	Kritická teplota (°C)	UN-číslo druhově položky	Vedlejší nebezpečí a poznámky
terc-BUTYLPEROXYETHYLACETÁT	≤ 100					OP5	+20	+25	3113	
terc-BUTYLPEROXY-2-ETHYLHEXANOÁT	> 52 – 100					OP6	+20	+25	3113	
"	> 32 – 52		≥ 48			OP8	+30	+35	3117	
"	≤ 52			≥ 48		OP8	+20	+25	3118	
"	≤ 32		≥ 68			OP8	+40	+45	3119	
terc-BUTYLPEROXY-2-ETHYLHEXANOÁT + 2,2-Di-(terc-BUTYLPEROXY)-BUTAN	≤ 12 ± 14	≥ 14		≥ 60		OP7			3106	
"	≤ 31 + 5 36		≥ 33			OP7	+35	+40	3115	
terc-BUTYLPEROXY-2-ETHYLHEXYLKARBONÁT	≤ 100					OP7			3105	
terc-BUTYLPEROXYISOBUTYRÁT	> 52 – 77		≥ 23			OP5	+15	+20	3111	3)
"	≤ 52		≥ 48			OP7	+15	+20	3115	
terc-BUTYLPEROXYISOPROPYLKARBONÁT	≤ 77	≥ 23				OP5			3103	
1-(2-terc-BUTYLPEROXYISOPROPYL)-3-ISOPROPENYLBENZEN	≤ 77	≥ 23				OP7			3105	
"	≤ 42			≥ 58		OP8			3108	
terc-BUTYLPEROXY-2-METHYLBENZOÁT	≤ 100					OP5			3108	
terc-BUTYLPEROXYNEODEKANOÁT	> 77 – 100					OP7	-5	+5	3115	
"	≤ 77	≥ 23				OP7	0	+10	3115	
"	≤ 52 jako stabilní disperze ve vodě					OP8	0	+10	3119	
"	≤ 42 jako stabilní disperze ve vodě (zmrázene)					OP8	0	+10	3118	
"	≤ 32	≥ 68				OP8	0	+10	3119	
terc-BUTYLPEROXYNEOHEPTANOÁT	≤ 77	≥ 23				OP7	0	+10	3115	
"	≤ 42 jako stabilní disperze ve vodě					OP8	0	+10	3117	
tert-BUTYL PEROXYPIVALÁT	> 67 – 77	≥ 23				OP5	0	+10	3113	
"	> 27 – 67		≥ 33			OP7	0	+10	3115	
"	≤ 27		≥ 73			OP8	+30	+35	3119	
terc-BUTYLPEROXYSTEARYL-KARBONÁT	≤ 100					OP7			3106	
terc-BUTYLPEROXY-3,5,5-TRIMETHYLHEXANOÁT	> 32 – 100					OP7			3105	
"	≤ 42			≥ 58		OP7			3106	
"	≤ 32		≥ 68			OP8			3109	

ORGANICKÝ PEROXID	Koncentrace (%)	Ředidlo Typ A (%)	Ředidlo Typ B (%) ¹⁾	Inertní tuhá látka (%)	Voda (%)	Způsob balení	Rizená teplota (°C)	Kritická teplota (°C)	UN-číslo druhové položky	Vedlejší nebezpečí a poznámky
-CHLORPEROXYBENZOOVÁ KYSELINA	> 57 – 86 ≤ 57			≥ 14 ≥ 3	≥ 40	OP1 OP7			3102 3106 3106	3) 3)
KUMYLHYDROPEROXID	> 90 – 98 ≤ 90	≤ 10 ≥ 10		≥ 6	≥ 17	OP8 OP8			3107 3109	13) 13), 18)
KUMYLPEROXYNEODEKANOÁT	≤ 87 ≤ 77 ≤ 52 jako stabilní disperze ve vodě	≥ 13	≥ 23			OP7 OP7 OP8	-10 -10 -10	0 0 0	3115 3115 3119	
KUMYLPEROXYNEOHEPTANOÁT	≤ 77	≥ 23				OP7	-10	0	3115	
KUMYLPEROXYPIVALÁT	≤ 77		≥ 23			OP7	-5	+5	3115	
CYKLOHEXANONPEROXID(Y)	≤ 91 ≤ 72 ≤ 72 jako pasta ≤ 32	≥ 28		≥ 9		OP6 OP7 OP7			3104 3105 3106	13) 5) 5) 20) Vyhrazeno 29)
(8R-(3R, 5aS,6S, 8aS, 9R, 10R, 12S, 12aR)-7J-DEKAHYDRO-10-METHOXY-3,6,9-TRIMETHYL-3,12-EPOXY-12H-PYRANO[4,3-J]-1,2-BENZODIOXEPIN DIACETONALKOHOLPEROXID	≤ 57 ≤ 27 ≤ 100		≥ 26 ≥ 73		≥ 8	OP7 OP7 OP8	+40 +20	+45 +25	3115 3115 3107	6) 7) 13)
DIACETYLPEROXID	≤ 57	≥ 43				OP7			3105	
DI-tert-AMYLPEROXID	≤ 100					OP8			3107	
2,2-DI-(tert-AMYLPEROXY)-BUTAN	≤ 57	≥ 18				OP6			3103	
1,1-DI-(tert-AMYLPEROXY)-CYKLOHEXAN	> 51 – 100 > 77 – 94 ≤ 77			≤ 48 ≥ 28	≥ 6 ≥ 23	OP2 OP4 OP6			3102 3102 3104	3) 3)
DIBENZOYLPEROXID	≤ 62 > 62 – 62 jako pasta > 35 – 52 > 36 – 42 ≤ 56.5 jako pasta ≤ 52 jako pasta ≤ 42 jako stabilní disperze ve vodě	≥ 18		≥ 48 ≥ 65	≥ 10	OP7 OP7 OP8 OP8 OP8 OP8			3106 3106 3107 3108 3108 3109	20) 20)
DI-(4-tert-BUTYL-CYKLOHEXYL)PEROXYDIKARBONÁT	≤ 35 ≤ 100 ≤ 42 jako stabilní disperze ve vodě					OP6 OP8	+30 +30	+35 +35	Vyhrazeno 3114 3119	29)

ORGANICKÝ PEROXID	Koncentrace (%)	Ředitlo Typ A (%)	Ředitlo Typ B (%) ¹⁾	Inertní tuhá látka (%)	Voda (%)	Způsob balení	Řízená teplota (°C)	Kritická teplota (°C)	UN-číslo druhové položky	Vedlejší nebezpečí a poznámky
DI-terc-BUTYL PEROXID	> 52 – 100		≥ 48			OP8			3107	
DI-terc-BUTYLPEROXYAZELÁT	≤ 52	≥ 48				OP8			3109	25)
2,2-DI-(terc-BUTYLPEROXY)-BUTAN	≤ 52	≥ 48				OP6			3103	
1,1-DI-(terc-BUTYLPEROXY)-CYKLOHEXAN	> 80 – 100		≥ 28			OP5			3101	3)
"	≤ 72					OP5			3103	30)
"	> 52 – 80	≥ 20				OP5			3103	
"	> 42 – 52	≥ 48				OP7			3105	
"	≤ 42	≥ 13		≥ 45		OP7			3106	
"	≤ 42	≥ 58				OP8			3109	
"	≤ 27	≥ 25				OP8			3107	21)
"	≤ 13	≥ 13				OP8			3109	
1,1-DI-(terc-BUTYLPEROXY)-CYKLOHEXAN + terc-BUTYLPEROXY-2-ETHYLHEXANOAT	≤ 43 + ≤ 16	≥ 41				OP7			3105	
DI-n-BUTYLPEROXYKARBONÁT	> 27 – 52	≥ 48				OP7	-15	-5	3115	
"	≤ 27	≥ 73				OP8	-10	0	3117	
"	≤ 42 jako stabilní disperze ve vodě (zmražené)					OP8	-15	-5	3118	
DI-sec-BUTYLPEROXYKARBONÁT	> 52 – 100		≥ 48			OP4	-20	-10	3113	
"	≤ 52					OP7	-15	-5	3115	
1,6-DI-(terc-BUTYLPEROXY-KARBONYLOXY) HEXAN	≤ 72	≥ 28				OP5			3103	
DI-(terc-BUTYLPEROXYISOPROPYL)-BENZEN(Y)	> 42 – 100			≤ 57		OP7			3106	
"	≤ 42			≥ 58					Vyhrazeno	29)
DI-(terc-BUTYLPEROXY)-FTALÁT	> 42 – 52	≥ 48				OP7			3105	
"	≤ 52 jako pasta					OP7			3106	20)
"	≤ 42	≥ 58				OP8			3107	
2,2-DI-(terc-BUTYLPEROXY)-PROPAN	≤ 52	≥ 48				OP7			3105	
"	≤ 42	≥ 13		≥ 45		OP7			3106	
1,1-DI-(terc-BUTYLPEROXY)-3,3,5-TRIMETHYLCYKLOHEXAN	> 90 – 100					OP5			3101	3)
"	≤ 90		≥ 10			OP5			3103	30)
"	> 57 – 90	≥ 10				OP5			3103	
"	≤ 77	≥ 23				OP5			3103	
"	≤ 57	≥ 43		≥ 43		OP8			3110	
"	≤ 57	≥ 43				OP8			3107	
"	≤ 32	≥ 26				OP8			3107	

ORGANICKÝ PEROXID	Koncentrace (%)	Ředidlo Typ A (%)	Ředidlo Typ B (%) ¹⁾	Inertní tuhá látka (%)	Voda (%)	Způsob balení	Rizemá teplota (°C)	Kritická teplota (°C)	UN-číslo druhové položky	Vedlejší nebezpečí a poznámky
DICETYLPEROXYDIKARBONÁT	≤ 100 ≤ 42 jako stabilní disperze ve vodě					OP7 OP8	+30 +30	+35 +35	3116 3119	
DI-(4-CHLORBENZOYL)-PEROXID	≤ 77 ≤ 52 jako pasta			≥ 23		OP5 OP7			3102 3106	3) 20)
DIKUMYLPEROXID	≤ 32 > 52 – 100 ≤ 52			≥ 68 ≥ 48		OP8			Vyhrazeno 29)	12) 29)
DICYKLOHEXYLPEROXYDIKARBONÁT	> 91 – 100 ≤ 91 ≤ 42 jako stabilní disperze ve vodě				≥ 9	OP3 OP5 OP8	+10 +10 +15	+15 +15 +20	3112 3114 3119	3)
DIDEKANOYLPEROXID	≤ 100					OP6	+30	+35	3114	
2,2-DI-(4-DI-(terc-BUTYL)PEROXY)-CYKLOHEXYL-PROPAN	≤ 42			≥ 58		OP7			3106	
DI-(2,4-DICHLORBENZOYL)-PEROXID	≤ 22 ≤ 77 ≤ 52 jako pasta ≤ 52 jako pasta se silikonovým olejem		≥ 78		≥ 23	OP5 OP8 OP7	+20	+25	3107 3102 3118 3106	3)
DI-(2-ETHOXYETHYL) PEROXYDIKARBONÁT	≤ 52		≥ 48			OP7	-10	0	3115	
1-(2-ETHYLHEXANOYLPEROXY)-1,3-DIMETHYLBUTYL PEROXYPIVALÁT	≤ 52	≥ 45	≥ 10			OP7	-20	-10	3115	
DI-(2-ETHYLHEXYL) PEROXYDIKARBONÁT	> 77 – 100 ≤ 77 ≤ 62 jako stabilní disperze ve vodě ≤ 52 jako stabilní disperze ve vodě (zmrážené)		≥ 23 ≥ 23			OP5 OP7 OP8 OP8	-20 -15 -15 -15	-10 -5 -5 -5	3113 3115 3119 3120	
2,2-DIHYDROPEROXYPROPAN	≤ 27			≥ 73	≥ 5	OP5			3102	3)
DI-(1-HYDROXYCYKLOHEXYL) PEROXID	≤ 100					OP7			3106	
DIISOBUTYRYL PEROXID	> 32 – 52 ≤ 32		≥ 48 ≥ 68			OP5 OP7	-20 -20	-10 -10	3111 3115	3)
DI-ISOPROPYLBENZEN-DIHYDROPEROXID	≤ 82	≥ 5				OP7			3106	24)
DIISOPROPYL PEROXYDIKARBONÁT	> 52-100 ≤ 52 ≤ 32		≥ 48			OP2 OP7 OP7	-15 -20 -15	-5 -10 -5	3112 3115 3115	3)
DILAUROYL PEROXID	≤ 100	≥ 68				OP7	-15	-5	3106	

ORGANICKÝ PEROXID	Koncentrace (%)	Ředitlo Typ A (%)	Ředitlo Typ B (%) ¹⁾	Inertní tuha látka (%)	Voda (%)	Způsob balení	Řízená teplota (°C)	Kritická teplota (°C)	UN-číslo druhov ²⁾ položky	Vedlejší nebezpečí a poznámky
"	≤ 42 jako stabilní disperze ve vodě		≥ 48			OP8			3109	
DI-(3-METOXYBUTYL) PEROXYKARBONÁT	≤ 52		≥ 48			OP7	-5	+5	3115	
DI-(2-METHYLBENZYL) PEROXID	≤ 87				≥ 13	OP5	+30	+35	3112	3)
DI-(3-METHYLBENZYL) PEROXID + BENZYL (3-METHYLBENZYL) PEROXID + DIBENZYL PEROXID	≤ 20 + ≤ 18 + ≤ 4		≥ 58			OP7	+35	+40	3115	
DI-(4-METHYLBENZYL) PEROXID	≤ 52 jako pasta se silikonovým olejem					OP7			3106	
2,5-DIMETHYL-2,5-DI-(BENZYLPEROXY)HEXAN	> 82-100					OP5			3102	3)
"	≤ 82			≥ 18		OP7			3106	
"	≤ 82				≥ 18	OP5			3104	
2,5-DIMETHYL-2,5-DI-(tert-BUTYLPEROXY)HEXAN	>90 – 100					OP5			3103	
"	>52 – 90	≥ 10				OP7			3105	
"	≤ 47 jako pasta					OP8			3108	
"	≤ 52	≥ 48				OP8			3109	
"	≤ 77			≥ 23		OP8			3108	
2,5-DIMETHYL-2,5-DI-(tert-BUTYLPEROXY)HEX-3-IN	> 86-100					OP5			3101	3)
"	>52-86	≥ 14				OP5			3103	28)
"	≤ 52			≥ 48		OP7			3106	
2,5-DIMETHYL-2,5-DI-(2-ETHYLHEXANOYLPEROXY)HEXAN	≤ 100					OP5	+20	+25	3113	
2,5-DIMETHYL-2,5-DIHYDROPEROXYHEXAN	≤ 82				≥ 18	OP6			3104	
2,5-DIMETHYL-2,5-DI-(3,5,5-TRIMETHYLHEXANOYLPEROXY)HEXAN	≤ 77	≥ 23				OP7			3105	
1,1-DIMETHYL-3-HYDROXYBUTYL PEROXYNEOHEPTANOÁT	≤ 52	≥ 48				OP8	0	+10	3117	
DIMYRISTYL PEROXYDIKARBONÁT	≤ 100					OP7	+20	+25	3116	
"	≤ 42 jako stabilní disperze ve vodě					OP8	+20	+25	3119	
DI-(2-NEODEKANOYLPEROXYISOPROPYL) BENZEN	≤ 52	≥ 48				OP7	-10	0	3115	
DI-n-NONANOYL PEROXID	≤ 100					OP7	0	+10	3116	

ORGANICKÝ PEROXID	Koncentrace (%)	Ředidlo Typ A (%)	Ředidlo Typ B (%) ¹⁾	Inertní tuhá látka (%)	Voda (%)	Způsob batení	Řízená teplota (°C)	Kritická teplota (°C)	UN-číslo druhov. položky	Vedlejší nebezpečí a poznámky
DI-n-OKTANOYL PEROXID	≤ 100					OP5	+10	+15	3114	
DI-(2-FENOXYETHYL)-PEROXYDIKARBONÁT	>85-100 ≤ 85				≥ 15	OP5 OP7			3102 3106	3)
DIPROPIONYL PEROXID	≤ 27		≥ 73			OP8	+15	+20	3117	
DI-n-PROPYL PEROXYDIKARBONÁT	≤ 100 ≤ 77		≥ 23			OP3 OP5	-25 -20	-15 -10	3113 3113	
DISUKCINÁT PEROXID	> 72-100 ≤ 72					OP4	+10	+15	3102 3116	3)17)
DI-(3,5,5-TRIMETHYLHEXANOYL) PEROXID	> 52-82 ≤ 52 jako stabilní disperze ve vodě > 38 - 52 ≤ 38	≥ 18			≥ 28	OP7 OP8	0 +10	+10 +15	3115 3119 3119	
ETHYL 3,3-DI-(tert-AMYL)PEROXYBUTYRÁT	≤ 67	≥ 33				OP7	+20	+25	3109	
ETHYL 3,3-DI-(tert-BUTYL)PEROXYBUTYRÁT	> 77 - 100 ≤ 77 ≤ 52	≥ 23		≥ 48		OP5 OP7 OP7			3103 3105 3106	
tert-HEXYL PEROXYNEODEKANOÁT	≤ 71	≥ 29				OP7	0	+10	3115	
tert-HEXYL PEROXYPIVALÁT	≤ 72	≥ 28				OP7	+10	+15	3115	
3-HYDROXY-1,1-DIMETHYLBUTYL PEROXY-NEODEKANOÁT	≤ 77	≥ 23				OP7	-5	+5	3115	
	≤ 52 jako stabilní disperze ve vodě ≤ 52					OP8 OP8	-5 -5	+5 +5	3119 3117	3)
ISOPROPYL sec-BUTYL PEROXYDIKARBONÁT +DI-sec-BUTYL PEROXYDIKARBONÁT +DI-ISOPROPYL PEROXYDIKARBONÁT	≤ 32 + ≤ 15 - 18 ≤ 12 - 15 ≤ 52 + ≤ 28 + ≤ 22	≥ 38				OP7 OP5	-20 -20	-10 -10	3115 3111	3)
ISOPROPYLKUMYL HYDROPEROXID	≤ 72	≥ 28				OP8			3109	13)
p-MENTHYL HYDROPEROXID	> 72 - 100 ≤ 72	≥ 28				OP7 OP8			3105 3109	13) 27)
METHYLCYKLOHEXANON PEROXID(Y)	≤ 67	≥ 33				OP7	+35	+40	3115	
METHYL ETHYL KETON PEROXID(Y)	viz. poznámka 8)	≥ 48				OP5			3101	3)8)13)
	viz. poznámka 9)	≥ 55				OP7			3105	9)
	viz. poznámka 10)	≥ 60				OP8			3107	10)
METHYL ISOBUTYL KETON PEROXID (Y)	≤ 62	≥ 19				OP7			3105	22)

ORGANICKÝ PEROXID	Koncentrace (%)	Ředitlo Typ A (%)	Ředitlo Typ B (%) ¹⁾	Inertní tuhá látka (%)	Voda (%)	Způsob balení	Řízená teplota (°C)	Kritická teplota (°C)	UN-číslo druhov ^é položky	Vedlejší nebezpečí a poznámky
*	viz. poznámka 31)	≥ 70				OP8			3109	31)
ORGANICKÝ PEROXID, KAPALNÝ, VZOREK						OP2			3103	11)
ORGANICKÝ PEROXID, KAPALNÝ, VZOREK VYŽADUJÍCÍ ŘÍZENÍ TEPLoty						OP2			3113	11)
ORGANICKÝ PEROXID, TUHÝ, VZOREK						OP2			3104	11)
ORGANICKÝ PEROXID, TUHÝ, VZOREK VYŽADUJÍCÍ ŘÍZENÍ TEPLoty						OP2			3114	11)
3.3.5.7.7-PENTAMETHYL-1,2,4-TRIOXEPAN	≤ 100					OP8			3107	
KYSELINA PEROXYOCTOVÁ, TYP D, STABILIZOVANÁ	≤ 43					OP7			3105	13) 14) 19)
KYSELINA PEROXYOCTOVÁ, TYP E, STABILIZOVANÁ	≤ 43					OP8			3107	13) 15) 19)
KYSELINA PEROXYOCTOVÁ, TYP F, STABILIZOVANÁ	≤ 43					OP8			3109	13) 16) 19)
KYSELINA PEROXYLAUROVÁ	≤ 100					OP8	+35	+40	3118	
PIANYL HYDROPEROXID	> 56 – 100					OP7			3105	13)
^{a)}	≤ 56	≥ 44				OP8			3109	
POLYETHER POLY-terc-BUTYLPEROXY-KARBONÁT	≤ 52		≥ 48			OP8			3107	
1.1.3.3-TETRAMETHYLBUTYL HYDROPEROXID	≤ 100					OP7			3105	
1.1.3.3-TETRAMETHYLBUTYL PEROXY-2 ETHYLHEXANOÁT	≤ 100					OP7	+15	+20	3115	
1.1.3.3-PEROXYNEODEKANOÁT	≤ 72		≥ 28			OP7	-5	+5	3115	
^{a)}	≤ 52 jako stabilní disperze ve vodě					OP8	-5	+5	3119	
1.1.3.3-TETRAMETHYLBUTYL PEROXYPIVALÁT	≤ 77	≥ 23				OP7	0	+10	3115	
3.6.9-TRIETHYL-3.6.9-TRIMETHYL-1.4.7 TRIPEROXONAN	≤ 42	≥ 58				OP7			3105	28)
	≤ 17	≥ 18		≥ 65		OP8			3110	

Poznámky k pododdílu 2.2.52.4:

- 1) Ředidlo typu B může být vždy nahrazeno ředidlem typu A. Bod varu ředidla typu B musí být nejméně o 60 °C vyšší než je SADT organického peroxidu.
- 2) Obsah aktivního kyslíku $\leq 4,7\%$.
- 3) Vyžaduje se bezpečnostní značka pro vedlejší nebezpečí "VÝBUŠNÝ" podle vzoru 1 (viz 5.2.2.2.2).
- 4) Ředidlo může být nahrazeno di-terc-butylperoxidem.
- 5) Obsah aktivního kyslíku $\leq 9\%$.
- 6) Nejvýše 9% peroxidu vodíku; obsah aktivního kyslíku $\leq 10\%$.
- 7) Smí se použít pouze nekovových obalů.
- 8) Obsah aktivního kyslíku $> 10\%$ a $\leq 10,7\%$, s vodou nebo bez vody.
- 9) Obsah aktivního kyslíku $\leq 10\%$, s vodou nebo bez vody.
- 10) Obsah aktivního kyslíku $\leq 8,2\%$, s vodou nebo bez vody.
- 11) Viz 2.2.52.1.9.
- 12) Do 2000 kg na nádobu přiřazenou ORGANICKÉMU PEROXIDU TYPU F, na základě výsledků zkoušek ve velkém měřítku.
- 13) Vyžaduje se bezpečnostní značka pro vedlejší nebezpečí "ŽÍRAVÝ" podle vzoru č. 8 (viz 5.2.2.2.2).
- 14) Přípravky kyseliny peroxyoctové, které odpovídají kritériím Příručky zkoušek a kritérií, odstavce 20.4.3 d).
- 15) Přípravky kyseliny peroxyoctové, které odpovídají kritériím Příručky zkoušek a kritérií, odstavce 20.4.3 e).
- 16) Přípravky kyseliny peroxyoctové, které odpovídají kritériím Příručky zkoušek a kritérií, odstavce 20.4.3 f).
- 17) Přidáním vody k tomuto organickému peroxidu se zmenší jeho tepelná stabilita.
- 18) Pro koncentrace pod 80 % se nevyžaduje bezpečnostní značka pro vedlejší nebezpečí "ŽÍRAVÝ" podle vzoru č. 8 (viz 5.2.2.2.2).
- 19) Směsi s peroxidem vodíku, vodou a kyselinou(ami).
- 20) S ředidlem typu A, s vodou nebo bez vody.
- 21) S nejméně 25 % hm. ředidla typu A a k tomu ethylbenzen.
- 22) S nejméně 19 % hm. ředidla typu A a k tomu methylisobutylketon.
- 23) S méně než 6 % di-terc-butylperoxidu.
- 24) Do 8 % 1-isopropylhydroperoxy-4-isopropylhydroxybenzénu.
- 25) Ředidlo typu B s bodem varu vyšším než 110 °C.
- 26) Obsah hydroperoxidů $< 0,5\%$.
- 27) Pro koncentrace nad 56 % se vyžaduje bezpečnostní značka pro vedlejší nebezpečí "ŽÍRAVÝ" podle vzoru č. 8 (viz 5.2.2.2.2).
- 28) Obsah aktivního kyslíku $\leq 7,6\%$ v ředidle typu A s bodem varu v rozmezí 200 °C až 260 °C.
- 29) Nepodléhá ustanovením ADR pro třídu 5.2.
- 30) Ředidlo typu B s bodem varu $> 130\text{ °C}$.
- 31) Aktivní kyslík $\leq 6,7\%$.

2.2.61 Třída 6.1 Toxické látky**2.2.61.1 Kritéria**

2.2.61.1.1 Název třídy 6.1 zahrnuje látky, o nichž je ze zkušenosti známo nebo o nichž lze na základě pokusů se zvířaty usuzovat, že jejich příjmem dýchacími cestami, pokožkou nebo zažívacími orgány při jednorázovém nebo krátkodobém působení v poměrně malém množství může dojít k poškození zdraví nebo ke smrti člověka.

POZNÁMKA: *Geneticky změněné mikroorganismy a organismy musí být přiřazeny do této třídy, jestliže splňují podmínky pro tuto třídu.*

2.2.61.1.2 Látky třídy 6.1 jsou rozděleny následovně:

- T Toxické látky bez vedlejšího nebezpečí
 - T1 organické, kapalné
 - T2 organické, tuhé
 - T3 organokovové
 - T4 anorganické, kapalné
 - T5 anorganické, tuhé
 - T6 kapalné, používané jako pesticidy
 - T7 tuhé, používané jako pesticidy
 - T8 vzorky
 - T9 jiné toxické látky
- TF Toxické látky, hořlavé
 - TF1 kapalné
 - TF2 kapalné, používané jako pesticidy
 - TF3 tuhé
- TS Toxické látky, schopné samoohřevu, tuhé
- TW Toxické látky, které ve styku s vodou vyvíjejí hořlavé plyny
 - TW1 kapalné
 - TW2 tuhé
- TO Toxické látky, podporující hoření
 - TO1 kapalné
 - TO2 tuhé
- TC Toxické látky, žíravé
 - TC1 organické, kapalné
 - TC2 organické, tuhé
 - TC3 anorganické, kapalné
 - TC4 anorganické, tuhé
- TFC Toxické látky, hořlavé, žíravé.
- TFW Toxické látky, hořlavé, které ve styku s vodou vyvíjejí hořlavé plyny

Definice

2.2.61.1.3 Pro účely ADR se následujícími pojmy rozumí:

LD₅₀ (střední smrtelná dávka) pro akutní toxicitu při požití je statisticky odvozená jedna dávka látky, od níž lze očekávat, že způsobí během 14 dnů smrt 50 % mladých dospělých bílých krys, je-li podána orální cestou. Hodnota LD₅₀ se vyjadřuje jako podíl hmotnosti zkoušené látky ku hmotnosti pokusného zvířete (mg/kg).

LD₅₀-Hodnota pro akutní toxicitu při absorpci pokožkou je takové množství látky, které při nepřetržitém styku s holou pokožkou bílých králíků po dobu 24 hodin způsobí s největší pravděpodobností v průběhu 14 dnů smrt poloviny počtu skupiny zvířat. Počet zvířat, který je tomuto pokusu podroben, musí být dostatečně velký, aby byl získaný výsledek statisticky významný a odpovídal dobrým zvyklostem farmakologie. Výsledek se vyjadřuje v mg na kg tělesné hmotnosti.

LC₅₀-Hodnota pro akutní toxicitu při vdechnutí je taková koncentrace páry, mlhy nebo prachu, která při nepřetržitém vdechování mladými dospělými, samčími a samičími, bílými krysami po dobu jedné hodiny způsobí s největší pravděpodobností v průběhu 14 dnů smrt poloviny počtu skupiny zvířat. Tuhá látka musí být podrobena zkouškám, jestliže existuje nebezpečí, že nejméně 10 % celkové hmotnosti je složeno z prachu, který může být vdechnut, např. jestliže aerodynamický průměr této frakční částice činí nejvýše 10 μm. Kapalná látka musí být podrobena zkouškám, jestliže existuje nebezpečí, že se při netěsnosti obalu nebo cisterny, použitých pro přepravu, může vytvořit mlha. Jak u tuhých, tak i u kapalných látek se musí více než 90 % hmotnosti vzorku připraveného ke zkoušce sestávat z částic, které lze vdechnout, jak je výše popsáno. Výsledek se vyjadřuje v mg na litr vzduchu u prachu nebo mlhy a v ml na m³ vzduchu (ppm) u páry.

Klasifikace a přiřazení k obalovým skupinám

2.2.61.1.4 Látky třídy 6.1 musí být přiřazeny na základě svého stupně nebezpečí, které představují při přepravě, k následujícím obalovým skupinám:

Obalová skupina I: velmi toxické látky;
 Obalová skupina II: toxické látky;
 Obalová skupina III: slabě toxické látky

2.2.61.1.5 Látky, směsi, roztoky a předměty zařazené do třídy 6.1 jsou uvedeny v tabulce A kapitoly 3.2. Přiřazení látek, směsí a roztoků, které nejsou v tabulce A kapitoly 3.2 jmenovitě uvedeny, k vhodné položce pododdílu 2.2.61.3 a k příslušné obalové skupině podle ustanovení kapitoly 2.1 musí být provedeno podle následujících kritérií v 2.2.61.1.6 až 2.2.61.1.11.

2.2.61.1.6 Při posuzování stupně toxicity se musí vzít v úvahu zkušenosti z případů otrav osob, jakož i zvláštní vlastnosti posuzované látky, jako kapalný stav, vysoká těkavost, zvláštní pravděpodobnost příjmu pokožkou a zvláštní biologické účinky.

2.2.61.1.7 Pokud nejsou zkušenosti z pozorování učiněných na člověku, posoudí se stupeň toxicity z vyhodnocených výsledků pokusů na zvířatech podle následující tabulky:

Obalová skupina	Toxicita při požití LD50 (mg/kg)	Toxicita při absorpci pokožkou LD50 (mg/kg)	Toxicita při vdechnutí prachu a mlhy LC50 (mg/l)
I	≤ 5,0	≤ 50	≤ 0,2
II	> 5,0 a ≤ 50	> 50 a ≤ 200	>0,2 a ≤ 2,0
III ^a	> 50 a ≤ 300	> 200 a ≤ 1000	>2,0 a ≤ 4,0

^a Sztotvorné látky musí být přiřazeny k obalové skupině II, i když údaje o jejich toxicitě odpovídají kritériím obalové skupiny III.

2.2.61.1.7.1 Jestliže látka vykazuje při dvou nebo více různých způsobech příjmu různé hodnoty toxicity, použije se pro klasifikaci nejvyšší hodnota toxicity.

2.2.61.1.7.2 Látky, které splňují kritéria třídy 8 a vykazují toxicitu při vdechnutí prachu a mlhy (LC₅₀) odpovídající obalové skupině I, se mohou zařadit do třídy 6.1 jen tehdy, pokud zároveň toxicita při požití nebo při absorpci pokožkou odpovídá alespoň obalové skupině I nebo II. V opačném případě se látka, pokud je to potřeba, musí přiřadit ke třídě 8 (viz 2.2.8.1.5).

2.2.61.1.7.3 Tato kritéria pro toxicitu při vdechnutí prachu a mlhy spočívají na hodnotách LC₅₀ při době pokusu jedné hodiny a tyto hodnoty musí být také použity, pokud jsou k dispozici. Jsou-li však k dispozici jen hodnoty LC₅₀ 4-hodinového pokusu, mohou být takové hodnoty vynásobeny čtyřmi a výsledek pak může nahradit výše uvedené kritérium, tzn., že čtyřnásobná hodnota LC₅₀ (4 hodiny) se považuje za ekvivalentní hodnotě LC₅₀ (1 hodina).

Toxicita při vdechnutí par

2.2.61.1.8

Kapaliny, které vylučují toxické páry, je třeba přiřadit do následujících skupin, kde písmeno „V“ představuje koncentraci nasycené páry (prchavost) (v ml/m³ vzduchu) při 20 °C a normálním atmosférickém tlaku.

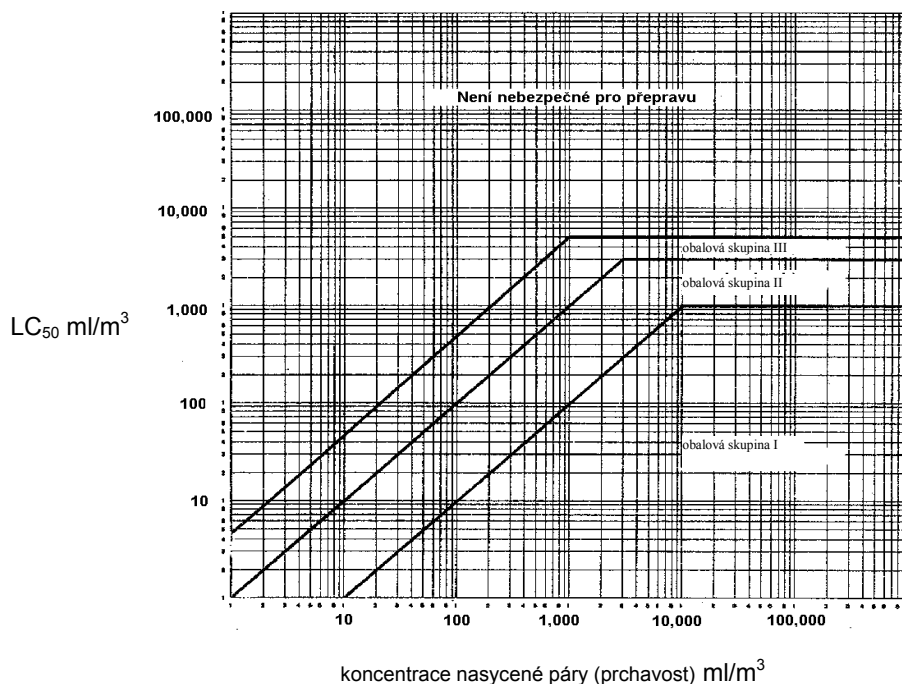
	Obalová skupina	
velmi toxické látky	I	Pokud $V \geq 10 LC_{50}$ a $LC_{50} \leq 1\,000 \text{ ml/m}^3$
toxické látky	II	Pokud $V \geq LC_{50}$ a $LC_{50} \leq 3\,000 \text{ ml/m}^3$ a nejsou splněna kritéria pro obalovou skupinu I.
slabě toxické látky	III ^a	Pokud $V \geq 1/5 LC_{50}$ a $LC_{50} \leq 5\,000 \text{ ml/m}^3$ a nejsou splněna kritéria pro obalovou skupinu I a II.

^a Slizotvorné látky musí být přiřazeny k obalové skupině II, i když údaje o jejich toxicitě odpovídají kritériím obalové skupiny III.

Tato kritéria toxicity při vdechnutí par spočívají na hodnotách LC_{50} při době pokusu 1 hodiny a tyto hodnoty musí být také použity, jsou-li k dispozici.

Jsou-li však k dispozici jen hodnoty LC_{50} ze 4-hodinového pokusu, mohou být takové hodnoty vynásobeny dvěma a výsledek může pak nahradit výše uvedená kritéria, tzn. dvojnásobná hodnota LC_{50} (4 hodiny) se považuje za ekvivalent k hodnotě LC_{50} (1 hodina).

Dělicí čáry obalových skupin - toxicita při vdechnutí par



Na tomto vyobrazení jsou pro usnadnění zařazení kritéria znázorněna graficky. Z důvodů jen přibližné přesnosti grafického znázornění musí se však látky, které leží v blízkosti nebo přímo na dělicí čáře, přezkoušet pomocí číselných kritérií.

Směsi kapalných látek

2.2.61.1.9

Směsi kapalných látek, které jsou při vdechnutí toxické, je třeba přiřadit k obalovým skupinám podle těchto kritérií:

2.2.61.1.9.1 Je-li hodnota LC_{50} pro každou toxickou látku, která je částí směsi, známa, lze určit obalovou skupinu následovně :

(a) výpočet hodnoty LC_{50} směsi:

$$LC_{50} (\text{směs}) = \frac{1}{\sum_{i=1}^n \frac{f_i}{LC_{50i}}}$$

kde :

$$f_i = \text{molární zlomek } i\text{-té části směsi}$$

$$LC_{50i} = \text{střední smrtelná koncentrace } i\text{-té části v ml/m}^3$$

(b) výpočet prchavosti každé části směsi :

$$V_i = P_i \times \frac{10^6}{101,3} \text{ v ml/m}^3$$

kde:

$$P_i = \text{parciální tlak } i\text{-té části v kPa při } 20 \text{ } ^\circ\text{C a při normálním atmosférickém tlaku}$$

(c) výpočet poměru prchavosti k hodnotě LC_{50} :

$$R = \sum_{i=1}^n \frac{V_i}{LC_{50i}}$$

(d) vypočítané hodnoty pro LC_{50} (směs) a R pak slouží k určení obalové skupiny směsi:

$$\text{Obalová skupina I: } R \geq 10 \text{ a } LC_{50} (\text{směs}) \leq 1000 \text{ ml/m}^3$$

$$\text{Obalová skupina II: } R \geq 1 \text{ a } LC_{50} (\text{směs}) \leq 3000 \text{ ml/m}^3 \text{ a jestliže směs nesplňuje kritéria obalové skupiny I}$$

$$\text{Obalová skupina III: } R \geq 1/5 \text{ a } LC_{50} (\text{směs}) \leq 5000 \text{ ml/m}^3 \text{ a jestliže směs nesplňuje kritéria obalové skupiny I nebo II.}$$

2.2.61.1.9.2 Není-li hodnota LC_{50} toxických komponentů známa, lze směs přiřadit k jedné z obalových skupin na základě dále popsaných zjednodušených zkoušek prahové toxicity. V takovém případě musí být určena a pro přepravu směsi použita nejpřísnější obalová skupina.

2.2.61.1.9.3 Směs bude přiřazena k obalové skupině I jen tehdy, jestliže splňuje obě následující kritéria:

(a) Vzorek kapalné směsi se rozpráší a rozředí se vzduchem tak, že vznikne zkušební ovzduší o 1000 ml/m^3 rozprášené směsi ve vzduchu. 10 bílých krys (5 sameček a 5 samic) se nechá v tomto zkušebním ovzduší po dobu 1 hodiny a následně se budou 14 dnů pozorovat. Jestliže nejméně 5 pokusných zvířat v průběhu sledovaného období 14 dnů uhynie, lze se domnívat, že směs má hodnotu LC_{50} rovnou nebo menší než 1000 ml/m^3 .

(b) Vzorek páry v rovnováze s kapalnou směsí se zředí devítinásobným objemem vzduchu, čímž se vytvoří zkušební ovzduší. 10 bílých krys (5 sameček a 5 samic) se nechá v tomto zkušebním ovzduší po dobu 1 hodiny a následně se budou 14 dnů pozorovat. Jestliže nejméně 5 pokusných zvířat v průběhu sledovaného období 14 dnů uhynie, lze se domnívat, že směs má prchavost, která je rovna nebo větší než desetnásobná hodnota LC_{50} směsi.

2.2.61.1.9.4 Směs bude přiřazena k obalové skupině II jen tehdy, jestliže splňuje obě následující kritéria, ne však kritéria pro obalovou skupinu I:

(a) Vzorek kapalné směsi se rozpráší a rozředí se vzduchem tak, že vznikne zkušební ovzduší o 3000 ml/m^3 rozprášené směsi ve vzduchu. 10 bílých krys (5 sameček a 5 samic) se nechá v tomto zkušebním ovzduší po dobu 1 hodiny a následně se budou 14 dnů pozorovat. Jestliže nejméně 5 pokusných zvířat v průběhu sledovaného období 14 dnů uhynie, lze se domnívat, že směs má hodnotu LC_{50} rovnou nebo menší než 3000 ml/m^3 .

- (b) Vzorek páry v rovnováze s kapalnou směsí se použije k vytvoření zkušební ovzduší. 10 bílých kryš (5 samečků a 5 samic) se nechá v tomto zkušebním ovzduší po dobu 1 hodiny a následně se budou 14 dnů pozorovat. Jestliže nejméně 5 pokusných zvířat v průběhu sledovaného období 14 dnů uhynie, lze se domnívat, že směs má prchavost, která je rovna nebo větší než hodnota LC₅₀ směsi.

2.2.61.1.9.5 Směs bude přiřazena k obalové skupině III jen tehdy, jestliže splňuje obě následující kritéria, ne však kritéria pro obalové skupiny I nebo II.

- (a) Vzorek kapalně směsi se rozpraší a rozředí se vzduchem tak, že vznikne zkušební ovzduší o 5000 ml/m³ rozprašené směsi ve vzduchu. 10 bílých kryš (5 samečků a 5 samic) se nechá v tomto zkušebním ovzduší po dobu 1 hodiny a následně se budou 14 dnů pozorovat. Jestliže nejméně 5 pokusných zvířat v průběhu sledovaného období 14 dnů uhynie, lze se domnívat, že směs má hodnotu LC₅₀ rovnou nebo menší než 5000 ml/m³.

- (b) Změří se koncentrace par (prchavost) kapalně směsi; je-li rovna nebo větší než 1000 ml/m³, lze se domnívat, že směs má prchavost, která je rovna nebo větší než 1/5 hodnoty LC₅₀ směsi.

Metody výpočtu toxicity směsí při požití a při absorpci pokožkou

2.2.61.1.10 Pro zařazení směsí třídy 6.1 a jejich přiřazení k vhodné obalové skupině podle kritérií pro toxicitu při požití a při absorpci pokožkou (viz 2.2.61.1.3) je nutné vypočítat akutní hodnotu LD₅₀ směsi.

2.2.61.1.10.1 Pokud směs obsahuje pouze jednu účinnou látku, jejíž hodnota LD₅₀ je známa, lze při chybějících spolehlivých údajích o akutní toxicitě při požití a při absorpci pokožkou u směsi, která má být přepravována, vypočítat hodnotu LD₅₀ při požití a při absorpci pokožkou následovně:

$$\text{LD}_{50} \text{ přípravku} = \frac{\text{LD}_{50} \text{ účinné látky} \times 100}{\text{podíl účinné látky (\% hm.)}}$$

2.2.61.1.10.2 Pokud směs obsahuje více než jednu účinnou látku, mohou být použity tři možné metody pro výpočet hodnoty LD₅₀ při požití a při absorpci pokožkou. Je třeba upřednostnit metodu, kterou se získají spolehlivé údaje pro akutní toxicitu při požití a při absorpci pokožkou konkrétní směsi, která se má přepravovat. Pokud nejsou spolehlivé přesné údaje k dispozici, je třeba použít jedné z následujících metod:

- (a) zařadit přípravek podle nejnebezpečnější složky směsi, jakoby tato složka byla přítomna ve stejné koncentraci jako je celková koncentrace všech účinných složek; nebo

- (b) použít vzorce

$$\frac{C_A}{T_A} + \frac{C_B}{T_B} + \dots + \frac{C_Z}{T_Z} = \frac{100}{T_M}$$

kde:

C = koncentrace v procentech složek A, B, Z směsi;

T = hodnota LD₅₀ při požití složek A, B, Z;

T_M = hodnota LD₅₀ při požití směsi.

POZNÁMKA: Tento vzorec lze také použít pro toxicitu při absorpci pokožkou, za předpokladu, že tyto informace jsou k dispozici ve stejné formě pro všechny složky. Použití tohoto vzorce nezohledňuje případné jevy stupňování nebo ochrany.

Klasifikace pesticidů

2.2.61.1.11 Všechny účinné látky pesticidů a jejich přípravky, u kterých jsou známy hodnoty LC_{50} a/nebo LD_{50} a které jsou zařazeny do třídy 6.1, musí být přiřazeny podle kritérií uvedených v 2.2.61.1.6 až 2.2.61.1.9 k odpovídajícím obalovým skupinám. Látky a přípravky, které vykazují vedlejší nebezpečí, musí být zařazeny podle tabulky převažujících nebezpečí v pododdíle 2.1.3.10 s přiřazením k odpovídajícím obalovým skupinám.

2.2.61.1.11.1 Není-li pro přípravek pesticidů známa hodnota LD_{50} pro požití nebo absorpci pokožkou, avšak je známa hodnota LD_{50} jeho účinné(ých) složky(ek), může být hodnota LD_{50} přípravku zjištěna použitím postupu uvedeného v 2.2.61.1.10.

POZNÁMKA: Údaje o toxicitě týkající se hodnoty LD_{50} určitého počtu běžných pesticidů lze nalézt v nejnovějším vydání dokumentu „The WHO Recommended Classification of Pesticides by Hazard and Guidelines to Classification“, který je možno si obstarat u Světové zdravotnické organizace (WHO) na adrese: International Programme on Chemical Safety, World Health Organisation (WHO), CH-1211, Geneva 27, Švýcarsko. Zatímco tento dokument může být použit jako zdroj dat pro hodnoty LD_{50} pesticidů, jeho klasifikační systém není možno použít pro účely zařazování pesticidů pro přepravu nebo pro jejich přiřazení k obalovým skupinám, které musejí odpovídat ustanovením ADR.

2.2.61.1.11.2 Oficiální pojmenování pro přepravu pesticidu se volí na základě aktivní složky, fyzikálního stavu pesticidu a všech vedlejších nebezpečí, které by mohl představovat (viz oddíl oddíl 3.1.2).

2.2.61.1.12 Jestliže látky třídy 6.1 vlivem příměsí spadají do jiných kategorií nebezpečnosti než těch, do kterých patří látky jmenovitě uvedené v tabulce A kapitoly 3.2, přiřadí se tyto směsi nebo roztoky k položkám, ke kterým na základě svého skutečného nebezpečí patří.

POZNÁMKA: K zařazování roztoků a směsí (jako jsou přípravky a odpady) viz také oddíl 2.1.3.

2.2.61.1.13 Na základě kritérií uvedených v 2.2.61.1.6 až 2.2.61.1.11 se může také zjistit, zda je jmenovitě uvedený roztok nebo jmenovitě uvedená směs, popřípadě roztok nebo směs, která obsahuje jmenovitě uvedenou látku, takové povahy, že tento roztok nebo tato směs nepodléhá ustanovením pro tuto třídu.

2.2.61.1.14 Látky, roztoky a směsi, s výjimkou látek a přípravků používaných jako pesticidy, které neodpovídají kritériím směrnice 67/548/EHS³ nebo 1999/45/ES⁴ v jejich platném znění a které proto nejsou zařazeny jako velmi toxické, toxické nebo zdraví škodlivé podle těchto směrnic v jejich platném znění, mohou být považovány za látky nepatřící do třídy 6.1.

2.2.61.2 **Látky nepřípuštěné k přepravě**

2.2.61.2.1 Chemicky nestálé látky třídy 6.1 je dovoleno přepravovat jen tehdy, jestliže byla učiněna potřebná opatření k zabránění jejich nebezpečnému rozkladu nebo polymeraci během přepravy. Za tímto účelem je zejména nutno dbát na to, aby nádoby a cisterny neobsahovaly látky, které by mohly takové reakce vyvolat.

2.2.61.2.2 Následující látky a směsi nejsou přípuštěny k přepravě:

- kyanovodík (bezvodý nebo v roztoku), který neodpovídá popisům UN čísel 1051, 1613, 1614 a 3294,
- karbonyly kovů s bodem vzplanutí nižším než 23 °C, jiné než UN 1259 TETRAKARBONYL NIKLU a UN 1994 PENTAKARBONYL ŽELEZA,
- 2,3,7,8-TETRACHLORDIBENZO-1,4-DIOXIN (TCDD) v koncentracích, které se považují podle kritérií v 2.2.61.1.7 za velmi toxické,
- UN 2249 DICHLORDIMETHYLETER, SYMETRICKÝ,

³ Směrnice Rady evropského společenství 67/548/EHS z 27. června 1967 o sblížení právních a správních předpisů týkající se klasifikace, balení a označování nebezpečných věcí (uveřejněná v úředním věstníku Evropského společenství č. L 196 z 16.8.1967)

⁴ Směrnice 1999/45/ES Evropského parlamentu a Rady z 31. května 1999 o sblížení právních a správních předpisů členských států týkající se klasifikace, balení a označování nebezpečných přípravků (Úřední věstník Evropského společenství č. L 200 z 30. července 1999).

- přípravky fosfidů bez přísad, které zabraňují vývinu toxických hořlavých plynů.

2.2.61.3 Seznam hromadných položek

	Klasifikační kód	UN-číslo	Pojmenování látek nebo předmětů
Toxické látky bez vedlejšího nebezpečí			
organické	kapalné^a	T1	1583 CHLORPIKRIN, SMĚS, J.N.
			1602 BARVIVO, KAPALNÉ, TOXICKÉ, J.N. nebo
			1602 MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, TOXICKÝ, J.N.
			1693 LÁTKA PRO PŘÍPRAVU SLZNÉHO PLYNU, KAPALNÁ, J.N.
			1851 LÉČIVA, KAPALNÁ, TOXICKÁ, J.N.
			2206 ISOKYANÁTY, TOXICKÉ, J.N. nebo
			2206 ISOKYANÁT, ROZTOK, TOXICKÝ, J.N.
			3140 ALKALOIDY, KAPALNÉ, J.N. nebo
			3140 SOLI ALKALOIDŮ, KAPALNÉ, J.N.
			3142 PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, TOXICKÝ, J.N.
			3144 SLOUČENINA NIKOTINU, KAPALNÁ, J.N. nebo
			3144 PŘÍPRAVKY, NIKOTINOVÉ, KAPALNÉ, J.N.
			3172 TOXINY, ZÍSKANÉ Z ŽIVÝCH ORGANISMŮ, KAPALNÉ, J.N.
			3276 NITRILY, KAPALNÉ, TOXICKÉ, J.N.
			3278 SLOUČENINA FOSFORU ORGANICKÁ, KAPALNÁ, TOXICKÁ, J.N.
			3381 LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, J.N., s LC ₅₀ nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC ₅₀
			3382 LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, J.N., s LC ₅₀ nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC ₅₀
2810 LÁTKA TOXICKÁ, KAPALNÁ, ORGANICKÁ, J.N.			
organické	tuhé^{a,b}	T2	1544 ALKALOIDY, TUHÉ, J.N. nebo
			1544 SOLI ALKALOIDŮ, TUHÉ, J.N.
			1601 PROSTŘEDEK DEZINFEKČNÍ, TUHÝ, TOXICKÝ, J.N.
			1655 SLOUČENINA NIKOTINU, TUHÁ, J.N. nebo
			1655 PŘÍPRAVKY NIKOTINOVÉ, TUHÉ, J.N.
			3448 LÁTKA PRO PŘÍPRAVU SLZNÉHO PLYNU, TUHÁ, J.N.
			3143 BARVIVO, TUHÉ, TOXICKÉ, J.N. nebo
			3143 MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, TOXICKÝ, J.N.
			3462 TOXINY, ZÍSKANÉ Z ŽIVÝCH ORGANISMŮ, TUHÉ, J.N.
			3249 LÉČIVA, TUHÁ, TOXICKÁ, J.N.
			3464 SLOUČENINA FOSFORU, ORGANICKÁ, TUHÁ, TOXICKÁ, J.N.
			3439 NITRILY, TUHÉ, TOXICKÉ, J.N.
			2811 LÁTKA TOXICKÁ, TUHÁ, ORGANICKÁ, J.N.
organokovové^{c, d}		T3	2026 SLOUČENINA FENYLRTUŤNATÁ, J.N.
			2788 SLOUČENINA CÍNU ORGANICKÁ, KAPALNÁ, J.N.
			3146 SLOUČENINA CÍNU ORGANICKÁ, TUHÁ, J.N.

		3280	SLOUČENINA ARSENU, ORGANICKÁ, KAPALNÁ, J.N.
		3465	SLOUČENINA ARSENU, ORGANICKÁ, TUHÁ, J.N.
		3281	KARBONYLY KOVŮ, KAPALNÉ, J.N.
		3466	KARBONYLY KOVŮ, TUHÉ, J.N.
		3282	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, TOXICKÁ, J.N.
		3467	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, TOXICKÁ, J.N.
		1556	SLOUČENINA ARSENU, KAPALNÁ, J.N. anorganická. zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.
		1935	KYANID, ROZTOK, J.N.
	kapalné^e	T4	2024 SLOUČENINA RTUTI, KAPALNÁ, J.N.
			3141 SLOUČENINA ANTIMONU, ANORGANICKÁ, KAPALNÁ, J.N.
			3440 SLOUČENINA SELENU, KAPALNÁ, J.N.
			3381 LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, J.N., s LC ₅₀ nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC ₅₀
			3382 LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, J.N., s LC ₅₀ nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC ₅₀
			3287 LÁTKA TOXICKÁ, KAPALNÁ, ANORGANICKÁ, J.N.
		1549	SLOUČENINA ANTIMONU, ANORGANICKÁ, TUHÁ, J.N.
		1557	SLOUČENINA ARSENU, TUHÁ, J.N. anorganická, zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.
anorganické			1564 SLOUČENINA BARYA, J.N.
			1566 SLOUČENINA BERYLIA, J.N.
			1588 KYANIDY ANORGANICKÉ, TUHÉ, J.N.
			1707 SLOUČENINA THALIA, J.N.
			2025 SLOUČENINA RTUTI, TUHÁ, J.N.
	tuhé^{f,g}	T5	2291 SLOUČENINA OLOVA, ROZPUSTNÁ, J.N.
			2570 SLOUČENINA KADMIA
			2630 SELENANY nebo
			2630 SELENIČITANY
			2856 HEXAFLUOROKŘEMIČITANY, J.N.
			3283 SLOUČENINA SELENU, TUHÁ, J.N.
			3284 SLOUČENINA TELURU, J.N.
			3285 SLOUČENINA VANADU, J.N.
			3288 LÁTKA TOXICKÁ, TUHÁ, ANORGANICKÁ, J.N.
		2992	PESTICID - KARBAMÁT, KAPALNÝ, TOXICKÝ
		2994	PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ
		2996	PESTICID-ORGANICKÁ SLOUČENINA CHLORU, KAPALNÝ, TOXICKÝ
		2998	PESTICID - TRIAZIN, KAPALNÝ, TOXICKÝ
		3006	PESTICID - THIOKARBAMÁT, KAPALNÝ, TOXICKÝ
		3010	PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ
		3012	PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ
	kapalné^h	T6	3014 PESTICID-SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ
			3016 PESTICID - BIPYRIDYL, KAPALNÝ, TOXICKÝ

pesticidy		3018 PESTICID-ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ
		3020 PESTICID-ORGANICKÁ SLOUČENINA CÍNU, KAPALNÝ, TOXICKÝ
		3026 PESTICID-DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ
		3348 PESTICID-DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ
		3352 PESTICID-PYRETHROID, KAPALNÝ, TOXICKÝ
		2902 PESTICID, KAPALNÝ, TOXICKÝ, J.N.
		2757 PESTICID-KARBAMÁT, TUHÝ, TOXICKÝ
		2759 PESTICID NA BÁZI ARSENU, TUHÝ, TOXICKÝ
		2761 PESTICID-ORGANICKÁ SLOUČENINA CHLORU, TUHÝ, TOXICKÝ
		2763 PESTICID NA BÁZI TRIAZINU, TUHÝ, TOXICKÝ
		2771 PESTICID NA BÁZI THIOKARBAMÁTU, TUHÝ, TOXICKÝ
		2775 PESTICID NA BÁZI MĚDI, TUHÝ, TOXICKÝ
		2777 PESTICID NA BÁZI RTUTI, TUHÝ, TOXICKÝ
		2779 PESTICID-SUBSTITUOVANÝ NITROFENOL, TUHÝ, TOXICKÝ
		2781 PESTICID NA BÁZI BIPYRIDYLU, TUHÝ, TOXICKÝ
	tuhé ^h T7	2783 PESTICID-ORGANICKÁ SLOUČENINA FOSFORU, TUHÝ, TOXICKÝ
		2786 PESTICID-ORGANICKÁ SLOUČENINA CÍNU, TUHÝ, TOXICKÝ
		3027 PESTICID-DERIVÁT KUMARINU, TUHÝ, TOXICKÝ
		3048 PESTICID - FOSFID HLINÍKU
		3345 PESTICID-DERIVÁT KYSELINY FENOXYOCTOVÉ, TUHÝ, TOXICKÝ
		3349 PESTICID-PYRETHROID, TUHÝ
		2588 PESTICID, TUHÝ, TOXICKÝ, J.N.
Vzorky	T8	3315 VZOREK CHEMICKÝ, TOXICKÝ
jiné toxické látky ⁱ	T9	3243 LÁTKY TUHÉ, OBSAHUJÍCÍ TOXICKOU KAPALNOU LÁTKU, J.N.
		3071 THIOLY (merkaptany), KAPALNÉ, TOXICKÉ, HOŘLAVÉ, J.N. nebo
		3071 SMĚSI THIOLŮ (merkaptanů), KAPALNÉ, TOXICKÉ, HOŘLAVÉ, J.N.
		3080 ISOKYANÁTY, TOXICKÉ, HOŘLAVÉ, J.N. nebo
		3080 ISOKYANÁT, ROZTOK, TOXICKÝ, HOŘLAVÝ, J.N.
		3275 NITRILY, TOXICKÉ, HOŘLAVÉ, J.N.
		3279 SLOUČENINA FOSFORU ORGANICKÁ, TOXICKÁ, HOŘLAVÁ, J.N.
		3383 LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, J.N., s LC ₅₀ nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC ₅₀
		3384 LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, J.N., s LC ₅₀ nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC ₅₀
		2929 LÁTKA TOXICKÁ, KAPALNÁ, HOŘLAVÁ, ORGANICKÁ, J.N.
	kapalné ^{j,k} TF1	

hořlavé TF		2991	PESTICID-KARBAMÁT, KAPALNÝ, TOXICKÝ, HOŘLAVÝ
		2993	PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ
		2995	PESTICID-ORGANICKÁ SLOUČENINA CHLORU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ
		2997	PESTICID - TRIAZIN, KAPALNÝ, TOXICKÝ, HOŘLAVÝ
		3005	PESTICID - THIOKARBAMÁT, KAPALNÝ, TOXICKÝ, HOŘLAVÝ
		3009	PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ
		3011	PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ
	pesticidy, kapalné TF2 (bod vzplanutí nejméně 23 °C)	3013	PESTICID SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ, HOŘLAVÝ
		3015	PESTICID - BIPYRIDYL , KAPALNÝ, TOXICKÝ, HOŘLAVÝ
		3017	PESTICID-ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ
		3019	PESTICID-ORGANICKÁ SLOUČENINA CÍNU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ
		3025	PESTICID-DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ
		3347	PESTICID-DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ
		3351	PESTICID-PYRETHROID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ
		2903	PESTICID KAPALNÝ, TOXICKÝ, HOŘLAVÝ, J.N.
	tuhé TF3	1700	SVÍCE SLZOTVORNÉ
		2930	LÁTKA TOXICKÁ, TUHÁ, HOŘLAVÁ, ORGANICKÁ, J.N.
	TS	3124	LÁTKA TOXICKÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.
tuhé, schopné samoohřevu^c			
	kapalné TW1	3385	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N., s LC ₅₀ nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC ₅₀
		3386	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N., s LC ₅₀ nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC ₅₀
		3123	LÁTKA TOXICKÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.
reagující s vodou^d TW	tuhéⁿ TW2	3125	LÁTKA TOXICKÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.
podporující hoření^l TO	kapalné TO1	3387	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N., s LC ₅₀ nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC ₅₀
		3388	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N., s LC ₅₀ nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC ₅₀

žiravé ^m TC	organické	tuhé	TO2	3122	LÁTKA TOXICKÁ, KAPALNÁ, PŮSOBÍCÍ JAKO OXIDAČNÍ ČINIDLO, J.N.	
				3086	LÁTKA TOXICKÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	
		kapalné	TC1	3277	CHLORFORMIÁTY, TOXICKÉ, ŽÍRAVÉ, J.N.	
				3361	CHLORSILANY, TOXICKÉ, ŽÍRAVÉ, J.N.	
				3389	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, ŽÍRAVÁ, J.N., s LC ₅₀ nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC ₅₀	
				3390	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, ŽÍRAVÁ, J.N., s LC ₅₀ nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC ₅₀	
				2927	LÁTKA TOXICKÁ, KAPALNÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	
		tuhé	TC2	2928	LÁTKA TOXICKÁ, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	
		anorganické	kapalné	TC3	3389	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, ŽÍRAVÁ, J.N., s LC ₅₀ nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC ₅₀
	3390				LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, ŽÍRAVÁ, J.N., s LC ₅₀ nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC ₅₀	
			3289	LÁTKA TOXICKÁ, KAPALNÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.		
	tuhé		TC4	3290	LÁTKA TOXICKÁ, TUHÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.	
hořlavé, žiravé TFC				2742	CHLORKARBONÁTY (CHLORFORMÁTY), TOXICKÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N.	
				3362	CHLORSILANY, TOXICKÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N.	
				3488	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, ŽÍRAVÁ, J.N., s LC ₅₀ nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC ₅₀	
				3489	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, ŽÍRAVÁ, J.N., s LC ₅₀ nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC ₅₀	
hořlavé, reagující s vodou TFW				3490	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N., s LC ₅₀ nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC ₅₀	
				3491	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N., s LC ₅₀ nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC ₅₀	

POZNÁMKY:

- a Látky a přípravky obsahující alkaloidy nebo nikotin používané jako pesticidy jsou přiřazeny pod UN 2588 PESTICID, TUHÝ, TOXICKÝ, J.N., UN 2902 PESTICID, KAPALNÝ, TOXICKÝ, J.N. nebo UN 2903 PESTICID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, J.N.

- b Účinné látky, jakož i přípravky nebo směsi látek určených pro laboratorní a pokusné účely, jakož i k výrobě farmaceutických výrobků, s jinými látkami musí být zařazeny podle své toxicity (viz 2.2.61.1.7 až 2.2.61.1.11).
- c Slabě toxické látky schopné samoohřevu a samozápalné organokovové sloučeniny jsou látkami třídy 4.2.
- d Slabě toxické látky reagující s vodou a organokovové sloučeniny reagující s vodou jsou látkami třídy 4.3.
- e Fulminát rtuťnatý, navlhčený, s nejméně 20 % hm. vody nebo směsi alkoholu a vody je látkou třídy 1, UN číslo 0135.
- f Ferikyanidy, feroxyanidy, jakož i thiokyanatany alkalické a amonné nepodléhají ustanovením ADR.
- g Olověné soli a olověná barviva, které smíchány v poměru 1 : 1000 s kyselinou chlorovodíkovou 0,07 M a míchány po dobu jedné hodiny při teplotě $23\text{ °C} \pm 2\text{ °C}$ vykazují rozpustnost nejvýše 5 %, nepodléhají ustanovením ADR.
- h Předměty napuštěné tímto pesticidem, jako jsou lepenkové podložky, papírové proužky, kuličky vaty, plastové fólie, v hermeticky uzavřených obalech nepodléhají ustanovením ADR.
- i Směsi tuhých látek, které nepodléhají ustanovením ADR, a toxických kapalných látek mohou být přepravovány pod UN číslem 3243, bez toho, že by se předtím použila klasifikační kritéria pro třídu 6.1, za podmínky, že v době naložky látky nebo uzavírání obalu, kontejneru nebo dopravní jednotky není vidět žádná uvolněná kapalina. Každý obal musí odpovídat konstrukčnímu typu, který úspěšně obstál při zkoušce těsnosti pro obalovou skupinu II. Tato položka nesmí být použita pro tuhé látky, které obsahují kapalnou látku obalové skupiny I.
- j Velmi toxické nebo toxické hořlavé kapalné látky s bodem vzplanutí pod 23 °C - vyjma látek, které jsou při vdechnutí velmi toxické, tzn. UN čísel 1051, 1092, 1098, 1143, 1163, 1182, 1185, 1238, 1239, 1244, 1251, 1259, 1613, 1614, 1695, 1994, 2334, 2382, 2407, 2438, 2480, 2482, 2484, 2485, 2606, 2929, 3279 a 3294 - jsou látkami třídy 3.
- k Slabě toxické hořlavé kapalné látky s bodem vzplanutí od 23 °C do 60 °C , včetně limitních hodnot, s výjimkou látek a přípravků sloužících jako pesticidy, jsou látkami třídy 3.
- l Slabě toxické látky podporující hoření jsou látkami třídy 5.1.
- m Slabě toxické a slabě žíravé látky jsou látkami třídy 8.
- n Fosfidy kovů přiřazené k UN číslům 1360, 1397, 1432, 1714, 2011 a 2013 jsou látkami třídy 4.3.

2.2.62 Třída 6.2 Infekční látky

2.2.62.1 Kritéria

2.2.62.1.1 Název třídy 6.2 zahrnuje látky schopné vyvolat nákazu. Pro účely ADR jsou infekčními látkami ty látky, o kterých je známo nebo lze důvodně předpokládat, že obsahují původce nemocí. Původci nemocí jsou definováni jako mikroorganismy (včetně bakterií, virů, rickettsií, parazitů a plísní) a jiní činitelé, jako jsou priony, které(kteří) mohou způsobit onemocnění u lidí nebo zvířat.

POZNÁMKA 1: *Geneticky změněné mikroorganismy a organismy, biologické produkty, diagnostické vzorky a infikovaná živá zvířata se zařadí do této třídy, jestliže splňují podmínky pro tuto třídu.*

POZNÁMKA 2: *Toxiny z rostlin, zvířat nebo bakterií, které neobsahují žádnou infekční látku nebo organismy, nebo které nejsou obsaženy v infekčních látkách nebo organismech, jsou látkami třídy 6.1, UN číslo 3172 nebo 3462.*

2.2.62.1.2 Látky třídy 6.2 jsou rozděleny následovně:

I1	Infekční látky nebezpečné pro lidi
I2	Infekční látky nebezpečné jen pro zvířata
I3	Klinické odpady
I4	Látky biologické

Definice

2.2.62.1.3 Pro účely ADR se následujícími pojmy rozumí:

„*Biologické produkty*“ jsou produkty z živých organismů, které se vyrábějí a rozesílají v souladu s předpisy příslušných národních orgánů, které mohou uložit podmínku zvláštních povolení. Biologické produkty se používají buď pro prevenci, léčení nebo diagnostikování nemocí u lidí nebo zvířat, nebo pro vývojové, pokusné nebo výzkumné účely s tím spojené. Zahrnují hotové výrobky nebo meziprodukty, jako očkovací látky, ale nejsou na ně omezeny;

„*Kultury*“ jsou výsledkem procesu, při kterém se původci nemocí záměrně rozmnožují. Tato definice nezahrnuje lidské nebo zvířecí vzorky od pacientů, jak jsou definovány v tomto odstavci.

„*Medicínské nebo klinické odpady*“ jsou odpady pocházející z lékařského ošetření zvířat nebo lidí nebo z biologického výzkumu.

„*Vzorky od pacientů*“ jsou lidské nebo materiály živočišného původu odebrané přímo z lidí nebo zvířat včetně, avšak ne pouze, výkalů, výměšků, krve a jejich složek, tkáně a tkáňových tekutin a částí těl, které jsou přepravovány k takovým účelům, jako je výzkum, diagnostika, vyšetření, léčení nemocí a prevence.

Klasifikace

2.2.62.1.4 Infekční látky musí být zařazeny do třídy 6.2 a přiřazeny k UN číslům 2814, 2900, 3291 nebo popřípadě 3373.

Infekční látky se dělí do těchto kategorií:

2.2.62.1.4.1 **Kategorie A:** Infekční látka, která je přepravována ve formě, která je schopna, dojde-li k vystavení jejímu účinku, způsobit trvalou invaliditu, nemoc ohrožující život nebo smrtelnou nemoc jinak zdravých lidí nebo zvířat. Informativní příklady látek, které splňují tato kritéria, jsou uvedeny v tabulce tohoto odstavce.

POZNÁMKA: *Vystavení účinku látky nastane, jestliže látka unikne ven z ochranného obalu a dojde k fyzickému kontaktu s lidmi nebo zvířaty.*

(a) Infekční látky splňující tato kritéria, které způsobují nemoc u lidí, nebo u lidí i zvířat musí být přiřazeny k UN číslu 2814. Infekční látky, které způsobují nemoc jen u zvířat, musí být přiřazeny k UN číslu 2900;

- (b) Přiřazení k UN číslu 2814 nebo k UN číslu 2900 musí být založeno na známých lékařských chorobopisech a známých příznamech nemoci u lidí nebo zvířat, endemických místních podmínkách nebo odborném posouzení individuálního stavu člověka nebo zvířete.

POZNÁMKA 1: Oficiální pojmenování pro přepravu UN čísla 2814 je **LÁTKA INFEKČNÍ, NEBEZPEČNÁ PRO LIDI**. Oficiální pojmenování pro přepravu UN čísla 2900 je **LÁTKA INFEKČNÍ, NEBEZPEČNÁ pouze PRO ZVÍŘATA**.

POZNÁMKA 2: Následující tabulka není vyčerpávající. Infekční látky, včetně nových nebo nově se objevivších původců nemocí, které nejsou uvedeny v tabulce, avšak které splňují stejná kritéria, musí být přiřazeny ke kategorii A. Kromě toho, je-li pochybnost, zda látka splňuje či nespĺňuje tato kritéria, musí být začleněna do kategorie A.

POZNÁMKA 3: Ty mikroorganismy, které jsou v následující tabulce napsány kurzívou, jsou bakterie, mykoplazmy, rickettsie nebo plísně.

JMENOVIITÉ PŘÍKLADY INFEKČNÍCH LÁTEK ZAHRNUTÝCH DO KATEGORIE A V JAKÉKOLI FORMĚ, NENÍ-LI PŘÍMO UVEDENO JINAK (2.2.62.1.4.1)	
UN číslo a pojmenování	Mikroorganismus
UN2814 Infekční látky nebezpečné pro lidi	<i>Bacillus anthracis</i> (pouze kultury) <i>Brucella abortus</i> (pouze kultury) <i>Brucella melitensis</i> (pouze kultury) <i>Brucella suis</i> (pouze kultury) <i>Burkholderia mallei</i> – <i>Pseudomonas mallei</i> – vozňřívka (pouze kultury) <i>Burkholderia pseudomallei</i> – <i>Pseudomonas pseudomallei</i> (pouze kultury) <i>Chlamydia psittaci</i> – ptačí kmemy (pouze kultury) <i>Clostridium botulinum</i> (pouze kultury) <i>Coccidioides immitis</i> (pouze kultury) <i>Coxiella burnetii</i> (pouze kultury) virus konžsko-krymské hemoragické horečky virus dengue (pouze kultury) virus /americké/ východní koňské encefalomyelitidy (pouze kultury) <i>Escherichia coli</i> , verotoxigenická (pouze kultury)* virus Ebola virus Flexal <i>Francisella tularensis</i> (pouze kultury) virus Guanarito virus Hantaan Hantaviry vyvolávající hemoragickou horečku s ledvinovým syndromem virus Hendra virus hepatitidy B (pouze kultury) virus herpes B (pouze kultury) virus lidské imunodeficiencie /HIV/ (pouze kultury) vysoce patogenní virus moru drůbeže /ptačí chřípky/ (pouze kultury) virus japonské encefalitidy (pouze kultury) virus Junin /argentinská hemoragická horečka/ virus horečky Kyasanurského lesa /indická klíšřřová horečka/ virus horečky Lassa virus Machupo /bolivjská hemoragická horečka/ virus Marburg virus opičích neštovic <i>Mycobacterium tuberculosis</i> (pouze kultury) * virus Nipah virus omské hemoragické horečky virus poliomyelitidy /dětské obrny/ (pouze kultury) virus vztekliny /Rabies virus/ (pouze kultury) <i>Rickettsia prowazekii</i> (pouze kultury) <i>Rickettsia rickettsii</i> (pouze kultury) virus horečky Rift / Rift Valley/ (pouze kultury) virus ruské jaro-letní encefalitidy (pouze kultury) virus Sabia <i>Shigella dysenteriae</i> typ 1 (pouze kultury) *

JMENOVITÉ PŘÍKLADY INFEKČNÍCH LÁTEK ZAHRNUTÝCH DO KATEGORIE A V JAKÉKOLI FORMĚ, NENÍ-LI PŘÍMO UVEDENO JINAK (2.2.62.1.4.1)	
UN číslo a pojmenování	Mikroorganismus
	virus klíšťové encefalitidy (pouze kultury) virus pravých neštovic /Variola/ virus venezuelské koňské encefalomyelitidy (pouze kultury) virus západní nilské /západonilské/ encefalomyelitidy (pouze kultury) virus žluté zimnice (pouze kultury) <i>Yersinia pestis</i> (pouze kultury)
UN 2900 Infekční látky nebezpečné jen pro zvířata	virus afrického moru prasat (pouze kultury) ptačí paramyxovirus typ 1 – Velogenový virus newcastleské choroby drůbeže (pouze kultury) virus klasického moru prasat (pouze kultury) virus slintavky a kulhavky (pouze kultury) virus nodulární dermatitidy skotu (pouze kultury) <i>Mycoplasma mycoides</i> – infekční hovězí pleuropneumonie (pouze kultury) virus moru malých přežvýkavců (pouze kultury) virus dobytčího moru (pouze kultury) virus ovčích neštovic (pouze kultury) virus kozích neštovic (pouze kultury) virus vezikulární stomatitidy prasat (pouze kultury) virus vezikulární stomatitidy (pouze kultury)

* Jsou-li kultury určeny pro diagnostické nebo klinické účely, mohou být zařazeny jako infekční látky kategorie B.

2.2.62.1.4.2 Kategorie B: Infekční látka, která nesplňuje kritéria pro zařazení do kategorie A. Infekční látky v kategorii B musí být přiřazeny k UN číslu 3373.

POZNÁMKA: *Oficiální pojmenování pro přepravu UN čísla 3373 je LÁTKY BIOLOGICKÉ, KATEGORIE B*

2.2.62.1.5 Vynětí z platnosti

2.2.62.1.5.1 Látky, které neobsahují infekční látky, nebo látky, u nichž není pravděpodobné, že způsobí nemoc u lidí nebo zvířat, nepodléhají ustanovením ADR, ledaže splňují kritéria pro zařazení do jiné třídy.

2.2.62.1.5.2 Látky obsahující mikroorganismy, které jsou nepatogenní vůči lidem nebo zvířatům, nepodléhají ustanovením ADR, ledaže splňují kritéria pro zařazení do jiné třídy.

2.2.62.1.5.3 Látky v takové formě, že všichni přítomní původci nemoci byli neutralizováni nebo deaktivováni, takže už nepředstavují zdravotní riziko, nepodléhají ustanovením ADR, ledaže splňují kritéria pro zařazení do jiné třídy.

POZNÁMKA: *Lékařské vybavení, které bylo zbaveno volné kapaliny, je považováno za splňující požadavky tohoto odstavce a nepodléhá ustanovením ADR.*

2.2.62.1.5.4 Látky, u nichž je koncentrace původců nemoci na stejné úrovni jako v přírodě (včetně vzorků potravin a vody) a které nejsou považovány za látky představující významné riziko infekce, nepodléhají ustanovením ADR, ledaže splňují kritéria pro zařazení do jiné třídy.

2.2.62.1.5.5 Suché krevní skvrny, získané odkápnutím krve na absorpční materiál, nebo vzorky pro zjištění krve ve výkalech a krev nebo krevní složky, které byly shromážděny pro účely transfúze nebo pro přípravu krevních produktů k použití pro transfúze nebo transplantace a jakékoli tkáně nebo orgány určené pro použití při transplantacích nepodléhají ustanovením ADR.

2.2.62.1.5.6 Lidské nebo zvířecí vzorky, u nichž je minimální pravděpodobnost, že jsou v nich přítomni původci nemoci, nepodléhají ustanovením ADR, jsou-li vzorky přepravovány v obalu, který zabrání jakémukoli úniku a který je označen slovy „VYJMUTÝ LIDSKÝ VZOREK“ nebo „VYJMUTÝ ZVÍŘECÍ VZOREK“.

Obal je považován za obal vyhovující výše uvedeným požadavkům, jestliže splňuje následující podmínky:

- (a) Obal sestává ze tří částí:
- (i) jedné nebo více těsných primárních nádob;
 - (ii) těsného sekundárního obalu; a
 - (iii) vnějšího obalu přiměřené pevnosti vzhledem k jeho vnitřnímu objemu, hmotnosti a zamýšlenému použití s alespoň jedním povrchem o rozměrech nejméně 100 x 100 mm;
- (b) Pro kapaliny musí být mezi primární nádobu(y) a sekundární obal vložen savý materiál v dostatečném množství, aby pohltil celý obsah tak, aby během přepravy žádný únik kapalně látky nezasáhl vnější obal a neporušil celistvost vycpávkového materiálu;
- (c) Je-li více křehkých primárních nádob vloženo do jednoho sekundárního obalu, musí být buď jednotlivě zabaleny, nebo navzájem odděleny, aby se zamezilo jejich vzájemnému dotyku.

POZNÁMKA 1: *K určení, zda je látka vyňata podle tohoto odstavce, se vyžaduje odborné posouzení. Toto posouzení by mělo být založeno na předchozích lékařských případech, příznacích a individuálních okolnostech zdroje, lidského nebo zvířecího, a na endemických místních podmínkách. Příklady vzorků, které mohou být přepravovány podle tohoto odstavce zahrnují:*

- vzorky krve nebo moči ke zjištění hladiny cholesterolu, hladiny cukru, hladiny hormonů nebo prostatických specifických protilátek (PSA);
- vzorky vyžadované k ověření funkce orgánů, jako srdce, jater nebo ledvin, u lidí nebo zvířat s neinfekčními chorobami, nebo pro terapeutickou kontrolu léků;
- vzorky odebrané na žádost pojišťovacích společností nebo zaměstnavatelů ke zjištění přítomnosti drog nebo alkoholu;
- vzorky odebrané pro těhotenské testy;
- biopsie ke zjištění rakoviny; a
- zjišťování protilátek u lidí nebo zvířat pokud není žádná obava z infekce (např. vyhodnocení imunity vyvolané vakcínou, diagnostikování autoimunní nemoci atd.).

POZNÁMKA 2: *Pro leteckou dopravu musí obaly pro vzorky vyňaté podle tohoto odstavce splňovat podmínky uvedené pod písmeny (a) až (c).*

2.2.62.1.5.7

S výjimkou:

- (a) medicínského odpadu (UN 3291);
- (b) lékařských přístrojů nebo zařízení kontaminovaných nebo obsahujících infekční látky kategorie A (UN 2814 nebo UN 2900); a
- (c) lékařských přístrojů nebo zařízení kontaminovaných nebo obsahujících jiné nebezpečné látky, které vyhovují definici jiné třídy,

lékařské přístroje nebo zařízení potenciálně kontaminované nebo obsahující infekční látky, které jsou přepravovány k desinfekci, čištění, sterilizaci, opravě nebo k ocenění zařízení nepodléhají jiným ustanovením ADR, než jsou ustanovení tohoto odstavce, jsou-li zabaleny do obalů konstruovaných a vyrobených takovým způsobem, že za normálních podmínek přepravy nemohou prasknout, být propíchnuty nebo propouštět svůj obsah. Obaly musí být konstruovány tak, aby splnily konstrukční požadavky uvedené v 6.1.4 nebo 6.6.5.

Tyto obaly musí splňovat všeobecná ustanovení pro balení v 4.1.1.1 a 4.1.1.2 a být schopny zadržet lékařské přístroje a zařízení při pádu z výšky 1,2 m.

Obaly musí být označeny nápisem „POUŽITÝ LÉKAŘSKÝ PŘÍSTROJ“ nebo „POUŽITÉ LÉKAŘSKÉ ZAŘÍZENÍ“. Při použití přepravních obalových souborů musí být tyto soubory označeny stejným způsobem, kromě případů, kdy nápis zůstává viditelným.

2.2.62.1.6 (Vyhrazeno)

2.2.62.1.7 (Vyhrazeno)

2.2.62.1.8 (Vyhrazeno)

2.2.62.1.9 Biologické produkty

Pro účely ADR se biologické produkty dělí do následujících skupin:

- (a) Produkty, které jsou vyrobeny a zabaleny v souladu s předpisy příslušných národních orgánů a jsou přepravovány za účelem jejich konečného zabalení nebo distribuce a k použití pro léčebné účely lékaři nebo jednotlivci. Látky této skupiny nepodléhají ustanovením ADR ;
- (b) Produkty, které nespádají pod písmeno a) a o kterých je známo nebo se o nich důvodně předpokládá, že obsahují infekční látky, a které splňují kritéria pro zařazení do kategorie A nebo kategorie B. Látky v této skupině se musí přiřadit k UN číslu 2814, 2900 nebo popřípadě 3373.

POZNÁMKA: U některých biologických produktů schválených pro uvedení na trh může biologické nebezpečí hrozit jen v určitých částech světa. V tomto případě mohou příslušné orgány požadovat, aby tyto biologické produkty vyhovovaly místním předpisům pro infekční látky nebo mohou uložit jiná omezení.

2.2.62.1.10 Geneticky změněné mikroorganismy a organismy

Geneticky změněné mikroorganismy, které neodpovídají definici infekční látky, musí být zařazeny podle oddílu 2.2.9.

2.2.62.1.11 Medicínské nebo klinické odpady

- 2.2.62.1.11.1 Medicínské nebo klinické odpady obsahující infekční látky kategorie A musí být přiřazeny k UN číslu 2814 nebo popřípadě k UN číslu 2900. Medicínské nebo klinické odpady obsahující infekční látky v kategorii B, musí být přiřazeny k UN číslu 3291.

POZNÁMKA: Medicínské nebo klinické odpady přiřazené k číslu 18 01 03 (Odpady z lékařské nebo veterinární zdravotní péče a/nebo s ní spojeného výzkumu – odpady z porodnic, diagnostiky, léčení nebo prevence nemocí u lidí – odpady, jejichž sběr a likvidace podléhá zvláštním požadavkům vzhledem k prevenci infekce) nebo 18 02 02 (Odpady z lékařské nebo veterinární zdravotní péče a/nebo s ní spojeného výzkumu – odpady z výzkumu, diagnostiky, léčení nebo prevence nemocí u zvířat – odpady, jejichž sběr a likvidace podléhá zvláštním požadavkům vzhledem k prevenci infekce) podle seznamu odpadů přiloženého k Rozhodnutí Komise 2000/532/ES⁵, se změnami, musí být zařazeny podle ustanovení uvedených v tomto odstavci, na základě lékařské nebo veterinární diagnózy týkající se pacienta nebo zvířete.

- 2.2.62.1.11.2 Medicínské nebo klinické odpady, u nichž je možno důvodně předpokládat malou pravděpodobnost, že obsahují infekční látky, musí být přiřazeny k UN číslu 3291. Pro přiřazení se mohou vzít v úvahu mezinárodní, regionální nebo vnitrostátní katalogy odpadů.

POZNÁMKA 1: Oficiální pojmenování pro přepravu UN čísla 3291 je „ODPAD KLINICKÝ, NESPECIFIKOVANÝ, J.N.“ nebo „ODPAD (BIO)MEDICÍNSKÝ, J.N.“ nebo „ODPAD MEDICÍNSKÝ REGULOVANÝ, J.N.“.

POZNÁMKA 2: Bez ohledu na výše uvedená klasifikační kritéria nepodléhají ustanovením ADR medicínské nebo klinické odpady přiřazené k číslu 18 01 04 (Odpady z lékařské nebo veterinární zdravotní péče a/nebo s ní spojeného výzkumu – odpady z porodnic, diagnostiky, léčení nebo prevence nemocí u lidí – odpady, jejichž sběr a likvidace nepodléhá zvláštním požadavkům vzhledem k prevenci infekce) nebo 18 02 03 (Odpady z lékařské nebo veterinární zdravotní péče a/nebo s ní spojeného výzkumu – odpady z výzkumu, diagnostiky, léčení nebo prevence nemocí u zvířat – odpady, jejichž sběr a likvidace nepodléhá zvláštním požadavkům vzhledem k prevenci infekce) podle seznamu odpadů přiloženého k Rozhodnutí Komise 2000/532/ES⁵, se změnami.

⁵ Rozhodnutí Komise 2000/532/ES z 3. května 2000 nahrazující Rozhodnutí 94/3/ES zavádějící seznam odpadů k provádění článku 1(a) Směrnice Rady 75/442/EHS o odpadech nahrazena Směrnicí 2006/12/ES Evropského parlamentu a Rady (Úřední věstník Evropského společenství č. L 114 z 27. dubna 2006, strana 9) a Rozhodnutí Rady 94/904/ES zavádějící seznam nebezpečných odpadů k provádění článku 1(4) Směrnice Rady 91/689/EHS o nebezpečných odpadech (Úřední věstník Evropských společenství č. L 226 z 6.9.2000, strana 3).

2.2.62.1.11.3 Dekontaminované medicínské nebo klinické odpady, které dříve obsahovaly infekční látky, nepodléhají ustanovením ADR, ledaže splňují kritéria pro zařazení do jiné třídy.

2.2.62.1.11.4 Medicínské nebo klinické odpady přiřazené k UN číslu 3291 jsou přiřazeny k obalové skupině II.

2.2.62.1.12 Infikovaná zvířata

2.2.62.1.12.1 Živá zvířata smějí být použita k zaslání infekční látky, jen pokud nemůže být zaslána nějakým jiným způsobem. Živá zvířata, která byla záměrně infikována a je známo nebo je podezření, že obsahují infekční látku, smějí být přepravována jen za podmínek schválených příslušným orgánem⁶.

2.2.62.1.12.2 Materiál živočišného původu obsahující původce nemoci kategorie A nebo původce nemocí, kteří by byli přiřazeni ke kategorii A jen v kulturách, musí být přiřazen k UN 2814 nebo UN 2900, jak je to náležité. Materiál živočišného původu obsahující původce nemocí kategorie B, jiné než původce nemocí, kteří by byli přiřazeni ke kategorii A, pokud by byli v kulturách, musí být přiřazen k UN 3373.

2.2.62.2 *Látky nepřípuštěné k přepravě*

Živí obratlovci nebo bezobratlá zvířata nesmějí být použiti(a) k tomu, aby přepravovali(a) infekční látku, ledaže by tato látka nemohla být přepravována jiným způsobem nebo ledaže by tato přeprava byla schválena příslušným orgánem (viz 2.2.62.1.12.1).

2.2.62.3 *Seznam hromadných položek*

Infekční látky nebezpečné pro lidi	I1	2814	LÁTKA INFEKČNÍ, NEBEZPEČNÁ PRO LIDI
Infekční látky nebezpečné jen pro zvířata	I2	2900	LÁTKA INFEKČNÍ, NEBEZPEČNÁ pouze PRO ZVÍŘATA
Klinické odpady	I3	3291	ODPAD KLINICKÝ, NESPECIFIKOVANÝ, J.N. nebo
		3291	ODPAD (BIO)MEDICÍNSKÝ, J.N. nebo
		3291	ODPAD MEDICÍNSKÝ REGULOVANÝ, J.N.
Biologické látky	I4	3373	LÁTKY BIOLOGICKÉ, KATEGORIE B

⁶ Předpisy upravující přepravu živých zvířat jsou obsaženy např. ve Směrnici 91/628/EHS z 19. listopadu 1991 o ochraně zvířat během přepravy (Úřední věstník Evropských společenství č. L 340 z 11.12.1991, str. 17) a v Doporučení Rady Evropy (Výbor ministrů) o přepravě některých druhů zvířat.

2.2.7. Třída 7: Radioaktivní látky**2.2.7.1 Definice**

2.2.7.1.1 *Radioaktivní látky* jsou jakékoliv látky obsahující radionuklidy, ve kterých jak hmotnostní aktivita tak i celková aktivita v zásilce převyšuje hodnoty uvedené v bodech 2.2.7.2.2.1 a 2.2.7.2.2.6

2.2.7.1.2 Kontaminace

Kontaminace - přítomnost radioaktivní látky na povrchu v množstvích větších než $0,4 \text{ Bq/cm}^2$ pro beta a gama zářiče a nízkotoxické alfa zářiče, nebo $0,04 \text{ Bq/cm}^2$ pro všechny ostatní alfa zářiče.

Nefixovaná kontaminace - kontaminace, která může být odstraněna z povrchu za běžných podmínek během přepravy.

Fixovaná kontaminace - jakákoliv jiná kontaminace než nefixovaná kontaminace.

2.2.7.1.3 Definice specifických termínů **A_1 a A_2**

A_1 - je hodnota aktivity radioaktivních látek zvláštní formy uvedená v tabulce 2.2.7.7.2.1 nebo odvozená podle 2.2.7.2.2.2, která se používá pro určení mezních hodnot aktivity pro účely předpisů ADR.

A_2 - je hodnota aktivity radioaktivních látek, jiných než jsou radioaktivní látky zvláštní formy, která je uvedena v tabulce 2.2.7.7.2.1 nebo odvozena podle pododílu 2.2.7.2 a která se používá pro určení mezních hodnot aktivity pro účely předpisů ADR.

Látka s nízkou specifickou aktivitou (LSA) - je radioaktivní látka, která má ze své povahy omezenou specifickou aktivitu nebo radioaktivní látka, pro kterou platí mezní hodnoty odhadované střední specifické aktivity. Při stanovení odhadované střední specifické aktivity se neberou v úvahu vnější stínící materiály obklopující LSA.

Neozářené thorium - thorium, které obsahuje nejvýše 10^{-7} g uranu-233 na gram thoria-232,

Neozářený uran - uran, který obsahuje nejvýše 2×10^3 Bq plutonia na gram uranu-235, nejvýše 9×10^6 Bq štěpných produktů na gram uranu-235 a nejvýše 5×10^{-3} g uranu-236 na gram uranu-235.

Nízkodisperzní radioaktivní látka je buď tuhá radioaktivní látka, nebo tuhá radioaktivní látka v uzavřené kapsli, která má omezenou schopnost se rozptýlovat a není v práškovité formě.

Nízkotoxické alfa zářiče jsou: přírodní uran, ochuzený uran, přírodní thorium, uran-235 nebo uran-238, thorium-232, thorium-228 a thorium-230, jsou-li tyto obsaženy v rudách nebo fyzikálních nebo chemických koncentrátech, nebo alfa zářiče s poločasem rozpadu kratším než 10 dní.

Povrchově kontaminovaný předmět (SCO) - tuhý předmět, který sám není radioaktivní, ale na jehož povrchu je rozptýlena radioaktivní látka.

Radioaktivní látka zvláštní formy - je

- nerozptýlitelná tuhá radioaktivní látka; nebo
- těsně uzavřené pouzdro, obsahující radioaktivní látku.

Specifická aktivita radionuklidu - aktivita radionuklidu vztažená na jednotku hmotnosti tohoto nuklidu. Specifická aktivita látky je aktivita vztažená na jednotku hmotnosti této látky, ve které je radionuklid v podstatě rovnoměrně rozptýlen.

Štěpné nuklidy jsou uran-233, uran-235, plutonium-239 a plutonium-241. **Štěpné látky** jsou látky obsahující kterýkoli z těchto štěpných nuklidů. Vyjmuty z definice štěpných látek jsou:

- neozářený přírodní uran nebo neozářený ochuzený uran; a
- přírodní uran nebo ochuzený uran, které byly ozářeny výhradně v tepelných reaktorech.

Uranem - přírodním, ochuzeným, obohaceným se rozumí:

Přírodní uran je uran (včetně chemicky separovaného), ve kterém se vyskytují izotopy uranu (v množství cca 99,28 % hmot. uranu-238, a cca 0,72 % hmot. uranu-235).

Ochuzený uran s menším hmotnostním podílem uranu-235 než má přírodní uran;

Obohacený uran s vyšším hmotnostním podílem uranu-235 než 0,72 % hmot.

Ve všech případech se vyskytuje nepatrný hmotnostní podíl uranu-234.

2.2.7.2 Klasifikace

2.2.7.2.1 Všeobecné předpisy

2.2.7.2.1.1 Radioaktivní látky musí být přiřazeny k jednomu z UN čísel definovanému v Tabulce 2.2.7.2.1.1 v závislosti na úrovni aktivity radionuklidů obsažených v kusu, štěpných nebo jiných než štěpných vlastností těchto radionuklidů, typu kusu, který byl předán k přepravě, a povahy nebo formy obsahu kusu nebo zvláštních ujednání řídících přepravní operace v souladu s opatřeními stanovenými v 2.2.7.2.2 až 2.2.7.2.5.

Tabulka 2.2.7.2.1.1 Přiřazení UN čísel

Vyjmuté kusy (1.7.1.5)	
UN 2908	LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS – PRAZDNÝ OBAL
UN 2909	LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS – VÝROBKY Z PŘÍRODNÍHO URANU nebo OCHUZENÉHO URANU nebo PŘÍRODNÍHO THORIA
UN 2910	LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS – OMEZENÁ MNOŽSTVÍ
UN 2911	LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS – PŘÍSTROJE nebo VÝROBKY
Látky s nízkou hmotnostní aktivitou (2.2.7.2.3.1)	
UN 2912	LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU HMOTNOSTNÍ AKTIVITOU (LSA-I) jiná než štěpná nebo vyjmutá štěpná
UN 3321	LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-II), jiná než štěpná nebo vyjmutá štěpná
UN 3322	LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-III), jiná než štěpná nebo vyjmutá štěpná
UN 3324	LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-II), ŠTĚPNÁ
UN 3325	LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-III), ŠTĚPNÁ
Povrchově kontaminované předměty (2.2.7.2.3.2)	
UN 2913	LÁTKA, RADIOAKTIVNÍ - POVRCHOVĚ KONTAMINOVANÉ PŘEDMĚTY (SCO-I nebo SCO-II), jiná než štěpné nebo vyjmuté štěpné
UN 3326	RADIOAKTIVNÍ LÁTKA, POVRCHOVĚ KONTAMINOVANÉ PŘEDMĚTY (SCO-I nebo SCO-II), ŠTĚPNÉ
Zásilky typu A (2.2.7.2.4.4)	
UN 2915	LÁTKA RADIOAKTIVNÍ, KUS TYPU A jiná než zvláštní formy, jiná než štěpná nebo vyjmutá štěpná
UN 3327	LÁTKA RADIOAKTIVNÍ, KUS TYPU A, ŠTĚPNÁ, jiná než zvláštní formy
UN 3332	LÁTKA RADIOAKTIVNÍ, KUS TYPU A, ZVLÁŠTNÍ FORMY, jiná než štěpná nebo vyjmutá štěpná
UN 3333	LÁTKA RADIOAKTIVNÍ, KUS TYPU A, ZVLÁŠTNÍ FORMY, ŠTĚPNÁ
Zásilky typu B(U) (2.2.7.2.4.6)	
UN 2916	LÁTKA RADIOAKTIVNÍ, KUS TYPU B (U), jiná než štěpná nebo vyjmutá štěpná
UN 3328	LÁTKA RADIOAKTIVNÍ, KUS TYPU B (U), ŠTĚPNÁ
Zásilky typu B(M) (2.2.7.2.4.6)	
UN 2917	LÁTKA RADIOAKTIVNÍ, KUS TYPU B (M), jiná než štěpná nebo vyjmutá štěpná
UN 3329	LÁTKA RADIOAKTIVNÍ, KUS TYPU B (M), ŠTĚPNÁ
Zásilky typu C (2.2.7.2.4.6)	
UN 3323	LÁTKA RADIOAKTIVNÍ, KUS TYPU C, jiná než štěpná nebo vyjmutá štěpná
UN 3330	LÁTKA RADIOAKTIVNÍ, KUS TYPU C, ŠTĚPNÁ
Zvláštní podmínky (2.2.7.2.5)	
UN 2919	LÁTKA RADIOAKTIVNÍ, PŘEPRAVOVANÁ ZA ZVLÁŠTNÍCH PODMÍNEK, jiná

	než štěpná nebo vyjmutá štěpná
UN 3331	LÁTKA RADIOAKTIVNÍ, PŘEPRAVOVANÁ ZA ZVLÁŠTNÍCH PODMÍNEK, ŠTĚPNÁ
Hexafluorid uranu (2.2.7.2.4.5)	
UN 2977	LÁTKA RADIOAKTIVNÍ, HEXAFLUORID URANU, ŠTĚPNÁ
UN 2978	LÁTKA RADIOAKTIVNÍ, HEXAFLUORID URANU, jiná než štěpná nebo vyjmutá štěpná

2.2.7.2.2 Určení úrovně aktivity

2.2.7.2.2.1 V tabulce 2.2.7.2.2.1 jsou uvedeny následující základní hodnoty pro jednotlivé radionuklidy:

- A_1 a A_2 v TBq;
- koncentrace aktivity pro vyjmuté látky v Bq/g; a
- mezní hodnoty aktivity pro vyjmuté zásilky v Bq.

Tabulka 2.2.7.2.2.1 Základní hodnoty aktivity jednotlivých radionuklidů

Radionuklid (atomové číslo)	A_1 (TBq)	A_2 (TBq)	Mezní hodnota hmotnostní aktivity pro vyjmuté látky (Bq/g)	Mezní hodnota aktivity pro vyjmutou zásilku (Bq)
Aktinium (89)				
Ac-225 ^{a)}	8×10^{-1}	6×10^{-3}	1×10^1	1×10^4
Ac-227 ^{a)}	9×10^{-1}	9×10^{-5}	1×10^{-1}	1×10^3
Ac-228	6×10^{-1}	5×10^{-1}	1×10^1	1×10^5
Stříbro (47)				
Ag-105	2×10^0	2×10^0	1×10^2	1×10^5
Ag-108m ^{a)}	7×10^{-1}	7×10^{-1}	1×10^1 ^{b)}	1×10^5 ^{b)}
Ag-110m ^{a)}	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
Ag-111	2×10^0	6×10^{-1}	1×10^3	1×10^5
Hliník (13)				
Al-26	1×10^{-1}	1×10^{-1}	1×10^1	1×10^5
Americium (95)				
Am-241	1×10^1	1×10^{-3}	1×10^0	1×10^4
Am-242m ^{a)}	1×10^1	1×10^{-3}	1×10^0 ^{b)}	1×10^4 ^{b)}
Am-243 ^{a)}	5×10^0	1×10^{-3}	1×10^0 ^{b)}	1×10^3 ^{b)}
Argon (18)				
Ar-37	4×10^1	4×10^1	1×10^5	1×10^5
Ar-39	4×10^1	2×10^1	1×10^7	1×10^4
Ar-41	3×10^{-1}	3×10^{-1}	1×10^2	1×10^3
Arzen (33)				
As-72	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
As-73	4×10^1	4×10^1	1×10^3	1×10^7
As-74	1×10^0	9×10^{-1}	1×10^1	1×10^5
As-76	3×10^{-1}	3×10^{-1}	1×10^2	1×10^5
As-77	2×10^1	7×10^{-1}	1×10^3	1×10^5
Astat (85)				
At-211 ^{a)}	2×10^1	5×10^{-1}	1×10^3	1×10^7
Zlato (79)				
Au-193	7×10^0	2×10^0	1×10^2	1×10^7
Au-194	1×10^0	1×10^0	1×10^1	1×10^5
Au-195	1×10^1	6×10^0	1×10^2	1×10^7
Au-198	1×10^0	6×10^{-1}	1×10^2	1×10^5
Au-199	1×10^1	6×10^{-1}	1×10^2	1×10^5
Baryum (56)				
Ba-131 ^{a)}	2×10^0	2×10^0	1×10^2	1×10^5
Ba-133	3×10^0	3×10^0	1×10^2	1×10^5
Ba-133m	2×10^1	6×10^{-1}	1×10^2	1×10^5
Ba-140 ^{a)}	5×10^{-1}	3×10^{-1}	1×10^1 ^{b)}	1×10^5 ^{b)}

Radionuklid (atomové číslo)	A ₁	A ₂	Mezní hodnota hmotnostní aktivity pro vyjmuté látky (Bq/g)	Mezní hodnota aktivity pro vyjmutou zásilku (Bq)
	(TBq)	(TBq)		(Bq)
Berylium (4)				
Be-7	2×10^1	2×10^1	1×10^3	1×10^7
Be-10	4×10^1	6×10^{-1}	1×10^4	1×10^5
Vizmut (83)				
Bi-205	7×10^{-1}	7×10^{-1}	1×10^1	1×10^5
Bi-206	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
Bi-207	7×10^{-1}	7×10^{-1}	1×10^1	1×10^5
Bi-210	1×10^0	6×10^{-1}	1×10^3	1×10^5
Bi-210m ^{a)}	6×10^{-1}	2×10^{-2}	1×10^1	1×10^5
Bi-212 ^{a)}	7×10^{-1}	6×10^{-1}	$1 \times 10^{1b)}$	$1 \times 10^{5b)}$
Berkelium (97)				
Bk-247	8×10^0	8×10^{-4}	1×10^0	1×10^4
Bk-249 ^{a)}	4×10^1	3×10^{-1}	1×10^3	1×10^5
Brom (35)				
Br-76	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
Br-77	3×10^0	3×10^0	1×10^2	1×10^5
Br-82	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
Uhlík (6)				
C-11	1×10^0	6×10^{-1}	1×10^1	1×10^5
C-14	4×10^1	3×10^0	1×10^4	1×10^7
Vápník (20)				
Ca-41	neomezeno	neomezeno	1×10^5	1×10^7
Ca-45	4×10^1	1×10^0	1×10^4	1×10^7
Ca-47 ^{a)}	3×10^0	3×10^{-1}	1×10^1	1×10^5
Kadmium (48)				
Cd-109	3×10^1	2×10^0	1×10^4	1×10^5
Cd-113m	4×10^1	5×10^{-1}	1×10^3	1×10^5
Cd-115 ^{a)}	3×10^0	4×10^{-1}	1×10^2	1×10^5
Cd-115m	5×10^{-1}	5×10^{-1}	1×10^3	1×10^5
Cer (58)				
Ce-139	7×10^0	2×10^0	1×10^2	1×10^5
Ce-141	2×10^1	6×10^{-1}	1×10^2	1×10^7
Ce-143	9×10^{-1}	6×10^{-1}	1×10^2	1×10^5
Ce-144 ^{a)}	2×10^{-1}	2×10^{-1}	$1 \times 10^{2b)}$	$1 \times 10^{5b)}$
Kalifornium (98)				
Cf-248	4×10^1	6×10^{-3}	1×10^1	1×10^4
Cf-249	3×10^0	8×10^{-4}	1×10^0	1×10^3
Cf-250	2×10^1	2×10^{-3}	1×10^1	1×10^4
Cf-251	7×10^0	7×10^{-4}	1×10^0	1×10^3
Cf-252	1×10^{-1}	3×10^{-3}	1×10^1	1×10^4
Cf-253 ^{a)}	4×10^1	4×10^{-2}	1×10^2	1×10^5
Cf-254	1×10^{-3}	1×10^{-3}	1×10^0	1×10^3
Chlor (17)				
Cl-36	1×10^1	6×10^{-1}	1×10^4	1×10^5
Cl-38	2×10^{-1}	2×10^{-1}	1×10^1	1×10^5
Curium (96)				
Cm-240	4×10^1	2×10^{-2}	1×10^2	1×10^5
Cm-241	2×10^0	1×10^0	1×10^2	1×10^5
Cm-242	4×10^1	1×10^{-2}	1×10^2	1×10^5
Cm-243	9×10^0	1×10^{-3}	1×10^0	1×10^4
Cm-244	2×10^1	2×10^{-3}	1×10^1	1×10^4
Cm-245	9×10^0	9×10^{-4}	1×10^0	1×10^3
Cm-246	9×10^0	9×10^{-4}	1×10^0	1×10^3
Cm-247 ^{a)}	3×10^0	1×10^{-3}	1×10^0	1×10^4
Cm-248	2×10^{-2}	3×10^{-4}	1×10^0	1×10^3
Kobalt (27)				
Co-55	5×10^{-1}	5×10^{-1}	1×10^1	1×10^5

Radionuklid (atomové číslo)	A ₁	A ₂	Mezní hodnota hmotnostní aktivity pro vyjmuté látky	Mezní hodnota aktivity pro vyjmutou zásilku
	(TBq)	(TBq)	(Bq/g)	(Bq)
Co-56	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
Co-57	1×10^1	1×10^1	1×10^2	1×10^6
Co-58	1×10^0	1×10^0	1×10^1	1×10^5
Co-58m	4×10^1	4×10^1	1×10^4	1×10^7
Co-60	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
Chrom(24)				
Cr-51	3×10^1	3×10^1	1×10^3	1×10^7
Cesium (55)				
Cs-129	4×10^0	4×10^0	1×10^2	1×10^5
Cs-131	3×10^1	3×10^1	1×10^3	1×10^6
Cs-132	1×10^0	1×10^0	1×10^1	1×10^5
Cs-134	7×10^{-1}	7×10^{-1}	1×10^1	1×10^4
Cs-134m	4×10^1	6×10^{-1}	1×10^3	1×10^5
Cs-135	4×10^1	1×10^0	1×10^4	1×10^7
Cs-136	5×10^{-1}	5×10^{-1}	1×10^1	1×10^5
Cs-137 ^{a)}	2×10^0	6×10^{-1}	$1 \times 10^{1\text{ b)}$	$1 \times 10^{4\text{ b)}$
Měď (29)				
Cu-64	6×10^0	1×10^0	1×10^2	1×10^5
Cu-67	1×10^1	7×10^{-1}	1×10^2	1×10^6
Dysprosium (66)				
Dy-159	2×10^1	2×10^1	1×10^3	1×10^7
Dy-165	9×10^{-1}	6×10^{-1}	1×10^3	1×10^6
Dy-166 ^{a)}	9×10^{-1}	3×10^{-1}	1×10^3	1×10^6
Erbium (68)				
Er-169	4×10^1	1×10^0	1×10^4	1×10^7
Er-171	8×10^{-1}	5×10^{-1}	1×10^2	1×10^5
Europium (63)				
Eu-147	2×10^0	2×10^0	1×10^2	1×10^5
Eu-148	5×10^{-1}	5×10^{-1}	1×10^1	1×10^5
Eu-149	2×10^1	2×10^1	1×10^2	1×10^7
Eu-150 (krátce životné)	2×10^0	7×10^{-1}	1×10^3	1×10^5
Eu-150 (dlouho životné)	7×10^{-1}	7×10^{-1}	1×10^1	1×10^5
Eu-152	1×10^0	1×10^0	1×10^1	1×10^5
Eu-152m	8×10^{-1}	8×10^{-1}	1×10^2	1×10^6
Eu-154	9×10^{-1}	6×10^{-1}	1×10^1	1×10^5
Eu-155	2×10^1	3×10^0	1×10^2	1×10^7
Eu-156	7×10^{-1}	7×10^{-1}	1×10^1	1×10^5
Fluor (9)				
F-18	1×10^0	6×10^{-1}	1×10^1	1×10^5
Železo (26)				
Fe-52 ^{a)}	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
Fe-55	4×10^1	4×10^1	1×10^4	1×10^6
Fe-59	9×10^{-1}	9×10^{-1}	1×10^1	1×10^5
Fe-60 ^{a)}	4×10^1	2×10^{-1}	1×10^2	1×10^5
Galium (31)				
Ga-67	7×10^0	3×10^0	1×10^2	1×10^5
Ga-68	5×10^{-1}	5×10^{-1}	1×10^1	1×10^5
Ga-72	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
Gadolinium (64)				
Gd-146 ^{a)}	5×10^{-1}	5×10^{-1}	1×10^1	1×10^5
Gd-148	2×10^1	2×10^{-3}	1×10^1	1×10^4
Gd-153	1×10^1	9×10^0	1×10^2	1×10^7
Gd-159	3×10^0	6×10^{-1}	1×10^3	1×10^6
Germanium (32)				
Ge-68 ^{a)}	5×10^{-1}	5×10^{-1}	1×10^1	1×10^5
Ge-71	4×10^1	4×10^1	1×10^4	1×10^6
Ge-77	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5

Radionuklid (atomové číslo)	A ₁	A ₂	Mezní hodnota hmotnostní aktivity pro vyjmuté látky (Bq/g)	Mezní hodnota aktivity pro vyjmutou zásilku (Bq)
	(TBq)	(TBq)		
Hafnium (72)				
Hf-172 ^{a)}	6×10^{-1}	6×10^{-1}	1×10^1	1×10^5
Hf-175	3×10^0	3×10^0	1×10^2	1×10^5
Hf-181	2×10^0	5×10^{-1}	1×10^1	1×10^5
Hf-182	neomezeno	neomezeno	1×10^2	1×10^5
Rtuť (80)				
Hg-194 ^{a)}	1×10^0	1×10^0	1×10^1	1×10^5
Hg-195m ^{a)}	3×10^0	7×10^{-1}	1×10^2	1×10^5
Hg-197	2×10^1	1×10^1	1×10^2	1×10^7
Hg-197m	1×10^1	4×10^{-1}	1×10^2	1×10^5
Hg-203	5×10^0	1×10^0	1×10^2	1×10^5
Holmium (67)				
Ho-166	4×10^{-1}	4×10^{-1}	1×10^3	1×10^5
Ho-166m	6×10^{-1}	5×10^{-1}	1×10^1	1×10^5
Jod (53)				
I-123	6×10^0	3×10^0	1×10^2	1×10^7
I-124	1×10^0	1×10^0	1×10^1	1×10^5
I-125	2×10^1	3×10^0	1×10^3	1×10^5
I-126	2×10^0	1×10^0	1×10^2	1×10^5
I-129	neomezeno	neomezeno	1×10^2	1×10^5
I-131	3×10^0	7×10^{-1}	1×10^2	1×10^5
I-132	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
I-133	7×10^{-1}	6×10^{-1}	1×10^1	1×10^5
I-134	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
I-135 ^{a)}	6×10^{-1}	6×10^{-1}	1×10^1	1×10^5
Indium (49)				
In-111	3×10^0	3×10^0	1×10^2	1×10^5
In-113m	4×10^0	2×10^0	1×10^2	1×10^5
In-114m ^{a)}	1×10^1	5×10^{-1}	1×10^2	1×10^5
In-115m	7×10^0	1×10^0	1×10^2	1×10^5
Iridium (77)				
Ir-189 ^{a)}	1×10^1	1×10^1	1×10^2	1×10^7
Ir-190	7×10^{-1}	7×10^{-1}	1×10^1	1×10^5
Ir-192	$1 \times 10^{0(6)}$	6×10^{-1}	1×10^1	1×10^4
Ir-194	3×10^{-1}	3×10^{-1}	1×10^2	1×10^5
Draslík (19)				
K-40	9×10^{-1}	9×10^{-1}	1×10^2	1×10^5
K-42	2×10^{-1}	2×10^{-1}	1×10^2	1×10^5
K-43	7×10^{-1}	6×10^{-1}	1×10^1	1×10^5
Krypton (36)				
Kr-79	4×10^0	2×10^0	1×10^3	1×10^5
Kr-81	4×10^1	4×10^1	1×10^4	1×10^7
Kr-85	1×10^1	1×10^1	1×10^5	1×10^4
Kr-85m	8×10^0	3×10^0	1×10^3	1×10^{10}
Kr-87	2×10^{-1}	2×10^{-1}	1×10^2	1×10^5
Lanthan (57)				
La-137	3×10^1	6×10^0	1×10^3	1×10^7
La-140	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
Lutecium (71)				
Lu-172	6×10^{-1}	6×10^{-1}	1×10^1	1×10^5
Lu-173	8×10^0	8×10^0	1×10^2	1×10^7
Lu-174	9×10^0	9×10^0	1×10^2	1×10^7
Lu-174m	2×10^1	1×10^1	1×10^2	1×10^7
Lu-177	3×10^1	7×10^{-1}	1×10^3	1×10^7
Hořčík (12)				
Mg-28 ^{a)}	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
Mangan (25)				

Radionuklid (atomové číslo)	A ₁	A ₂	Mezní hodnota hmotnostní aktivity pro vyjmuté látky (Bq/g)	Mezní hodnota aktivity pro vyjmutou zásilku (Bq)
	(TBq)	(TBq)		
Mn-52	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
Mn-53	neomezeno	neomezeno	1×10^4	1×10^9
Mn-54	1×10^0	1×10^0	1×10^1	1×10^5
Mn-56	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
Molybden (42)				
Mo-93	4×10^1	2×10^1	1×10^3	1×10^8
Mo-99 ^{a)}	1×10^0	6×10^{-1}	1×10^2	1×10^5
Dusík (7)				
N-13	9×10^{-1}	6×10^{-1}	1×10^2	1×10^9
Sodík (11)				
Na-22	5×10^{-1}	5×10^{-1}	1×10^1	1×10^5
Na-24	2×10^{-1}	2×10^{-1}	1×10^1	1×10^5
Niob (41)				
Nb-93m	4×10^1	3×10^1	1×10^4	1×10^7
Nb-94	7×10^{-1}	7×10^{-1}	1×10^1	1×10^5
Nb-95	1×10^0	1×10^0	1×10^1	1×10^5
Nb-97	9×10^{-1}	6×10^{-1}	1×10^1	1×10^5
Neodym (60)				
Nd-147	6×10^0	6×10^{-1}	1×10^2	1×10^5
Nd-149	6×10^{-1}	5×10^{-1}	1×10^2	1×10^5
Nikl (28)				
Ni-59	neomezeno	neomezeno	1×10^4	1×10^5
Ni-63	4×10^1	3×10^1	1×10^5	1×10^8
Ni-65	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
Neptunium (93)				
Np-235	4×10^1	4×10^1	1×10^3	1×10^7
Np-236 (krátce životné)	2×10^1	2×10^0	1×10^3	1×10^7
Np-236 (dlouho životné)	9×10^0	2×10^{-2}	1×10^2	1×10^5
Np-237	2×10^1	2×10^{-3}	1×10^0 ^{b)}	1×10^3 ^{b)}
Np-239	7×10^0	4×10^{-1}	1×10^2	1×10^7
Osmium (76)				
Os-185	1×10^0	1×10^0	1×10^1	1×10^5
Os-191	1×10^1	2×10^0	1×10^2	1×10^7
Os-191m	4×10^1	3×10^1	1×10^3	1×10^7
Os-193	2×10^0	6×10^{-1}	1×10^2	1×10^5
Os-194 ^{a)}	3×10^{-1}	3×10^{-1}	1×10^2	1×10^5
Fosfor (15)				
P-32	5×10^{-1}	5×10^{-1}	1×10^3	1×10^5
P-33	4×10^1	1×10^0	1×10^5	1×10^8
Protaktinium (91)				
Pa-230 ^{a)}	2×10^0	7×10^{-2}	1×10^1	1×10^5
Pa-231	4×10^0	4×10^{-4}	1×10^0	1×10^3
Pa-233	5×10^0	7×10^{-1}	1×10^2	1×10^7
Olovo (82)				
Pb-201	1×10^0	1×10^0	1×10^1	1×10^5
Pb-202	4×10^1	2×10^1	1×10^3	1×10^5
Pb-203	4×10^0	3×10^0	1×10^2	1×10^5
Pb-205	neomezeno	neomezeno	1×10^4	1×10^7
Pb-210 ^{a)}	1×10^0	5×10^{-2}	1×10^1 ^{b)}	1×10^4 ^{b)}
Pb-212 ^{a)}	7×10^{-1}	2×10^{-1}	1×10^1 ^{b)}	1×10^5 ^{b)}
Paladium (46)				
Pd-103 ^{a)}	4×10^1	4×10^1	1×10^3	1×10^5
Pd-107	neomezeno	neomezeno	1×10^5	1×10^8
Pd-109	2×10^0	5×10^{-1}	1×10^3	1×10^5
Prometium (61)				
Pm-143	3×10^0	3×10^0	1×10^2	1×10^5
Pm-144	7×10^{-1}	7×10^{-1}	1×10^1	1×10^5

Radionuklid (atomové číslo)	A ₁	A ₂	Mezní hodnota hmotnostní aktivity pro vyjmuté látky	Mezní hodnota aktivity pro vyjmutou zásilku
	(TBq)	(TBq)	(Bq/g)	(Bq)
Pm-145	3×10^1	1×10^1	1×10^3	1×10^7
Pm-147	4×10^1	2×10^0	1×10^4	1×10^7
Pm-148m ^a)	8×10^{-1}	7×10^{-1}	1×10^1	1×10^5
Pm-149	2×10^0	6×10^{-1}	1×10^3	1×10^5
Pm-151	2×10^0	6×10^{-1}	1×10^2	1×10^5
Polonium (84)				
Po-210	4×10^1	2×10^{-2}	1×10^1	1×10^4
Praseodym (59)				
Pr-142	4×10^{-1}	4×10^{-1}	1×10^2	1×10^5
Pr-143	3×10^0	6×10^{-1}	1×10^4	1×10^5
Platina (78)				
Pt-188 ^a)	1×10^0	8×10^{-1}	1×10^1	1×10^5
Pt-191	4×10^0	3×10^0	1×10^2	1×10^5
Pt-193	4×10^1	4×10^1	1×10^4	1×10^7
Pt-193m	4×10^1	5×10^{-1}	1×10^3	1×10^7
Pt-195m	1×10^1	5×10^{-1}	1×10^2	1×10^5
Pt-197	2×10^1	6×10^{-1}	1×10^3	1×10^5
Pt-197m	1×10^1	6×10^{-1}	1×10^2	1×10^5
Plutonium (94)				
Pu-236	3×10^1	3×10^{-3}	1×10^1	1×10^4
Pu-237	2×10^1	2×10^1	1×10^3	1×10^7
Pu-238	1×10^1	1×10^{-3}	1×10^0	1×10^4
Pu-239	1×10^1	1×10^{-3}	1×10^0	1×10^4
Pu-240	1×10^1	1×10^{-3}	1×10^0	1×10^5
Pu-241 ^a)	4×10^1	6×10^{-2}	1×10^2	1×10^5
Pu-242	1×10^1	1×10^{-3}	1×10^0	1×10^4
Pu-244 ^a)	4×10^{-1}	1×10^{-3}	1×10^0	1×10^4
Radium (88)				
Ra-223 ^a)	4×10^{-1}	7×10^{-3}	$1 \times 10^{2 \text{ b)}}$	$1 \times 10^{5 \text{ b)}}$
Ra-224 ^a)	4×10^{-1}	2×10^{-2}	$1 \times 10^{1 \text{ b)}}$	$1 \times 10^{5 \text{ b)}}$
Ra-225 ^a)	2×10^{-1}	4×10^{-3}	1×10^2	1×10^5
Ra-226 ^a)	2×10^{-1}	3×10^{-3}	$1 \times 10^{1 \text{ b)}}$	$1 \times 10^{4 \text{ b)}}$
Ra-228/ ^a)	6×10^{-1}	2×10^{-2}	$1 \times 10^{1 \text{ b)}}$	$1 \times 10^{5 \text{ b)}}$
Rubidium (37)				
Rb-81	2×10^0	8×10^{-1}	1×10^1	1×10^5
Rb-83 ^a)	2×10^0	2×10^0	1×10^2	1×10^5
Rb-84	1×10^0	1×10^0	1×10^1	1×10^5
Rb-86	5×10^{-1}	5×10^{-1}	1×10^2	1×10^5
Rb-87	neomezeno	neomezeno	1×10^4	1×10^7
Rb (přírodní)	neomezeno	neomezeno	1×10^4	1×10^7
Rhenium (75)				
Re-184	1×10^0	1×10^0	1×10^1	1×10^5
Re-184m	3×10^0	1×10^0	1×10^2	1×10^5
Re-186	2×10^0	6×10^{-1}	1×10^3	1×10^5
Re-187	neomezeno	neomezeno	1×10^5	1×10^9
Re-188	4×10^{-1}	4×10^{-1}	1×10^2	1×10^5
Re-189 ^a)	3×10^0	6×10^{-1}	1×10^2	1×10^5
Re (přírodní)	neomezeno	neomezeno	1×10^5	1×10^9
Rhodium (45)				
Rh-99	2×10^0	2×10^0	1×10^1	1×10^5
Rh-101	4×10^0	3×10^0	1×10^2	1×10^7
Rh-102	5×10^{-1}	5×10^{-1}	1×10^1	1×10^5
Rh-102m	2×10^0	2×10^0	1×10^2	1×10^5
Rh-103m	4×10^1	4×10^1	1×10^4	1×10^8
Rh-105	1×10^1	8×10^{-1}	1×10^2	1×10^7

Radionuklid (atomové číslo)	A ₁ (TBq)	A ₂ (TBq)	Mezní hodnota hmotnostní aktivity pro vyjmuté látky (Bq/g)	Mezní hodnota aktivity pro vyjmutou zásilku (Bq)
Radon (86)				
Rn-222 ^{a)}	3×10^{-1}	4×10^{-3}	$1 \times 10^{1 \text{ b)}$	$1 \times 10^{8 \text{ b)}$
Ruthenium (44)				
Ru-97	5×10^0	5×10^0	1×10^2	1×10^7
Ru-103 ^{a)}	2×10^0	2×10^0	1×10^2	1×10^6
Ru-105	1×10^0	6×10^{-1}	1×10^1	1×10^5
Ru-106 ^{a)}	2×10^{-1}	2×10^{-1}	$1 \times 10^{2 \text{ b)}$	$1 \times 10^{5 \text{ b)}$
Síra (16)				
S-35	4×10^1	3×10^0	1×10^5	1×10^8
Antimon (51)				
Sb-122	4×10^{-1}	4×10^{-1}	1×10^2	1×10^4
Sb-124	6×10^{-1}	6×10^{-1}	1×10^1	1×10^6
Sb-125	2×10^0	1×10^0	1×10^2	1×10^5
Sb-126	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
Skandium (21)				
Sc-44	5×10^{-1}	5×10^{-1}	1×10^1	1×10^5
Sc-46	5×10^{-1}	5×10^{-1}	1×10^1	1×10^5
Sc-47	1×10^1	7×10^{-1}	1×10^2	1×10^5
Sc-48	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
Selen (34)				
Se-75	3×10^0	3×10^0	1×10^2	1×10^5
Se-79	4×10^1	2×10^0	1×10^4	1×10^7
Křemík (14)				
Si-31	6×10^{-1}	6×10^{-1}	1×10^3	1×10^5
Si-32	4×10^1	5×10^{-1}	1×10^3	1×10^6
Samarium (62)				
Sm-145	1×10^1	1×10^1	1×10^2	1×10^7
Sm-147	neomezeno	neomezeno	1×10^1	1×10^4
Sm-151	4×10^1	1×10^1	1×10^4	1×10^8
Sm-153	9×10^0	6×10^{-1}	1×10^2	1×10^5
Cín (50)				
Sn-113 ^{a)}	4×10^0	2×10^0	1×10^3	1×10^7
Sn-117m	7×10^0	4×10^{-1}	1×10^2	1×10^5
Sn-119m	4×10^1	3×10^1	1×10^3	1×10^7
Sn-121m ^{a)}	4×10^1	9×10^{-1}	1×10^3	1×10^7
Sn-123	8×10^{-1}	6×10^{-1}	1×10^3	1×10^5
Sn-125	4×10^{-1}	4×10^{-1}	1×10^2	1×10^5
Sn-126 ^{a)}	6×10^{-1}	4×10^{-1}	1×10^1	1×10^5
Stroncium (38)				
Sr-82 ^{a)}	2×10^{-1}	2×10^{-1}	1×10^1	1×10^5
Sr-85	2×10^0	2×10^0	1×10^2	1×10^5
Sr-85m	5×10^0	5×10^0	1×10^2	1×10^7
Sr-87m	3×10^0	3×10^0	1×10^2	1×10^5
Sr-89	6×10^{-1}	6×10^{-1}	1×10^3	1×10^5
Sr-90 ^{a)}	3×10^{-1}	3×10^{-1}	$1 \times 10^{2 \text{ b)}$	$1 \times 10^{4 \text{ b)}$
Sr-91 ^{a)}	3×10^{-1}	3×10^{-1}	1×10^1	1×10^5
Sr-92 ^{a)}	1×10^0	3×10^{-1}	1×10^1	1×10^5
Tritium (1)				
T (H-3)	4×10^1	4×10^1	1×10^6	1×10^9
Tantal (73)				
Ta-178 (dlouho životný)	1×10^0	8×10^{-1}	1×10^1	1×10^5
Ta-179	3×10^1	3×10^1	1×10^3	1×10^7
Ta-182	9×10^{-1}	5×10^{-1}	1×10^1	1×10^4
Terbium (65)				
Tb-157	4×10^1	4×10^1	1×10^4	1×10^7

Radionuklid (atomové číslo)	A ₁	A ₂	Mezní hodnota hmotnostní aktivity pro vyjmuté látky (Bq/g)	Mezní hodnota aktivity pro vyjmutou zásilku (Bq)
	(TBq)	(TBq)		
Tb-158	1×10^0	1×10^0	1×10^1	1×10^6
Tb-160	1×10^0	6×10^{-1}	1×10^1	1×10^6
Technecium (43)				
Tc-95m ^{a)}	2×10^0	2×10^0	1×10^1	1×10^6
Tc-96	4×10^{-1}	4×10^{-1}	1×10^1	1×10^6
Tc-96m ^{a)}	4×10^{-1}	4×10^{-1}	1×10^3	1×10^7
Tc-97	neomezeno	neomezeno	1×10^3	1×10^8
Tc-97m	4×10^1	1×10^0	1×10^3	1×10^7
Tc-98	8×10^{-1}	7×10^{-1}	1×10^1	1×10^6
Tc-99	4×10^1	9×10^{-1}	1×10^4	1×10^7
Tc-99m	1×10^1	4×10^0	1×10^2	1×10^7
Telur (52)				
Te-121	2×10^0	2×10^0	1×10^1	1×10^6
Te-121m	5×10^0	3×10^0	1×10^2	1×10^8
Te-123m	8×10^0	1×10^0	1×10^2	1×10^7
Te-125m	2×10^1	9×10^{-1}	1×10^3	1×10^7
Te-127	2×10^1	7×10^{-1}	1×10^3	1×10^6
Te-127m ^{a)}	2×10^1	5×10^{-1}	1×10^3	1×10^7
Te-129	7×10^{-1}	6×10^{-1}	1×10^2	1×10^6
Te-129m ^{a)}	8×10^{-1}	4×10^{-1}	1×10^3	1×10^6
Te-131m ^{a)}	7×10^{-1}	5×10^{-1}	1×10^1	1×10^6
Te-132 ^{a)}	5×10^{-1}	4×10^{-1}	1×10^2	1×10^7
Thorium (90)				
Th-227	1×10^1	5×10^{-3}	1×10^1	1×10^4
Th-228 ^{a)}	5×10^{-1}	1×10^{-3}	$1 \times 10^{0 \text{ b)}}$	$1 \times 10^{4 \text{ b)}}$
Th-229	5×10^0	5×10^{-4}	$1 \times 10^{0 \text{ b)}}$	$1 \times 10^{3 \text{ b)}}$
Th-230	1×10^1	1×10^{-3}	1×10^0	1×10^4
Th-231	4×10^1	2×10^{-2}	1×10^3	1×10^7
Th-232	neomezeno	neomezeno	1×10^1	1×10^4
Th-234 ^{a)}	3×10^{-1}	3×10^{-1}	$1 \times 10^{3 \text{ b)}}$	$1 \times 10^{5 \text{ b)}}$
Th (přirodní)	neomezeno	neomezeno	$1 \times 10^{0 \text{ b)}}$	$1 \times 10^{3 \text{ b)}}$
Titan (22)				
Ti-44 ^{a)}	5×10^{-1}	4×10^{-1}	1×10^1	1×10^3
Thalium (81)				
Tl-200	9×10^{-1}	9×10^{-1}	1×10^1	1×10^6
Tl-201	1×10^1	4×10^0	1×10^2	1×10^6
Tl-202	2×10^0	2×10^0	1×10^2	1×10^5
Tl-204	1×10^1	7×10^{-1}	1×10^4	1×10^4
Thulium (69)				
Tm-167	7×10^0	8×10^{-1}	1×10^2	1×10^6
Tm-170	3×10^0	6×10^{-1}	1×10^3	1×10^5
Tm-171	4×10^1	4×10^1	1×10^4	1×10^8
Uran (92)				
U-230 (rychlá absorpce plícemi) ^{a)d)}	4×10^1	1×10^{-1}	$1 \times 10^{0 \text{ b)}}$	$1 \times 10^{5 \text{ b)}}$
U-230 (střední absorpce plícemi) ^{a)e)}	4×10^1	4×10^{-3}	1×10^1	1×10^4
U-230 (pomalá absorpce plícemi) ^{a)f)}	3×10^1	3×10^{-3}	1×10^1	1×10^4
U-232 (rychlá absorpce plícemi) ^{d)}	4×10^1	1×10^{-2}	$1 \times 10^{0 \text{ b)}}$	$1 \times 10^{3 \text{ b)}}$
U-232 (střední absorpce plícemi) ^{e)}	4×10^1	7×10^{-3}	1×10^1	1×10^4
U-232 (pomalá absorpce plícemi) ^{f)}	1×10^1	1×10^{-3}	1×10^1	1×10^4

Radionuklid (atomové číslo)	A ₁	A ₂	Mezní hodnota hmotnostní aktivity pro vyjmuté látky (Bq/g)	Mezní hodnota aktivity pro vyjmutou zásilku (Bq)
	(TBq)	(TBq)		
U-233 (rychlá absorpce plicemi) ^{d)}	4×10^1	9×10^{-2}	1×10^1	1×10^4
U-233 (střední absorpce plicemi) ^{e)}	4×10^1	2×10^{-2}	1×10^2	1×10^5
U-233 (pomalá absorpce plicemi) ^{f)}	4×10^1	6×10^{-3}	1×10^1	1×10^5
U-234 (rychlá absorpce plicemi) ^{d)}	4×10^1	9×10^{-2}	1×10^1	1×10^4
U-234 (střední absorpce plicemi) ^{e)}	4×10^1	2×10^{-2}	1×10^2	1×10^5
U-234 (pomalá absorpce plicemi) ^{f)}	4×10^1	6×10^{-3}	1×10^1	1×10^5
U-235 (všechny druhy absorpce plicemi) ^{a)d)e)f)}	neomezeno	neomezeno	$1 \times 10^{1 \text{ b)}$	$1 \times 10^{4 \text{ b)}$
U-236 (rychlá absorpce plicemi) ^{d)}	neomezeno	neomezeno	1×10^1	1×10^4
U-236 (střední absorpce plicemi) ^{e)}	4×10^1	2×10^{-2}	1×10^2	1×10^5
U-236 (pomalá absorpce plicemi) ^{f)}	4×10^1	6×10^{-3}	1×10^1	1×10^4
U-238 (všechny druhy absorpce plicemi) ^{d)e)f)}	neomezeno	neomezeno	$1 \times 10^{1 \text{ b)}$	$1 \times 10^{4 \text{ b)}$
U (přírodní)	neomezeno	neomezeno	$1 \times 10^{0 \text{ b)}$	$1 \times 10^{3 \text{ b)}$
U (obohacený $\leq 20 \%$) ^{g)}	neomezeno	neomezeno	1×10^0	1×10^3
U (ochuzený)	neomezeno	neomezeno	1×10^0	1×10^3
Vanad (23)				
V-48	4×10^{-1}	4×10^{-1}	1×10^1	1×10^5
V-49	4×10^1	4×10^1	1×10^4	1×10^7
Wolfram (74)				
W-178 ^{a)}	9×10^0	5×10^0	1×10^1	1×10^6
W-181	3×10^1	3×10^1	1×10^3	1×10^7
W-185	4×10^1	8×10^{-1}	1×10^4	1×10^7
W-187	2×10^0	6×10^{-1}	1×10^2	1×10^6
W-188 ^{a)}	4×10^{-1}	3×10^{-1}	1×10^2	1×10^5
Xenon (54)				
Xe-122 ^{a)}	4×10^{-1}	4×10^{-1}	1×10^2	1×10^9
Xe-123	2×10^0	7×10^{-1}	1×10^2	1×10^9
Xe-127	4×10^0	2×10^0	1×10^3	1×10^9
Xe-131m	4×10^1	4×10^1	1×10^4	1×10^4
Xe-133	2×10^1	1×10^1	1×10^3	1×10^4
Xe-135	3×10^0	2×10^0	1×10^3	1×10^{10}
Yttrium (39)				
Y-87 ^{a)}	1×10^0	1×10^0	1×10^1	1×10^6
Y-88	4×10^{-1}	4×10^{-1}	1×10^1	1×10^6
Y-90	3×10^{-1}	3×10^{-1}	1×10^3	1×10^5
Y-91	6×10^{-1}	6×10^{-1}	1×10^3	1×10^6
Y-91m	2×10^0	2×10^0	1×10^2	1×10^5
Y-92	2×10^{-1}	2×10^{-1}	1×10^2	1×10^5
Y-93	3×10^{-1}	3×10^{-1}	1×10^2	1×10^5
Yterbium (79)				
Yb-169	4×10^0	1×10^0	1×10^2	1×10^7
Yb-175	3×10^1	9×10^{-1}	1×10^3	1×10^7
Zinek (30)				
Zn-65	2×10^0	2×10^0	1×10^1	1×10^6
Zn-69	3×10^0	6×10^{-1}	1×10^4	1×10^6
Zn-69m ^{a)}	3×10^0	6×10^{-1}	1×10^2	1×10^6
Zirkonium (40)				

Radionuklid (atomové číslo)	A ₁	A ₂	Mezní hodnota hmotnostní aktivity pro vyjmuté látky (Bq/g)	Mezní hodnota aktivity pro vyjmutou zásilku (Bq)
	(TBq)	(TBq)	(Bq/g)	(Bq)
Zr-88	3×10^0	3×10^0	1×10^2	1×10^5
Zr-93	neomezeno	neomezeno	$1 \times 10^{3 \text{ b)}}$	$1 \times 10^{7 \text{ b)}}$
Zr-95 ^{a)}	2×10^0	8×10^{-1}	1×10^1	1×10^5
Zr-97 ^{a)}	4×10^{-1}	4×10^{-1}	$1 \times 10^{1 \text{ b)}}$	$1 \times 10^{5 \text{ b)}}$

(a) Hodnoty A₁ a/nebo A₂ pro tyto mateřské nuklidy zahrnují příspěvky od dceřinných nuklidů s poločasem rozpadu kratším než 10 dnů, jak je uvedeno v následujícím (přehledu):

Mg-28	Al-28
Ar-42	K-42
Ca-47	Sc-47
Ti-44	Sc-44
Fe-52	Mn-52m
Fe-60	Co-60m
Zn-69m	Zn-69
Ge-68	Ga-68
Rb-83	Kr-83m
Sr-82	Rb-82
Sr-90	Y-90
Sr-91	Y-91m
Sr-92	Y-92
Y-87	Sr-87m
Zr-95	Nb-95m
Zr-97	Nb-97m, Nb-97
Mo-99	Tc-99m
Tc-95m	Tc-95
Tc-96m	Tc-96
Ru-103	Rh-103m
Ru-106	Rh-106
Pd-103	Rh-103m
Ag-108m	Ag-108
Ag-110m	Ag-110
Cd-115	In-115m
In-114m	In-114
Sn-113	In-113m
Sn-121m	Sn-121
Sn-126	Sb-126m
Te-118	Sb-118
Te-127m	Te-127
Te-129m	Te-129
Te-131m	Te-131
Te-132	I-132
I-135	Xe-135m
Xe-122	I-122
Cs-137	Ba-137m
Ba-131	Cs-131
Ba-140	La-140
Ce-144	Pr-144m, Pr-144
Pm-148m	Pm-148
Gd-146	Eu-146
Dy-166	Ho-166
Hf-172	Lu-172
W-178	Ta-178
W-188	Re-188
Re-189	Os-189m
Os-194	Ir-194

Ir-189	Os-189m
Pt-188	Ir-188
Hg-194	Au-194
Hg-195m	Hg-195
Pb-210	Bi-210
Pb-212	Bi-212, Tl-208, Po-212
Bi-210m	Tl-206
Bi-212	Tl-208, Po-212
At-211	Po-211
Rn-222	Po-218, Pb-214, At-218, Bi-214, Po-214
Ra-223	Rn-219, Po-215, Pb-211, Bi-211, Po-211, Tl-207
Ra-224	Rn-220, Po-216, Pb-212, Bi-212, Tl-208, Po-212
Ra-225	Ac-225, Fr-221, At-217, Bi-213, Tl-209, Po-213, Pb-209
Ra-226	Rn-222, Po-218, Pb-214, At-218, Bi-214, Po-214
Ra-228	Ac-228
Ac-225	Fr-221, At-217, Bi-213, Tl-209, Po-213, Pb-209
Ac-227	Fr-223
Th-228	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208, Po-212
Th-234	Pa-234m, Pa-234
Pa-230	Ac-226, Th-226, Fr-222, Ra-222, Rn-218, Po-214
U-230	Th-226, Ra-222, Rn-218, Po-214
U-235	Th-231
Pu-241	U-237
Pu-244	U-240, Np-240m
Am-242m	Am-242, Np-238
Am-243	Np-239
Cm-247	Pu-243
Bk-249	Am-245
Cf-253	Cm-249 ⁿ

(b) Dále jsou uvedeny mateřské nuklidy a jejich dceřinné produkty, které jsou v trvalé rovnováze:

Sr-90	Y-90
Zr-93	Nb-93m
Zr-97	Nb-97
Ru-106	Rh-106
Ag-108m	Ag-108
Cs-137	Ba-137m
Ce-144	Pr-144
Ba-140	La-140
Bi-212	Tl-208 (0,36), Po-212 (0,64)
Pb-210	Bi-210, Po-210
Pb-212	Bi-212, Tl-208 (0,36), Po-212 (0,64)
Rn-222	Po-218, Pb-214, Bi-214, Po-214
Ra-223	Rn-219, Po-215, Pb-211, Bi-211, Tl-207
Ra-224	Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0,36), Po-212 (0,64)
Ra-226	Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210
Ra-228	Ac-228
Th-228	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0,36), Po-212 (0,64)
Th-229	Ra-225, Ac-225, Fr-221, At-217, Bi-213, Po-213, Pb-209
Th (nat)	Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0,36), Po-212 (0,64)
Th-234	Pa-234m
U-230	Th-226, Ra-222, Rn-218, Po-214

U-232	Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0,36), Po-212 (0,64)
U-235	Th-231
U-238	Th-234, Pa-234m
U (nat)	Th-234, Pa-234m, U-234, Th-230, Ra-226, Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210
Np-237	Pa-233
Am-242m	Am-242
Am-243	Np-239

- (c) Množství může být určeno pomocí měření doby rozpadu nebo měření dávkové intenzity v předepsané vzdálenosti od zdroje.
- (d) Tyto hodnoty platí pouze pro sloučeniny uranu, které jak za normálních, tak i nevhodných podmínek přepravy zachovávají chemickou podobu UF_6 , UO_2F_2 a $UO_2(NO_3)_2$.
- (e) Tyto hodnoty platí pouze pro uranové sloučeniny, které jak za normálních, tak i nevhodných podmínek přepravy zachovávají chemickou podobu UO_3 , UF_4 , UCl_4 , a pro šestimocné sloučeniny.
- (f) Tyto hodnoty platí pro všechny uranové sloučeniny, kromě těch, které jsou uvedeny pod písmeny d) a e) výše.
- (g) Tyto hodnoty platí pouze pro neozářený uran.

2.2.7.2.2.2

Stanovení základních hodnot zmíněných v tabulce 2.2.7.2.2.1 pro jednotlivé radionuklidy, které nejsou v tabulce 2.2.7.2.2.1 uvedeny, si vyžaduje vícestranné schválení. Jestliže je známa chemická forma každého radionuklidu, je přípustné použít hodnotu A_2 vypočtenou s použitím dávkového koeficientu pro příslušný typ absorpce plicemi (retence) podle doporučení Mezinárodní komise pro radiologickou ochranu (International Commission of Radiological Protection), bude-li zohledněna chemická forma každého radionuklidu jak za normálních, tak i havarijních podmínek přepravy. Alternativně se směji použít bez schválení příslušného orgánu pro radionuklidy hodnoty uvedené v tabulce 2.2.7.2.2.2.

Tabulka 2.2.7.2.2.2 Základní hodnoty aktivity radionuklidů pro neznámé radionuklidy a směsi

Radioaktivní obsah	A_1	A_2	Meze hmotnostní aktivity pro vyjmuté látky	Meze aktivity pro vyjmuté zásilky
	[TBq]	[TBq]	[Bq/g]	[Bq]
Je známa pouze přítomnost radionuklidů emitujících záření beta nebo gama	0.1	0.02	1×10^1	1×10^4
Je známa přítomnost nuklidů emitujících záření alfa, ale není známa přítomnost neutronových zářičů	0.2	9×10^{-5}	1×10^{-1}	1×10^3
Je známa přítomnost neutronových zářičů nebo nejsou dostupné žádné údaje	0.001	9×10^{-5}	1×10^{-1}	1×10^3

2.2.7.2.2.3

Při stanovení hodnot A_1 a A_2 pro radionuklid neobsažený v tabulce 2.2.7.2.2.1 se jednoduše radioaktivní rozpadová řada, v níž jsou radionuklidy obsaženy v poměru, ve kterém se vyskytují v přírodě, a v níž žádný dceřinný radionuklid nemá poločas rozpadu delší než 10 dní, nebo delší než poločas rozpadu mateřského radionuklidu, považuje za jednotlivý radionuklid; v tomto případě je třeba vzít v úvahu aktivitu a použít hodnoty A_1 nebo A_2 odpovídající mateřskému nuklidu v řadě. U radioaktivní rozpadové řady, v níž má kterýkoli dceřinný nuklid poločas rozpadu buď delší než 10 dnů, nebo delší než mateřský radionuklid, je nutno považovat mateřský radionuklid a takové dceřinné nuklidy za směsi různých nuklidů.

2.2.7.2.2.4 K určování základních hodnot pro směsi radionuklidů, kde základní hodnoty jednotlivých radionuklidů jsou uvedeny v tabulce 2.2.7.2.2.1, platí vztah:

$$X_m = 1 / \sum_i [f_{(i)} / X_{(i)}]$$

kde:

$f_{(i)}$ je podíl aktivity nebo specifické aktivity příslušného radionuklidu i ve směsi;

$X_{(i)}$ je příslušná hodnota A_1 nebo A_2 nebo mez specifické aktivity pro vyjmutou látku nebo mez aktivity pro vyjmutou zásilku pro příslušný radionuklid i ; a

X_m je odvozená hodnota z hodnot A_1 nebo A_2 nebo specifické aktivity pro vyjmutou látku nebo z meze aktivity pro vyjmutou zásilku v případě směsi.

2.2.7.2.2.5 Je-li známa identita každého radionuklidu, ale nejsou-li známy hodnoty aktivity některých radionuklidů, mohou být radionuklidy seskupeny do skupin a nejnižší hodnota aktivity v každé skupině může být použita při výpočtech podle vzorců uvedených v bodech 2.2.7.2.2.4 a 2.2.7.2.4.4. Skupiny mohou být vytvořeny na základě celkové alfa aktivity a celkové beta/gama aktivity, pokud jsou známy; k výpočtu se používá nejnižších hodnot jak pro zářiče alfa tak pro zářiče beta/gama.

2.2.7.2.2.6 Pro jednotlivé radionuklidy nebo směsi radionuklidů, pro které nejsou k dispozici příslušné údaje, se použijí hodnoty uvedené v tabulce 2.2.7.2.2.2.

2.2.7.2.3 Stanovení dalších materiálových charakteristik

2.2.7.2.3.1 Látky s nízkou specifickou aktivitou (LSA)

2.2.7.2.3.1.1 (Vyhrazeno)

2.2.7.2.3.1.2 Látky LSA se rozdělují do tří skupin

- (a) LSA-I
- (i) uranové a thoriové rudy, koncentráty těchto rud a další rudy obsahující přírodně se vyskytující radionuklidy, které jsou určeny ke zpracování pro využití těchto radionuklidů;
 - (ii) přírodní uran, ochuzený uran, přírodní thorium nebo jejich sloučeniny nebo směsi, které nebyly ozářeny a jsou tuhé nebo kapalné;
 - (iii) radioaktivní látku, pro niž je hodnota A_2 neomezena s výjimkou štěpné látky v množstvích, která nejsou vyňata z požadavků na štěpnou látku podle 2.2.7.2.3.5; nebo
 - (iv) další radioaktivní látky, ve kterých je aktivita zcela rozptýlena a stanovená průměrná specifická aktivita nepřekračuje třicetinasobek hodnoty stanovené podle 2.2.7.2.2.1 až 2.2.7.2.2.6, s výjimkou štěpné látky v množstvích, která nejsou vyňata z požadavků na štěpnou látku podle 2.2.7.2.3.5.
- (b) LSA-II
- (i) voda s tritiem o koncentraci do 0,8 TBq/l; nebo
 - (ii) další látky, ve kterých je aktivita zcela rozptýlena a stanovená průměrná specifická aktivita nepřevyšuje 10^{-4} A₂/g pro tuhé látky a plyny a 10^{-5} A₂/g pro kapaliny;
- (c) LSA-III - Tuhé látky (t.j. zpevněné odpady, aktivované materiály) s výjimkou prášků splňujících požadavky uvedené v 2.2.7.2.3.1.3, v nichž současně:
- (i) radioaktivní látka je zcela rozptýlena v tuhé látce nebo v tuhých předmětech nebo je v podstatě rovnoměrně rozptýlena v kompaktní pojivě látce (jako je beton, bitumen, keramika apod.);
 - (ii) radioaktivní látka je relativně nerozpustná nebo je vázána v relativně nerozpustném podkladu, takže ani v případě ztráty funkčnosti obalového souboru by ztráta radioaktivních látek z jednoho obalu loužením ve vodě po dobu sedm dní nepřesáhla 0,1 A₂; a
 - (iii) stanovená průměrná hmotnostní aktivita tuhé látky bez stínícího materiálu nepřekračuje $2 \cdot 10^{-3}$ A₂/g.

- 2.2.7.2.3.1.3 Látky LSA-III musí být tuhými látkami takové povahy, že jestliže by se celkový obsah kusu podrobil zkoušce uvedené v 2.2.7.2.3.1.4, aktivita ve vodě by nepřekročila $0,1 A_2$
- 2.2.7.2.3.1.4 Látky LSA-III se zkoušejí následovně:
- Vzorek tuhé látky představující úplný obsah kusu (ne méně) musí být na sedm dní ponořen do vody (ke stanovení vyluhovatelnosti) při pokojové teplotě. Objem vody použité ke zkoušce musí být takový, aby na konci sedmidenního zkušebního období zaručoval, že volný objem neabsorbované a nezureagované vody bude přinejmenším dosahovat 10 % objemu samotného vzorku tuhé látky. Voda musí mít počáteční pH 6 - 8 a maximální měrnou vodivost 1mS/m při $20\text{ }^\circ\text{C}$. Celková aktivita volného objemu vody musí být měřena po skončení sedmidenní zkoušky.
- 2.2.7.2.3.1.5 Důkaz o dodržení požadovaných kritérií podle 2.2.7.2.3.1.4 musí být v souladu s 6.4.12.1 a 6.4.12.2
- 2.2.7.2.3.2 Povrchově kontaminovaný předmět (SCO)
- SCO se zařazují do jedné ze dvou skupin:
- (a) SCO-I, tuhý předmět, na kterém:
- (i) nefixovaná kontaminace na přístupném povrchu o ploše průměrně 300 cm^2 (nebo na celé ploše, je-li menší než 300 cm^2) nepřekračuje 4 Bq/cm^2 u beta a gama zářičů a alfa zářičů s nízkou toxicitou, nebo $0,4\text{ Bq/cm}^2$ u všech ostatních alfa zářičů; a
 - (ii) fixovaná kontaminace na přístupném povrchu o ploše průměrně 300 cm^2 (nebo na celé ploše, je-li menší než 300 cm^2) nepřekračuje $4 \times 10^4\text{ Bq/cm}^2$ u beta a gama zářičů a alfa zářičů s nízkou toxicitou, nebo $4 \times 10^3\text{ Bq/cm}^2$ u všech ostatních alfa zářičů; a
 - (iii) součet nefixované a fixované kontaminace na nepřístupném povrchu větším než 300 cm^2 (nebo na celé ploše, je-li menší než 300 cm^2) nepřekračuje $4 \times 10^4\text{ Bq/cm}^2$ u beta a gama zářičů a alfa zářičů s nízkou toxicitou, nebo $4 \times 10^3\text{ Bq/cm}^2$ u všech ostatních alfa zářičů;
- (b) SCO-II, tuhý předmět, na jehož povrchu překračuje fixovaná nebo nefixovaná kontaminace meze uvedené pro SCO-I v (a), a na kterém:
- (i) nefixovaná kontaminace na přístupném povrchu o ploše větší než 300 cm^2 (nebo na celé ploše, je-li menší než 300 cm^2) nepřekračuje 400 Bq/cm^2 u beta a gama zářičů a alfa zářičů s nízkou toxicitou, nebo 40 Bq/cm^2 u všech ostatních alfa zářičů; a
 - (ii) fixovaná kontaminace na přístupném povrchu na ploše větší než 300 cm^2 (nebo na celé ploše, je-li menší než 300 cm^2) nepřekračuje $8 \times 10^5\text{ Bq/cm}^2$ u beta a gama zářičů a alfa zářičů s nízkou toxicitou nebo $8 \times 10^4\text{ Bq/cm}^2$ u všech ostatních alfa zářičů; a
 - (iii) součet nefixované a fixované kontaminace na nepřístupném povrchu o ploše větší než 300 cm^2 (nebo na celé ploše, je-li menší než 300 cm^2) nepřekračuje $8 \times 10^5\text{ Bq/cm}^2$ u beta a gama zářičů a alfa zářičů s nízkou toxicitou nebo $8 \times 10^4\text{ Bq/cm}^2$ u všech ostatních alfa zářičů.
- 2.2.7.2.3.3 Radioaktivní látky zvláštní formy
- 2.2.7.2.3.3.1 Radioaktivní látka zvláštní formy musí mít alespoň jeden rozměr nejméně 5 mm. Pokud uzavřené pouzdro obsahuje část radioaktivní látky zvláštní formy, pouzdro musí být vyrobeno tak, aby je bylo možno otevřít pouze destrukcí. Vzor radioaktivní látky zvláštní formy vyžaduje jednostranné schválení.
- 2.2.7.2.3.3.2 Radioaktivní látka zvláštní formy musí být takové povahy, nebo musí být vyrobena tak, aby po provedených zkouškách podle 2.2.7.2.3.3.4 až 2.2.7.2.3.3.8 splňovala následující požadavky:
- (a) nepraskne nebo se nerozdrtí v průběhu zkoušek na náraz, tlak a ohyb podle 2.2.7.2.3.3.5 (a), (b), (c) a 2.2.7.2.3.3.6(a);

- (b) neroztaví se nebo se nerozptýlí při tepelných zkouškách specifikovaných v 2.2.7.2.3.3.5 (d) nebo 2.2.7.2.3.3.6 (b); a
 - (c) aktivita vody při stanovení vyluhovatelnosti podle 2.2.7.2.3.3.7. a 2.2.7.2.3.3.8 nepřekročí 2 kBq; nebo u uzavřených zářičů rychlost objemového úniku při zkoušce hodnotící objemový únik, specifikovaný v publikaci Mezinárodní organizace pro standardizaci: „Radiální ochrana - uzavřené radioaktivní zářiče - metody zkoušek netěsnosti, ISO 9987:1992 E, ISO, Geneva, 1992“, nepřekročí příslušnou mez stanovenou příslušným orgánem.
- 2.2.7.2.3.3.3 Důkaz o dodržení požadovaných kritérií podle 2.2.7.2.3.3.2 musí být v souladu s 6.4.12.1 a 6.4.12.2.
- 2.2.7.2.3.3.4 Vzorky, které obsahují nebo simulují radioaktivní látku zvláštní formy, musí být podrobeny pádové zkoušce, zkoušce nárazem, ohýbací zkoušce a tepelné zkoušce podle 2.2.7.2.3.3.5 nebo alternativně zkoušce podle 2.2.7.2.3.3.6. Pro každou z těchto zkoušek může být použit jiný vzorek. Po každé zkoušce musí být provedeno stanovení vyluhovatelnosti nebo test rychlosti objemového úniku daného vzorku pomocí metody, která nesmí být méně citlivá než metody specifikované v 2.2.7.2.3.3.7 pro nerozptýlitelnou tuhou látku nebo podle bodu 2.2.7.2.3.3.8 pro zapouzdřenou látku.
- 2.2.7.2.3.3.5 Závazné zkušební metody jsou:
- (a) Pádová zkouška: Vzorek musí padnout na podložku (terč) z výšky 9 m. Podložka musí odpovídat definici v 6.4.14;
 - (b) Zkouška průrazem: vzorek musí být umístěn na plátu olova, podepřeném hladkou tuhou plochou a musí do něj narazit plochou přední stranou tyč z měkké oceli tak, aby způsobila náraz odpovídající důsledku nárazu hmoty 1,4 kg padající volným pádem z 1 m. Spodní část tyče musí mít průměr 25 mm s hranami zaoblenými na poloměr $(3,0 \pm 0,3)$ mm. Olovo o tvrdosti 3,5 - 4,5 podle Vickersovy stupnice a o tloušťce nejvýše 25 mm musí překrývat plochu větší, než činí plocha vzorku. Pro každý náraz musí být použit nový olověný povrch. Tyč musí na vzorek narazit v místě předpokládaného největšího poškození;
 - (c) Zkouška ohybem se musí provádět pouze pro dlouhé a tenké zdroje, které mají minimální délku 10 cm a současně poměr délky k minimální šířce činí nejméně 10. Vzorek musí být pevně uchycen tak, aby jedna jeho polovina vyčnívala přes okraj uchycení. Orientace vzorku musí být taková, aby došlo k jeho maximálnímu poškození, když na jeho volný konec narazí přední plocha ocelové tyče. Ocelová tyč musí na vzorek narazit tak, aby způsobila náraz odpovídající důsledku nárazu hmoty 1,4 kg padající volným pádem z 1 m. Spodní část tyče musí mít průměr 25 mm s hranami zaoblenými na poloměr $(3,0 \pm 0,3)$ mm;
 - (d) Tepelná zkouška: Vzorek musí být ohříván na vzduchu na teplotu 800 °C, na této teplotě musí být udržován 10 minut a po té se musí nechat vychladnout.
- 2.2.7.2.3.3.6 Vzorky, které obsahují nebo simulují radioaktivní látku uzavřenou v hermetickém pouzdru nemusí být prověřovány:
- (a) zkouškami předepsanými v bodech 2.2.7.2.3.3.5 (a) a (b), za předpokladu, že hmotnost radioaktivní látky zvláštní formy je:
 - (i) menší než 200 g a alternativně jsou vystaveny zkoušce nárazem 4. třídy, předepsané v publikaci Mezinárodní organizace pro standardizaci ISO 2919:1999 „Radiální ochrana – Uzavřené radioaktivní zářiče – Všeobecné požadavky a klasifikace“; nebo
 - (ii) menší než 500 g a alternativně jsou vystaveny zkoušce nárazem 5. třídy, předepsané v publikaci Mezinárodní organizace pro standardizaci ISO 2919:1999 „Radiální ochrana – Uzavřené radioaktivní zářiče – Všeobecné požadavky a klasifikace“; a
 - (b) zkouškou, předepsanou v 2.2.7.2.3.3.5 (d), za předpokladu, že alternativně jsou vystaveny teplotní zkoušce 6. třídy, předepsané v publikaci Mezinárodní organizace pro standardizaci: ISO 2919:1999 „Radiální ochrana – Uzavřené radioaktivní zářiče – Všeobecné požadavky a klasifikace“.
- 2.2.7.2.3.3.7 Pro vzorky obsahující nebo simulující nerozptýlitelnou tuhou látku, musí být stanovení vyluhovatelnosti prováděno následovně:

- (a) vzorek musí být na sedm dní ponořený do vody (ke stanovení vyluhovatelnosti) při pokojové teplotě. Objem vody použité ke zkoušce musí být takový, aby na konci sedmidenního zkušebního období zaručoval, že volný objem neabsorbované a nezreagované vody bude při nejmenším dosahovat 10 % objemu samotného vzorku tuhé látky. Voda musí mít počáteční pH 6 - 8 a maximální vodivost 1 mS/m při 20 °C;
- (b) voda se vzorkem se musí poté ohřát na teplotu 50 ± 5 °C a tato teplota musí být udržována po dobu 4 hodin;
- (c) potom musí být stanovena aktivita vody;
- (d) nato musí být vzorek ponechán v klidném ovzduší po dobu sedmi dnů při minimální teplotě 30 °C a minimální relativní vlhkosti 90 %;
- (e) následně musí být vzorek ponořen do vody o stejné specifikaci jako v bodě (a) výše a tato voda se musí poté ohřát na teplotu 50 ± 5 °C a, tato teplota musí být udržována po dobu 4 hodin;
- (f) nakonec musí být stanovena aktivita vody.

2.2.7.2.3.3.8 Pro vzorky obsahující nebo simulující radioaktivní látku uzavřenou v hermetickém pouzdru, musí být provedeno buď stanovení vyluhovatelnosti, nebo rychlosti objemového úniku, a to následujícím způsobem:

- (a) Vyluhovací zkouška musí sestávat z následujících kroků:
 - (i) vzorek musí být ponořený do vody při pokojové teplotě. Voda musí mít počáteční pH 6 - 8 a maximální vodivost 1 mS/m při 20 °C;
 - (ii) voda se vzorkem se musí poté ohřát na teplotu 50 ± 5 °C a tato teplota musí být udržována po dobu 4 hodin;
 - (iii) potom musí být stanovena aktivita vody;
 - (iv) nato musí být vzorek ponechán v klidném ovzduší po dobu sedmi dnů při minimální teplotě 30 °C a minimální relativní vlhkosti 90 %;
 - (v) postup podle bodů (i), (ii) a (iii) musí být opakován.
- (b) Alternativní stanovení rychlosti objemového úniku musí zahrnovat kteroukoliv ze zkoušek, předepsaných v publikaci Mezinárodní organizace pro standardizaci: „Radiační ochrana - uzavřené radioaktivní zářiče - metody zkoušek netěsnosti, ISO 9987:1992, které jsou přijatelné pro příslušný orgán.

2.2.7.2.3.4 Radioaktivní látky s nízkou rozptýlitelností

2.2.7.2.3.4.1 Konstrukce radioaktivní látky s malou rozptýlitelností podléhá vícestrannému schválení. Radioaktivní látka s malou rozptýlitelností musí být takové povahy, aby celkové množství této radioaktivní látky v kusu, s přihlédnutím k ustanovením v 6.4.8.14, splnilo následující požadavky:

- (a) hodnota příkonu dávkového ekvivalentu ve vzdálenosti 3 m od nestíněné radioaktivní látky nesmí překročit hodnotu 10 mSv/h;
- (b) po provedení testů specifikovaných v 6.4.20.3 a 6.20.4, nesmí aktivita uvolněných aerosolů ve formě plynné nebo tuhých částic překročit, až do aerodynamického ekvivalentu průměru 100 μm, hodnotu 100 A₂. Pro každou zkoušku může být použit zvláštní vzorek; a
- (c) po provedení zkoušky podle 2.2.7.2.3.1.4, aktivita ve vodě nesmí nepřekročit 100 A₂. Při tomto testu musí být vzato v úvahu poškození v důsledku zkoušek uvedených v bodu (b).

2.2.7.2.3.4.2 Radioaktivní látka s malou rozptýlitelností musí být zkoušena následovně:

Vzorek obsahující nebo simulující radioaktivní látku s malou rozptýlitelností musí být podroben rozšířené tepelné zkoušce specifikované v 6.4.20.3 a nárazové zkoušce specifikované v 6.4.20.4. Pro každou ze zkoušek může být použit jiný vzorek. Po každé zkoušce musí být vzorek podroben vyluhovací zkoušce specifikované v 2.2.7.2.3.1.4. Po každé zkoušce musí být stanoveno, zda jsou naplněny aplikovatelné požadavky uvedené v 2.2.7.2.3.4.1.

2.2.7.2.3.4.3 Důkaz o dodržení požadovaných kritérií podle 2.2.7.2.3.4.1 a 2.2.7.2.3.4.2 musí být v souladu s 6.4.12.1 a 6.4.12.2.

2.2.7.2.3.5 Štěpná látka

Kusy obsahující štěpné látky musí být přiřazeny pod příslušnou položku tabulky 2.2.7.2.1.1, jejíž popis zahrnuje slova „ŠTĚPNÁ“ nebo „vyjmutá štěpná“. Klasifikace jako „vyjmutá štěpná“ je povolena pouze tehdy, je-li splněna jedna z podmínek uvedených pod písmeny (a) až (d) tohoto odstavce. V rámci jedné zásilky smí být uplatněna pouze jedna výjimka (viz též 6.4.7.2).

- (a) Hmotnostní mez na zásilku, pokud nejmenší vnější rozměr každého kusu není menší než 10 cm, se stanoví podle tohoto vzorce:

$$\frac{\text{hmotnost uranu-235 (g)}}{X} + \frac{\text{hmotnost ostatních štěpných látek (g)}}{Y} < 1$$

kde X a Y jsou hmotnostní meze definované v tabulce 2.2.7.2.3.5 za předpokladu, že:

- (i) každý jednotlivý kus obsahuje nejvýše 15 g štěpných nuklidů; pro nebalenou látku se toto hmotnostní omezení vztahuje na zásilku, která se má přepravovat ve vozidle nebo na vozidle; nebo
- (ii) štěpné látky jsou homogenní vodné roztoky nebo směsi, kde poměr štěpných nuklidů k vodíku je menší než 5 % hm.; nebo
- (iii) nejvýše 5 g štěpných nuklidů je obsaženo v libovolném desetilitrovém objemu látky.

Berylium nesmí být přítomné v množstvích překračujících 1 % platných hmotnostních mezí pro zásilku uvedených v tabulce 2.2.7.2.3.5, vyjma případů, kdy koncentrace berylia v látce nepřekračuje 1 gram berylia na jakoukoli hmotnost 1000 gramů.

Deuterium nesmí být rovněž přítomné v množstvích překračujících 1 % platných hmotnostních mezí pro zásilku uvedených v tabulce 2.2.7.2.3.5, vyjma deuteria obsaženého ve vodíku v přírodní koncentraci.

- (b) uran obohacený maximálně na 1 hmot. % uranu-235 a s celkovým obsahem plutonia a uranu-233 nepřevyšujícím 1 hmot. % uranu-235 za předpokladu, že štěpné nuklidy jsou rozloženy zcela homogenně v celém objemu. Navíc, je-li uran-235 ve formě kovu, oxidu nebo karbidu, nesmí být uspořádán ve tvaru mřížce;
- (c) kapalně roztoky dusičnanu uranylu s uranem obohaceným maximálně na 2 hmot. % uranu-235, přičemž celkový obsah plutonia a uranu-233 nesmí přesáhnout 0,002% hmotnosti uranu a minimální poměr počtu atomů dusíku ku počtu atomů uranu (N/U) musí být 2;
- (d) Plutonium obsahující nejvýše 20 % hm. štěpných nuklidů až do nejvýše 1 kg plutonia na zásilku. Odeslání podle této výjimky smí být provedeno jen za vylučného použití.

Tabulka 2.2.7.2.3.5 Hmotnostní meze na dodávku pro vyjmutí z požadavků na radioaktivní zásilky obsahující štěpné látky

Štěpná látka	Hmotnost štěpné látky (g) smíšené s látkami majícími průměrnou hustotu vodíkových atomů nižší nebo rovnou hustotě vodíkových atomů ve vodě	Hmotnost štěpné látky (g) smíšené s látkami majícími průměrnou hustotu vodíkových atomů vyšší než hustota vodíkových atomů ve vodě
Uran-235 (X)	400	290
Další štěpné látky (Y)	250	180

2.2.7.2.4 Klasifikace kusů nebo nebalené látky

Množství radioaktivní látky v kusu nesmí překročit příslušné meze, jak je uvedeno v následujícím.

2.2.7.2.4.1 Klasifikace jako vyjmutý kus

2.2.7.2.4.1.1 Kusy mohou být klasifikovány jako vyjmuté pokud:

- (a) Jsou prázdnými obaly, které obsahovaly radioaktivní látku;
- (b) Obsahují výrobky nebo přístroje v omezeném množství, jak je uvedeno v tabulce 2.2.7.2.4.1.2;
- (c) Obsahují výrobky vyrobené z přírodního uranu, ochuzeného uranu nebo přírodního thoria; nebo
- (d) Obsahují radioaktivní látku v omezeném množství, jak je uvedeno v tabulce 2.2.7.2.4.1.2.

2.2.7.2.4.1.2 Kus, který obsahuje radioaktivní látku, může být klasifikován jako vyjmutý kus pokud dávkový příkon na libovolném místě jeho vnějšího povrchu nepřevyšuje 5 $\mu\text{Sv/h}$.

Tabulka 2.2.7.2.4.1.2 Meze aktivity pro vyjmuté kusy

FYZIKÁLNÍ STAV OBSAHU (SKUPENSTVÍ)	Přístroj nebo výrobek		Látky – meze pro radioaktivní kusy ^a
	Meze pro předměty ^a	Meze pro radioaktivní kusy ^a	
<i>Tuhé látky</i>			
ZVLÁŠTNÍ FORMA			
Jiné	$10^{-2}A_1$	A_1	$10^{-3}A_1$
Kapaliny			
Jiné	$10^{-3}A_2$	$10^{-1}A_2$	$10^{-4}A_2$
Plyny			
Tritium	$2 \times 10^{-2}A_2$	$2 \times 10^{-1}A_2$	$2 \times 10^{-2}A_2$
zvláštní forma	$10^{-3}A_1$	$10^{-2}A_1$	$10^{-3}A_1$
Jiné	$10^{-3}A_2$	$10^{-3}A_2$	$10^{-3}A_2$

^a Pro směsi radionuklidů, viz. 2.2.7.2.2.4 až 2.2.7.2.2.6

2.2.7.2.4.1.3 Radioaktivní látky, které jsou uzavřeny v přístroji nebo obsaženy ve výrobku, nebo tvoří součást těchto předmětů, mohou být klasifikovány jako UN 2911 LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS – PŘÍSTROJE nebo VÝROBKY, jen pokud:

- (a) příkon dávkového ekvivalentu ve vzdálenosti 10 cm od libovolného místa vnějšího povrchu nebaleného přístroje nebo výrobku není vyšší než 0,1 mSv/h; a
- (b) každý přístroj nebo výrobek je opatřen nápisem „RADIOAKTIVNÍ“ („RADIOACTIVE“) s výjimkou:
 - (i) hodin nebo zařízení opatřených značením provedeným barvami světélkujícími na základě radioluminiscence;
 - (ii) spotřebního zboží majícího povolení příslušného úřadu podle 1.7.1.4 (d) nebo nepřesahujícího limity aktivity pro vyjmuté kusy uvedené v tabulce 2.2.7.2.2.1 (sloupec 5), za předpokladu, že takové výrobky jsou přepravovány v obalovém souboru, který je označen nápisem „Radioaktivní“ na vnitřním povrchu takovým způsobem, že toto upozornění na přítomnost radioaktivní látky je viditelné po otevření obalu; a
- (c) radioaktivní látka je úplně uzavřena neaktivními součástmi (přítom zařízení, jehož jediným účelem je obsahovat radioaktivní látku nelze považovat za přístroj nebo výrobek ve výše uvedeném smyslu); a
- (d) platí limity specifikované ve sloupcích 2 a 3 tabulky 2.2.7.2.4.1.2 pro každou jednotlivou položku a každý kus.

2.2.7.2.4.1.4 Radioaktivní látky v jiných formách, než jsou formy uvedené v 2.2.7.2.4.1.3, jejichž aktivita nepřekračuje meze stanovené ve sloupci 4 tabulky 2.2.7.2.4.1.2, může být klasifikována jako UN 2910 LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS - OMEZENÁ MNOŽSTVÍ, pokud:

- (a) kus udrží svůj radioaktivní obsah za podmínek běžné přepravy; a
- (b) kus je na vnitřním povrchu obalu opatřen nápisem „RADIOAKTIVNÍ“ („RADIOACTIVE“), takže při jeho otevření je viditelné upozornění na přítomnost radioaktivní látky.

2.2.7.2.4.1.5 Prázdný obal, který obsahoval radioaktivní látky, může být klasifikován jako UN 2908 LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS - PRÁZDNÝ OBAL, jen pokud

- (a) je v bezvadném stavu a je bezpečně uzavřen;
- (b) vnější povrch každé jeho součásti z uranu nebo thoria je uzavřen neaktivním pláštěm z kovového nebo jiného tuhého materiálu;
- (c) úroveň nefixované kontaminace na jeho vnitřním povrchu o ploše větší než 300 cm² nepřekračuje:
 - (i) 400 Bq/cm² pro beta a gama zářiče a nízkotoxické alfa zářiče; a
 - (ii) 40 Bq/cm² pro všechny ostatní alfa zářiče; a
- (d) veškeré bezpečnostní značky, které na něm mohly být umístěny v souladu s 5.2.2.1.11.1, jsou zakryty, znehodnoceny nebo odstraněny.

2.2.7.2.4.1.6 Výrobky vyrobené z přírodního uranu, ochuzeného uranu nebo přírodního thoria a výrobky, ve kterých jsou jedinými radioaktivními látkami neozářený přírodní uran, neozářený ochuzený uran nebo neozářený přírodní thorium, mohou být klasifikovány jako UN 2909 LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS - VÝROBKY Z PŘÍRODNÍHO URANU nebo OCHUZENÉHO URANU nebo PŘÍRODNÍHO THORIA jen pokud vnější povrch uranu nebo thoria je uzavřen v neaktivním plášti z kovu nebo jiného tuhého materiálu.

2.2.7.2.4.2 Klasifikace jako látka s nízkou specifickou aktivitou (LSA)

Radioaktivní látka může být zaříděna jako látka LSA za předpokladu, že je splněna definice látky LSA v 2.2.7.1.3 a podmínky dle 2.2.7.2.3.1, 4.1.9.2 a 7.5.11 CV33 (2).

2.2.7.2.4.3 Klasifikace jako povrchově kontaminovaný předmět (SCO)

Radioaktivní látka může být zaříděna jako SCO za předpokladu, že je splněna definice SCO v 2.2.7.1.3 a podmínky dle 2.2.7.2.3.2, 4.1.9.2 a 7.5.11 CV33 (2).

2.2.7.2.4.4 Klasifikace jako kus typu A

Kusy obsahující radioaktivní látky mohou být zaříděny jako kus typu A za předpokladu dodržení následujících podmínek:

Kusy typu A nesmí obsahovat aktivity vyšší než:

- (a) hodnotu A₁; pro radioaktivní látku zvláštní formy; nebo
- (b) hodnotu A₂; pro všechny ostatní radioaktivní látky.

Pro směsi radionuklidů jejichž identita a příslušné aktivity jsou známy, platí následující podmínka pro radioaktivní látku kusu typu A:

$$\sum_i \frac{B(i)}{A_1(i)} + \sum_j \frac{C(j)}{A_2(j)} \leq 1$$

kde:

B(i) je aktivita radionuklidu i jako radioaktivní látky zvláštní formy;

A₁(i) je hodnota A₁ pro radionuklid i;

C(j) je aktivita radionuklidu j jako radioaktivní látky jiné než radioaktivní látka zvláštní formy; a

A₂(j) je hodnota A₂ pro radionuklid j.

- 2.2.7.2.4.5 **Klasifikace hexafluoridu uranu**
- Hexafluorid uranu může být přiřazen pouze k položce UN 2977 LÁTKA RADIOAKTIVNÍ, HEXAFLUORID URANU, ŠTĚPNÁ, nebo 2978 LÁTKA RADIOAKTIVNÍ, HEXAFLUORID URANU, jiná než štěpná nebo vyjmutá štěpná
- 2.2.7.2.4.5.1 **Kusy obsahující hexafluorid uranu nesmí obsahovat:**
- (a) hexafluorid uranu o hmotnosti odlišné od hmotnosti stanovené v rozhodnutí o typovém schválení kusu;
 - (b) hexafluorid uranu o hmotnosti větší než takové, která umožňuje volný objem menší než 5 % v kusu při maximální teplotě kusu, jak je popsáno pro systémy toho zařízení, kde se bude s kusem nakládat; nebo
 - (c) hexafluorid uranu v jiném než tuhém skupenství nebo za vnitřního tlaku vyššího než je tlak atmosférický při předání k přepravě.
- 2.2.7.2.4.6 **Zatřídění jako kusy typu B(U), typu B(M) nebo typu C**
- 2.2.7.2.4.6.1 Kusy, které nejsou zatříděny podle 2.2.7.2.4 (2.2.7.2.4.1 až 2.2.7.2.4.5) musí být zatříděny v souladu s rozhodnutím o typovém schválení kusu vydaným příslušným orgánem v zemi původu nebo konstrukce vzoru.
- 2.2.7.2.4.6.2 Kus může být zatříděn jako kus typu B(U) pouze pokud neobsahuje:
- (a) vyšší aktivity než ty, které byly povoleny pro daný konstrukční typ;
 - (b) jiné radionuklidy než které byly povoleny pro daný konstrukční typ; nebo
 - (c) radioaktivní obsah ve formě nebo chemickém či fyzikálním stavu jiném, než který byl povolen pro daný konstrukční typ;
- jak je popsáno v rozhodnutí o typovém schválení.
- 2.2.7.2.4.6.3 Kus může být zatříděn jako kus typu B(M) pouze pokud neobsahuje:
- (a) vyšší aktivity než ty, které byly povoleny pro daný konstrukční typ;
 - (b) jiné radionuklidy než které byly povoleny pro daný konstrukční typ; nebo
 - (c) radioaktivní obsah ve formě nebo chemickém či fyzikálním stavu jiném, než který byl povolen pro daný konstrukční typ;
- jak je popsáno v rozhodnutí o typovém schválení.
- 2.2.7.2.4.6.4 Kus může být zatříděn jako kus typu C pouze pokud neobsahuje:
- (a) vyšší aktivity než ty, které byly povoleny pro daný konstrukční typ;
 - (b) jiné radionuklidy než které byly povoleny pro daný konstrukční typ; nebo
 - (c) radioaktivní obsah ve formě nebo chemickém či fyzikálním stavu jiném, než který byl povolen pro daný konstrukční typ;
- jak je popsáno v rozhodnutí o typovém schválení.
- 2.2.7.2.5 **Zvláštní ujednání**
- Radioaktivní látka musí být zatříděna jako přepravovaná podle zvláštního ujednání, když je určena k přepravě v souladu s 1.7.4.

2.2.8 Třída 8 Žíravé látky**2.2.8.1 Kritéria**

2.2.8.1.1 Název třídy 8 zahrnuje látky a předměty obsahující látky této třídy, které svým chemickým účinkem napadají vlákna epitelu pokožky nebo sliznic, se kterým přicházejí do styku, nebo které v případě úniku mohou způsobit škody na jiných věcech nebo na dopravních prostředcích nebo je mohou zničit. Pod název této třídy spadají také látky, které teprve s vodou tvoří žíravé kapaliny, nebo které za přítomnosti přirozené vlhkosti vzduchu vytvářejí žíravé páry nebo mlhy.

2.2.8.1.2 Látky a předměty třídy 8 jsou rozděleny následovně:

C1 - C11 Žíravé látky bez vedlejšího nebezpečí a předměty obsahující takové látky

C1 - C4 Kyselé látky
C1 anorganické, kapalné
C2 anorganické, tuhé
C3 organické, kapalné
C4 organické, tuhé

C5 - C8 Zásadité látky
C5 anorganické, kapalné
C6 anorganické, tuhé
C7 organické, kapalné
C8 organické, tuhé

C9-C10 Jiné žíravé látky
C9 kapalné
C10 tuhé

C11 Předměty

CF Žíravé látky, hořlavé
CF1 kapalné
CF2 tuhé

CS Žíravé látky, schopné samoohřevu
CS1 kapalné
CS2 tuhé

CW Žíravé látky, které ve styku s vodou vyvíjejí hořlavé plyny
CW1 kapalné
CW2 tuhé

CO Žíravé látky, podporující hoření
CO1 kapalné
CO2 tuhé

CT Žíravé látky, toxické a předměty obsahující takové látky
CT1 kapalné
CT2 tuhé
CT3 předměty

CFT Žíravé látky, kapalné, hořlavé, toxické

COT Žíravé látky, podporující hoření, toxické.

Klasifikace a přiřazení k obalovým skupinám

2.2.8.1.3 Látky třídy 8 musí být na základě svého stupně nebezpečí, které představují při přepravě, přiřazeny k následujícím obalovým skupinám :

Obalová skupina I : silně žíravé látky;

Obalová skupina II : Žíravé látky;
Obalová skupina III: slabě žíravé látky

2.2.8.1.4 Látky a předměty zařazené do třídy 8 jsou uvedeny v tabulce A kapitoly 3.2. Přiřazení látek k obalovým skupinám I, II nebo III je založeno na získaných zkušenostech se zohledněním přídatných faktorů, jako nebezpečí vdechnutí (viz 2.2.8.1.5) a schopnosti reagovat s vodou (včetně vytvoření nebezpečných produktů rozkladu).

2.2.8.1.5 Látky nebo přípravky, které splňují kritéria třídy 8 a mají toxicitu při vdechnutí prachu a mlhy (LC₅₀) odpovídající obalové skupině I, ale toxicitu při požití nebo absorpci kůží odpovídající jen obalové skupině III nebo nižší, musí být přiřazeny ke třídě 8.

2.2.8.1.6 Látky, včetně směsí, které nejsou jmenovitě uvedeny v tabulce A kapitoly 3.2, mohou být přiřazeny k vhodným položkám pododdílu 2.2.8.3 a k odpovídající obalové skupině na základě délky doby kontaktu, která je nutná k tomu, aby byla poškozena lidská pokožka v celé své tloušťce v souladu s kritérii odstavců (a) až (c) dále.

U kapalin a u tuhých látek, které mohou zkapalnit během přepravy, o nichž se předpokládá, že nevyvolají poškození lidské pokožky v celé její tloušťce, je třeba ještě zohlednit jejich schopnost způsobit korozi některých kovových povrchů. Při přiřazování látek k obalovým skupinám se musí zohlednit zkušenosti, získané při jejich náhodném působení. Jestliže takové zkušenosti chybí, je třeba přiřazení provést na základě výsledků pokusů podle směrnice pro zkoušení OECD 404⁷ nebo 435⁸. Látky, která podle směrnice pro zkoušení OECD 430⁹ nebo 431¹⁰ není určena za látku žíravou, smí být považována pro účely ADR bez dalšího zkoušení za látku, která není žíravá vůči pokožce.

(a) K obalové skupině I jsou přiřazeny látky, které během pozorovací doby 60 minut, počínající po době působení 3 minut nebo kratší, způsobí zničení neporaněné kožní tkáně v celé její tloušťce.

(b) K obalové skupině II jsou přiřazeny látky, které během pozorovací doby 14 dní, počínající po době působení delší než 3 minuty, nejvýše však 60 minut, způsobí zničení neporaněné kožní tkáně v celé její tloušťce.

(c) K obalové skupině III jsou přiřazeny látky:

- které během pozorovací doby 14 dní, počínající po době působení delší než 60 minut, nejvýše však 4 hodiny, způsobí zničení neporaněné kožní tkáně v její celé tloušťce; nebo

- u kterých se předpokládá, že nezpůsobí zničení neporaněné kožní tkáně v celé její tloušťce, u kterých však rychlost koroze buď na ocelových nebo hliníkových površích při zkušební teplotě 55 °C překračuje hodnotu 6,25 mm za rok, zkouší-li se na obou materiálech. Pro zkoušky je nutno použít ocel typu S235JR+CR (1.0037 resp. St 37-2), S275J2G3+CR(1.0144 resp. St 44-3), ISO 3574, Unifikovaný číslovací systém (UNS) G10200 nebo SAE 1020 a pro zkoušky hliníku nepotažené typy 7075-T6 nebo AZ5GU-T6. Uznávaná zkouška je předepsána v Příručce zkoušek a kritérií, části III, oddílu 37.

POZNÁMKA: Pokud první zkouška buď na oceli, nebo hliníku ukáže, že je zkoušená látka korozivní, nevyžaduje se již následná zkouška na tom druhém kovu.

⁷ OECD Guideline for the testing of chemicals No. 404 „Acute Dermal Irritation/Corrosion“ 2002

⁸ OECD Guideline for the testing of chemicals No. 435 „In Vitro Membrane Barrier Test Method for Skin Corrosion“ 2006.

⁹ OECD Guideline for the testing of chemicals No. 430 „In Vitro Skin Corrosion: Transcutaneous Electrical Resistance Test (TER)“ 2004.

¹⁰ OECD Guideline for the testing of chemicals No. 431 „In Vitro Skin Corrosion: Human Skin Model Test“ 2004.

Tabulka sumarizující kritéria uvedená v 2.2.8.1.6

Obalová Skupina	Doba působení	Pozorovací doba	Účinek
I	≤ 3 min	≤ 60 min	Úplné zničení neporaněné kožní tkáně v celé její tloušťce
II	>3 min ≤ 1 h	≤ 14 d	Úplné zničení neporaněné kožní tkáně v celé její tloušťce
III	>1 h ≤ 4 h	≤ 14 d	Úplné zničení neporaněné kožní tkáně v celé její tloušťce
III	-	-	Rychlost koroze buď na ocelových, nebo hliníkových površích překračuje 6,25 mm za rok při zkušební teplotě 55 °C, zkouší-li se na obou materiálech

2.2.8.1.7 Jestliže látky třídy 8 vlivem příměsí spadají do jiných kategorií nebezpečnosti než do těch, do kterých patří látky jmenovitě uvedené v tabulce A kapitoly 3.2, přiřadí se tyto směsi nebo roztoky k položkám, ke kterým na základě svého skutečného nebezpečí patří.

POZNÁMKA: K zařazování roztoků a směsí (jako jsou přípravky a odpady) viz také oddíl 2.1.3.

2.2.8.1.8 Na základě kritérií uvedených v 2.2.8.1.6 se může také zjistit, zda je jmenovitě uvedený roztok nebo jmenovitě uvedená směs, popřípadě roztok nebo směs obsahující jmenovitě uvedenou látku takové povahy, že tento roztok nebo tato směs nepodléhá ustanovením této třídy.

2.2.8.1.9 Látky, roztoky a směsi, které:

- neodpovídají kritériím směrnic 67/548/EHS³ nebo 1999/45/ES⁴ v jejich platném znění a nejsou podle těchto směrnic v jejich platném znění zařazeny jako žíravé látky; a
- nepůsobí korozivně na ocel nebo hliník,

mohou být považovány za látky nepatřící do třídy 8.

POZNÁMKA: UN 1910 OXID VÁPENATÝ a UN 2812 HLINITAN SODNÝ, které jsou uvedeny ve Vzorových předpisech I OSN, nepodléhají předpisům ADR.

2.2.8.2 Látky nepřipustěné k přepravě

2.2.8.2.1 Chemicky nestálé látky třídy 8 je dovoleno přepravovat jen tehdy, jestliže byla učiněna potřebná opatření k zabránění jejich nebezpečnému rozkladu nebo polymeraci během přepravy. Pro tento účel je zejména nutno dbát na to, aby nádoby a cisterny neobsahovaly žádné látky, které by mohly tyto reakce podporovat.

2.2.8.2.2 K přepravě nejsou připuštěny následující látky:

- UN 1798 KYSELINA DUSIČNÁ A CHLOROVODÍKOVÁ (solná), SMĚS,
- chemicky nestálé směsi odpadní kyseliny sírové,
- chemicky nestálé směsi nitrační kyseliny nebo směsi odpadní kyseliny sírové a dusičné, nedenitrované,
- kyselina chloristá, vodné roztoky s více než 72 % hm. čisté kyseliny nebo směsi kyseliny chloristé s jinými kapalnými látkami než s vodou.

³ Směrnice Rady Evropského společenství 67/548/EHS ze dne 27. června 1967 o sblížení právních a správních předpisů týkajících se klasifikace, balení a označování nebezpečných látek (Úřední věstník Evropského společenství č. L 196 ze dne 16. srpna 1967).

⁴ Směrnice 1999/45/ES Evropského parlamentu a Rady z 31. května 1999 o sblížení právních a správních předpisů členských států týkající se klasifikace, balení a označování nebezpečných přípravků (Úřední věstník Evropského společenství č. L 200 z 30. července 1999).

2.2.8.3 Seznam hromadných položek

Vedlejší nebezpečí	Klasifikační kód	UN-číslo	Pojmenování látek nebo předmětů
Žíravé látky bez vedlejšího nebezpečí a předměty obsahující takové látky			
Látky kyselého charakteru	anorganické	kapalné C1	2584 KYSELINY ALKYLSULFONOVÉ, KAPALNÉ, obsahující více než 5 % volné kyseliny sírové nebo
			2584 KYSELINY ARYLSULFONOVÉ, KAPALNÉ, obsahující více než 5 % volné kyseliny sírové
			2693 HYDROGENSIŘIČITANY, VODNÝ ROZTOK, J.N.
		tuhé C2	2837 HYDROGENSULFÁTY, VODNÝ ROZTOK
			3264 LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ANORGANICKÁ, J.N.
	organické	tuhé C4	1740 HYDROGENFLUORIDY TUHÉ, J.N.
			2583 KYSELINY ALKYLSULFONOVÉ, TUHÉ, obsahující více než 5 % volné kyseliny sírové nebo
		kapalné C3	2583 KYSELINY, ARYLSULFONOVÉ, TUHÉ, obsahující více než 5 % volné kyseliny sírové
			3260 LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ANORGANICKÁ, J.N.
			2586 KYSELINY ALKYLSULFONOVÉ, KAPALNÉ, obsahující nejvýše 5 % volné kyseliny sírové nebo
tuhé C5	kapalné C5	2586 KYSELINY ARYLSULFONOVÉ, KAPALNÉ, obsahující nejvýše 5 % volné kyseliny sírové	
		2987 CHLORSILANY ŽÍRAVÉ, J.N.	
		3145 ALKYLFENOLY, KAPALNÉ, J.N. (včetně C ₂ -C ₁₂ -homologů)	
		3265 LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ORGANICKÁ, J.N.	
		2430 ALKYLFENOLY, TUHÉ, J.N. (včetně C ₂ -C ₁₂ -homologů)	
tuhé C4	kapalné C5	2585 KYSELINY ALKYLSULFONOVÉ, TUHÉ, obsahující nejvýše 5 % volné kyseliny sírové nebo	
		2585 KYSELINY ARYLSULFONOVÉ, TUHÉ, obsahující nejvýše 5 % volné kyseliny sírové	
		3261 LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ORGANICKÁ, J.N.	
kapalné C5	kapalné C5	1719 LÁTKA ŽÍRAVÁ, ALKALICKÁ, KAPALNÁ, J.N.	
		2797 ELEKTROLYT PRO AKUMULÁTORY (BATERIE), ALKALICKÝ	
		3266 LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ANORGANICKÁ, J.N.	

Látky zásaditého charakteru	anorga- nické tuhé	C6	3262	LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ANORGANICKÁ, J.N.
			2735	AMINY, KAPALNÉ, ŽÍRAVÉ, J.N. nebo
	kapalné	C7	2735	POLYAMINY, KAPALNÉ, ŽÍRAVÉ, J.N.
			3267	LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ORGANICKÁ, J.N.
organi- cké	tuhé	C8	3259	AMINY, TUHÉ, ŽÍRAVÉ, J.N. nebo
			3259	POLYAMINY, TUHÉ, ŽÍRAVÉ, J.N.
Jiné žíravé látky	kapalné	C9	3263	LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ORGANICKÁ, J.N.
			1903	PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, ŽÍRAVÝ, J.N.
			2801	BARVIVO KAPALNÉ, ŽÍRAVÉ, J.N., nebo
			2801	MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, ŽÍRAVÝ, J.N.
Předměty	tuhé ^a	C10	3066	BARVA (včetně barev, laků, emailů, mořidel, šelak, fermež, politura a kapalné základy laků) nebo
			3066	LÁTKY POMOČNÉ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů)
			1760	LÁTKA ŽÍRAVÁ, KAPALNÁ, J.N.
			3147	BARVIVO, TUHÉ, ŽÍRAVÉ, J.N. nebo
Předměty	C11	3147	MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, ŽÍRAVÝ, J.N.	
		3244	LÁTKY TUHÉ, OBSAHUJÍCÍ ŽÍRAVOU KAPALNOU LÁTKU, J.N.	
		1759	LÁTKA ŽÍRAVÁ, TUHÁ, J.N.	
		1774	NÁPLNĚ HASICÍCH PŘÍSTROJŮ, žíravá kapalná látka	
		2028	PUMY MLŽNÉ, DÝMOVNICE, NEVÝBUŠNÉ, obsahující žíravou kapalnou látku, bez zapalovačů	
		2794	AKUMULÁTORY (BATERIE), NAPLNĚNÉ KYSELÝM KAPALNÝM ELEKTROLYTEM	
		2795	AKUMULÁTORY (BATERIE), NAPLNĚNÉ ALKALICKÝM KAPALNÝM ELEKTROLYTEM	
		2800	AKUMULÁTORY (BATERIE), JIŠTĚNÉ PROTI VYTEČENÍ NAPLNĚNÉ KAPALNÝM ELEKTROLYTEM	
		3028	AKUMULÁTORY (BATERIE), SUCHÉ, OBSAHUJÍCÍ TUHÝ HYDROXID DRASELNÝ	
		3477	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ, obsahující žíravé látky, nebo	
		3477	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZAŘÍZENÍ, obsahující žíravé látky, nebo	
3477	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZAŘÍZENÍM, obsahující žíravé látky, nebo			

Žíravé látky s vedlejšími(i) nebezpečími(i) a předměty obsahující takové látky

hořlavé^{b)} CF	kapalné	CF1	2734 AMINY, KAPALNÉ ŽÍRAVÉ, HOŘLAVÉ, J. N. nebo 2734 POLYAMINY, KAPALNÉ, ŽÍRAVÉ, HOŘLAVÉ, J. N. 2986 CHLORSILANY, ŽÍRAVÉ, HOŘLAVÉ, J. N. 2920 LÁTKA ŽÍRAVÁ, KAPALNÁ, HOŘLAVÁ, J. N. 3470 BARVA, ŽÍRAVÁ, HOŘLAVÁ (včetně laků, emailů, mořidel, šelaku a fermeží, leštidel a kapalných základových složek laků) nebo 3470 LÁTKA POMOCNÁ K VÝROBĚ BAREV, ŽÍRAVÁ, HOŘLAVÁ (včetně ředidel a složek odstraňovačů)
	Tuhé	CF2	2921 LÁTKA ŽÍRAVÁ, TUHÁ, HOŘLAVÁ, J. N.
schopné samoohřevu CS	Kapalné	CS1	3301 LÁTKA ŽÍRAVÁ, KAPALNÁ, SCHOPNÁ SAMOOHŘEVU, J. N.
	tuhé	CS2	3095 LÁTKA ŽÍRAVÁ, TUHÁ, SCHOPNÁ, SAMOOHŘEVU, J. N.
reagující s vodou CW	kapalné^{b)}	CW1	3094 LÁTKA ŽÍRAVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J. N.
	tuhé	CW2	3096 LÁTKA ŽÍRAVÁ, TUHÁ, REAGUJÍCÍ S VODOU, J. N.
podporující hoření CO	Kapalné	CO1	3093 LÁTKA ŽÍRAVÁ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J. N.
	tuhé	CO2	3084 LÁTKA ŽÍRAVÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ ;J. N.
	kapalné^{c)}	CT1	2922 LÁTKA ŽÍRAVÁ, KAPALNÁ, TOXICKÁ, J. N. 3471 HYDROGENFLUORIDY, ROZTOK, J. N.
toxické^{d)} CT	tuhé^{e)}	CT2	2923 LÁTKA ŽÍRAVÁ, TUHÁ, TOXICKÁ, J. N.
	předměty	CT3	3506 RTUŤ VYROBENÁ VE VÝROBNÍCH PŘEDMĚTECH
hořlavé, toxické, kapalné^{d)}	CFT	(není k dispozici žádná hromadná položka s tímto klasifikačním kódem; je-li nutné přiřazení k hromadné položce s klasifikačním kódem, určí se z tabulky převažujících nebezpečí v pododdíle 2.1.3.10)	
podporující hoření, toxické^{d),e)}	COT	(není k dispozici žádná hromadná položka s tímto klasifikačním kódem; je-li nutné přiřazení k hromadné položce s klasifikačním kódem, určí se z tabulky převažujících nebezpečí v pododdíle 2.1.3.10)	

Poznámky:

- a) Směsi tuhých látek, které nepodléhají předpisům ADR, s žíravými kapalnými látkami mohou být přepravovány pod UN číslem 3244, bez toho, aby předtím byla použita přiřazovací kritéria pro třídu 8, za předpokladu, že v době nakládky látky nebo uzavírání obalu, vozidla nebo kontejneru není viditelná žádná volná kapalina. Každý obal musí odpovídat konstrukčnímu typu obalu, který obstál s úspěchem při zkoušce těsnosti pro obalovou skupinu II.
- b) Chlorsilany, které s vodou nebo vlhkým vzduchem vyvíjejí hořlavé plyny, jsou látkami třídy 4.3.
- c) Chlorformiáty s převažujícími toxickými vlastnostmi jsou látkami třídy 6.1.
- d) Žíravé látky, které jsou podle odstavců 2.2.61.1.4 až 2.2.61.1.9 při vdechnutí velmi toxické, jsou látkami třídy 6.1
- e) UN 1690 FLUORID SODNÝ, TUHÝ, UN 1812 FLUORID DRASELNÝ, TUHÝ, UN 2505 FLUORID AMONNÝ, UN 2674 HEXAFLUOROKŘEMIČITAN SODNÝ, UN 2856 HEXAFLUOROKŘEMIČITANY, J. N., UN 3415 FLUORID SODNÝ, ROZTOK A UN 3422 FLUORID DRASELNÝ, ROZTOK jsou látkami třídy 6.1.

2.2.9 Třída 9 Jiné nebezpečné látky a předměty**2.2.9.1 Kritéria**

2.2.9.1.1 Název třídy 9 zahrnuje látky a předměty, které během přepravy představují jiné nebezpečí, než jsou nebezpečí ostatních tříd.

2.2.9.1.2 Látky a předměty třídy 9 jsou rozděleny následovně:

M1	Látky, které při vdechnutí jemného prachu mohou ohrozit zdraví
M2	Látky a přístroje, které mohou v případě požáru vytvářet dioxiny
M3	Látky uvolňující hořlavé páry
M4	Lithiové baterie
M5	Záchrané prostředky
M6-M8	Látky ohrožující životní prostředí
	M6 Látky znečišťující vodu, kapalné
	M7 Látky znečišťující vodu, tuhé
	M8 Geneticky změněné mikroorganismy a organismy
M9-M10	Zahřáté látky
	M9 kapalné
	M10 tuhé
M11	Jiné látky, které během přepravy představují nebezpečí a neodpovídají definici žádné jiné třídy.

Definice a klasifikace

2.2.9.1.3 Látky a předměty zařazené do třídy 9 jsou uvedeny v tabulce A kapitoly 3.2. Přiřazení látek a předmětů, které nejsou jmenovitě uvedeny v tabulce A kapitoly 3.2, k odpovídající položce této tabulky nebo pododdílu 2.2.9.3 musí být provedeno v souladu s ustanoveními odstavců 2.2.9.1.4 až 2.2.9.1.14.

Látky, které při vdechnutí jemného prachu mohou ohrozit zdraví

2.2.9.1.4 Látky, které při vdechnutí jemného prachu mohou ohrozit zdraví, zahrnují azbest a směsi obsahující azbest.

Látky a přístroje, které mohou v případě požáru vytvářet dioxiny

2.2.9.1.5 Látky a přístroje, které v případě požáru mohou vytvářet dioxiny, zahrnují polychlorované bifenyly (PCB) a terfenyly (PCT) a polyhalogenované bifenyly a terfenyly a směsi obsahující tyto látky, jakož i přístroje, jako transformátory, kondensátory a jiné přístroje, které tyto látky nebo směsi obsahují.

POZNÁMKA: Směsi s obsahem PCB nebo PCT nejvýše 50 mg/kg nepodléhají předpisům ADR.

Látky uvolňující hořlavé páry

2.2.9.1.6 Látky uvolňující hořlavé páry zahrnují polymery, které obsahují hořlavé kapaliny s bodem vzplanutí do 55 °C.

Lithiové baterie

2.2.9.1.7 Články a baterie, články a baterie obsažené v zařízení nebo články a baterie balené se zařízením, obsahující lithium v jakékoli formě, musí být přiřazeny k UN číslům 3090, 3091, 3480 nebo 3481, jak je to vhodné. Smějí být přepravovány pod těmito položkami, jestliže splňují následující ustanovení:

(a) Každý článek nebo baterie je typu, u něhož bylo prokázáno, že splňuje požadavky každé zkoušky uvedené v Příručce zkoušek a kritérií, části III, pododdílu 38.3;

POZNÁMKA: Baterie musí být typu, u něhož bylo prokázáno, že splňuje zkušební požadavky Příručky zkoušek a kritérií, části III, pododdílu 38.3, bez ohledu na to, zda jsou články, z nichž jsou baterie složeny, zkoušeného typu.

(b) Každý článek a baterie je opatřen(a) ochranným zařízením proti vnitřnímu přetlaku, nebo zkonstruován(a) tak, aby se zabránilo jejich prudkému roztržení za normálních podmínek přepravy;

(c) Každý článek a baterie je vybaven(a) účinným systémem k zabránění vnějším zkratům;

(d) Každá baterie s více články nebo sériemi článků s paralelním zapojením je vybavena účinným zařízením, které zabraňuje nebezpečným zpětným proudům (např. diody, pojistky atd.);

(e) Články a baterie musí být vyráběny pod programem řízení kvality, který zahrnuje:

- (i) Popis organizační struktury a odpovědností personálu s ohledem na konstrukci a kvalitu výrobku;
- (ii) Příslušné instrukce pro inspekce a zkoušky, kontrolu kvality, zajištění kvality a výrobní postup, které budou používány;
- (iii) Kontroly výroby, které by měly zahrnovat příslušné činnosti k zamezení a zjištění závad, pokud jde o vnitřní zkraty, během výroby článků;
- (iv) Záznamy o kvalitě, jako jsou inspekční zprávy, údaje ze zkoušek, kalibrační údaje a osvědčení. Údaje ze zkoušek musí být uchovávány a být na požádání poskytnuty příslušnému orgánu;
- (v) Audit k zajištění účinného fungování programu řízení kvality;
- (vi) Postup pro kontrolu dokladů a jejich revize;
- (vii) Způsoby kontroly článků nebo baterií, které neodpovídají typu vyzkoušenému podle ustanovení uvedených pod písmenem (a) výše;
- (viii) Školící programy a kvalifikační postupy pro příslušný personál; a
- (ix) Postupy garantující, že finální výrobek není poškozen.

POZNÁMKA: Mohou být akceptovány vlastní programy řízení kvality. Osvědčení od třetí strany se nevyžaduje, ale postupy uvedené pod (i) až (ix) výše musí být řádně zaznamenané a sledovatelné. Kopie programu řízení kvality musí být na požádání poskytnuta příslušnému orgánu.

Lithiové baterie nepodléhají ustanovením ADR, jestliže splňují požadavky zvláštního ustanovení 188 kapitoly 3.3.

POZNÁMKA: Položky UN 3171 Vozidlo na akumulátorový pohon nebo UN 3171 Přístroj na akumulátorový pohon se vztahují pouze na vozidla poháněná mokřými bateriemi, sodíkovými bateriemi, bateriemi s kovem lithia nebo bateriemi s ionty lithia a na přístroje poháněné mokřými bateriemi nebo sodíkovými bateriemi, přepravované s těmito zabudovanými bateriemi.

Pro účely tohoto UN čísla jsou vozidla samohybné stroje zkonstruované pro přepravu jedné nebo více osob nebo věcí. Příklady takových vozidel jsou elektricky poháněné osobní automobily, motocykly, skútry, tří- nebo čtyřkolová vozidla nebo motocykly, motorová kola, invalidní vozíky, motorové sekačky trávy, čluny a letadla.

Příklady přístrojů jsou sekačky trávy, čisticí stroje nebo modelové čluny a modelová letadla. Přístroje poháněné bateriemi s kovem lithia nebo bateriemi s ionty lithia musí být přiřazeny pod položky UN 3091 BATERIE LITHIOVÉ KOVOVÉ OBSAŽENÉ V ZAŘÍZENÍ nebo UN 3091 BATERIE LITHIOVÉ KOVOVÉ BALENÉ SE ZAŘÍZENÍM nebo UN 3481 BATERIE LITHIUM-IONTOVÉ OBSAŽENÉ V ZAŘÍZENÍ nebo UN 3481 BATERIE LITHIUM-IONTOVÉ BALENÉ SE ZAŘÍZENÍM, jak je to náležité.

Hybridní elektrická vozidla poháněná jak spalovacím motorem, tak i mokřými bateriemi, sodíkovými bateriemi, bateriemi s kovem lithia nebo bateriemi s ionty lithia, přepravovaná se zabudovanou baterií (bateriemi) musí být zařazena pod položky UN 3166 VOZIDLO POHÁNĚNÉ HOŘLAVÝM PLYNEM nebo UN 3166 VOZIDLO POHÁNĚNÉ HOŘLAVOU KAPALINOU, jak je to náležité. Vozidla, která obsahují palivový článek, musí být zařazena pod položky UN 3166 VOZIDLO POHÁNĚNÉ PALIVOVÝMI ČLÁNKY OBSAHUJÍCÍMI HOŘLAVÝ PLYN nebo UN 3166 VOZIDLO POHÁNĚNÉ PALIVOVÝMI ČLÁNKY OBSAHUJÍCÍMI HOŘLAVOU KAPALINU, jak je to náležité.

Záchranné prostředky

2.2.9.1.8 Záchranné prostředky zahrnují záchranné prostředky a díly motorových vozidel, které odpovídají definicím uvedeným ve zvláštních ustanoveních 235 nebo 296 kapitoly 3.3.

Látky ohrožující životní prostředí

2.2.9.1.9 (Vypuštěno)

Látky znečišťující vodu

2.2.9.1.10 *Látky ohrožující životní prostředí (vodní prostředí)*

2.2.9.1.10.1 Všeobecné definice

2.2.9.1.10.1.1 Látky ohrožující životní prostředí zahrnují, mimo jiné, kapalné nebo tuhé látky znečišťující vodní prostředí a roztoky a směsi takových látek (jako jsou přípravky a odpady).

Pro účely odstavce 2.2.9.1.10 „látky“ znamená chemické prvky a jejich sloučeniny v přírodním stavu nebo získané výrobním procesem, včetně jakékoli přísady potřebné k zachování stálosti produktu a jakýchkoli nečistot pocházejících z použitého procesu, ale s výjimkou jakéhokoli rozpouštědla, které může být odděleno bez ovlivnění stálosti látky nebo změny jejího složení.

2.2.9.1.10.1.2 Vodní prostředí může být posuzováno ve smyslu vodních organismů, které žijí ve vodě a vodního ekosystému, jehož jsou součástí¹¹. Proto je základem pro identifikaci nebezpečí vodní toxicita látky nebo směsi, i když tato může být modifikována dalšími informacemi o degradačním a bioakumulačním chování.

2.2.9.1.10.1.3 I když je následující klasifikační postup určen k použití pro všechny látky a směsi, uznává se, že v některých případech, např. u kovů nebo špatně rozpustných anorganických sloučenin, bude nutný speciální návod¹².

2.2.9.1.10.1.4 Pro akronymy nebo pojmy používané v tomto oddílu platí následující definice:

- BCF: Faktor biokoncentrace;
- BOD: Biochemická potřeba kyslíku;
- COD: Chemická potřeba kyslíku;
- GLP: Dobré laboratorní praktiky;
- EC_x: koncentrace spojená s X % reakcí;
- EC₅₀: účinná koncentrace látky, která způsobí 50 % maximální reakce;
- ErC₅₀: EC₅₀ ve smyslu brzdění růstu;
- K_{ow}: rozdělovací koeficient oktanol/voda;
- LC₅₀ (50 % smrtelná koncentrace): koncentrace látky ve vodě, která způsobí smrt 50 % (poloviny) ve skupině pokusných zvířat;
- L(E)C₅₀: LC₅₀ nebo EC₅₀;
- NOEC (No Observed Effect Concentration): zkušební koncentrace, bezprostředně pod nejnižší zkoušenou koncentrací se statisticky významným škodlivým účinkem. NOEC nemá žádný statisticky významný škodlivý účinek ve srovnání se škodlivým účinkem zkoušky;
- Směrnice pro zkoušení OECD – Test Guidelines publikované Organizací pro ekonomickou spolupráci a rozvoj (OECD).

2.2.9.1.10.2 Definice a požadavky na údaje

2.2.9.1.10.2.1 Základními prvky pro klasifikaci látek ohrožujících životní prostředí (vodní prostředí) jsou:

- (a) akutní vodní toxicita;
- (b) chronická vodní toxicita;
- (c) bioakumulační potenciál nebo aktuální bioakumulace; a
- (d) degradace (biotická nebo abiotická) pro organické sloučeniny.

¹¹ To se netýká látek znečišťujících vodu, u nichž může být nutné posoudit účinky nad rámec vodního prostředí, jako jsou dopady na lidské zdraví atd.

¹² Tento návod je možno nalézt v příloze 10 GHS.

- 2.2.9.1.10.2.2 Zatímco se upřednostňují údaje z mezinárodně harmonizovaných zkušebních metod, v praxi se smějí používat také údaje z vnitrostátních metod, kde jsou považovány za rovnocenné. Všeobecně bylo dohodnuto, že údaje o toxicitě sladkovodních a mořských druhů mohou být považovány za rovnocenné údaje a mají být přednostně získány za použití Směrnic pro zkoušení OECD nebo jejich ekvivalentu podle zásad dobrých laboratorních praktik (GLP). Nejsou-li takové údaje k dispozici, musí být klasifikace založena na nejlepších disponibilních údajích.
- 2.2.9.1.10.2.3 „*Akutní vodní toxicita* je podstatná vlastnost látky, která je škodlivá vodním organismům při jejich krátkodobém vystavení působení této látky ve vodním prostředí.
- „*Akutní (krátkodobé) nebezpečí* pro účely klasifikace je nebezpečí chemické látky způsobené její akutní toxicitou pro organismus během jeho krátkodobého vystavení působení této chemické látky ve vodním prostředí.
- Akutní vodní toxicita se normálně stanoví za použití rybích druhů 96 hodin LC₅₀ (Směrnice pro zkoušení OECD 203 nebo ekvivalent), koryšovitých druhů 48 hodin EC₅₀ (Směrnice pro zkoušení OECD 202 nebo ekvivalent) a/nebo vodních řas 72 nebo 96 hodin EC₅₀ (Směrnice pro zkoušení OECD 201 nebo ekvivalent). Tyto druhy se považují za náhradu pro všechny vodní organismy a údaje z jiných druhů, jako je lemna, smějí být rovněž vzaty v úvahu, je-li vhodná zkušební metodologie.
- 2.2.9.1.10.2.4 *Chronická vodní toxicita* je podstatná vlastnost látky, vyvolávající škodlivé účinky na vodní organismy při jejich vystavení působení této látky ve vodním prostředí, která je určena v relaci k životnímu cyklu těchto organismů.
- Dlouhodobé nebezpečí* pro účely klasifikace je nebezpečí chemické látky způsobené její chronickou toxicitou po dlouhodobém působení této chemické látky ve vodním prostředí.
- Údaje o chronické toxicitě jsou méně dostupné než akutní údaje a rozsah zkušebních postupů je méně standardizován. Údaje získané podle Směrnice pro zkoušení OECD 210 (ryby v počátečním stádiu života) nebo 211 (rozmnožování dafnií) a 201 (zábrana růstu řas) mohou být akceptovány. Je dovoleno použít také jiné uznané a mezinárodně akceptované zkoušky. Musí být použity NOEC nebo jiné ekvivalentní EC_x.
- 2.2.9.1.10.2.5 Bioakumulace znamená čistý výsledek absorpce, přeměny a vyloučení látky v organismu v důsledku vystavení jejímu působení všemi cestami (tj. vzduchem, vodou, usazeninou/půdou a potravou).
- Bioakumulační potenciál se normálně stanoví za použití rozdělovacího koeficientu oktanol/voda, obvykle vyjadřovaného jako log K_{ow}, stanoveného podle Směrnice pro zkoušení OECD 107 nebo 117. Zatímco toto představuje bioakumulační potenciál, poskytuje experimentálně zjištěný faktor biokoncentrace (BCF) lepší důkaz a musí být používán přednostně, pokud je k dispozici. BCF se stanoví podle Směrnice pro zkoušení OECD 305.
- 2.2.9.1.10.2.6 *Degradace* je rozklad organických molekul na menší molekuly a nakonec na oxid uhličitý, vodu a soli.
- Environmentální degradace může být biotická nebo abiotická (např. hydrolyza) a použitá kritéria odrážejí tuto skutečnost. Snadná biodegradace se nejnadhěji definuje použitím zkoušek biologické odbouratelnosti (A-F) Směrnice pro zkoušení OECD 301. Překročení úrovně v těchto zkouškách smí být považováno za důkaz rychlé degradace ve většině prostředí. Toto jsou sladkovodní zkoušky a tak bylo zahrnuto také použití výsledků ze Směrnice pro zkoušení OECD 306, která je vhodnější pro mořská prostředí. Nejsou-li takové údaje k dispozici, potom se poměr BOD (5 dní)/COD $\geq 0,5$ považuje za důkaz rychlé degradace.
- Abiotická degradace, jako je hydrolyza, primární degradace, jak abiotická, tak i biotická, degradace v nevodních mediích a prokázaná rychlá degradace v životním prostředí smějí být všechny brány v úvahu při definování rychlé odbouratelnosti¹³.
- Látky jsou považovány za rychle odbouratelné v životním prostředí, jsou-li splněna následující kritéria:
- (a) Při pozorováních snadné biodegradace po dobu 28 dní je dosaženo následujících úrovní degradace:

13 Zvláštní návod k interpretaci údajů poskytuje kapitola 4.1 a příloha 9 ke GHS.

- (i) zkoušky založené na rozpuštěném organickém uhlíku: 70 %;
- (ii) zkoušky založené na ztrátě kyslíku nebo vyvíjení oxidu uhličitého: 60 % teoretického maxima;

Těchto úrovně biodegradace musí být dosaženo do 10 dní od počátku degradace, kteréhožto bodu je dosaženo v době, kdy bylo odbouráno 10 % látky, ledaže je látka identifikována jako komplexní, multikomponentní látka se strukturálně podobnými složkami. V tomto případě, a kde je pro to dostatečné ospravedlnění, smí být od podmínky časového intervalu 10 dnů upuštěno a předpokládá se, že požadované úrovně biodegradace je dosaženo do 28 dnů¹⁴, nebo

- (b) v těch případech, kdy jsou k dispozici pouze údaje BOD a COD, je-li poměr $BOD_5/COD \geq 0,5$; nebo
- (c) je-li k dispozici jiný přesvědčivý vědecký důkaz, který může prokázat, že látka nebo směs může být odbourána (bioticky a/nebo abioticky) ve vodním prostředí na úroveň nad 70 % v období 28 dní.

2.2.9.1.10.3 Kategorie a kritéria klasifikace látek

2.2.9.1.10.3.1 Látky musí být klasifikovány jako „látky ohrožující životní prostředí (vodní prostředí)“, jestliže vyhovují kritériím pro kategorii Akutní 1, Chronická 1 nebo Chronická 2 podle tabulky 2.2.9.1.10.3.1. Tato kritéria popisují podrobně klasifikační kategorie. Ty jsou ve formě diagramu shrnuty v tabulce 2.2.9.1.10.3.2.

Tabulka 2.2.9.1.10.3.1 Kategorie pro látky ohrožující vodní prostředí
(viz **POZNÁMKA 1**)

(a) Akutní (krátkodobé) nebezpečí pro vodu

Kategorie Akutní 1: (viz **POZNÁMKA 2**)

96 hodin LC_{50} (pro ryby)	≤ 1 mg/l a/nebo
48 hodin EC_{50} (pro koryše)	≤ 1 mg/l a/nebo
72 nebo 96 hodin ErC_{50} (pro řasy nebo jiné vodní rostliny)	≤ 1 mg/l (viz POZNÁMKA 3)

(b) Dlouhodobé nebezpečí pro vodu (viz též obr. 2.2.9.1.10.3.1)

- (i) Látky, které nejsou rychle odbouratelné (viz **POZNÁMKA 4**), pro něž jsou k dispozici dostatečné údaje o chronické toxicitě

Kategorie Chronická 1: (viz **POZNÁMKA 2**)

Chronická NOEC nebo EC_x (pro ryby)	$\leq 0,1$ mg/l a/nebo
Chronická NOEC nebo EC_x (pro koryše)	$\leq 0,1$ mg/l a/nebo
Chronická NOEC nebo EC_x (pro řasy nebo jiné vodní rostliny)	$\leq 0,1$ mg/l

Kategorie Chronická 2:

Chronická NOEC nebo EC_x (pro ryby)	≤ 1 mg/l a/nebo
Chronická NOEC nebo EC_x (pro koryše)	≤ 1 mg/l a/nebo
Chronická NOEC nebo EC_x (pro řasy nebo jiné vodní rostliny)	≤ 1 mg/l

- (ii) Rychle odbouratelné látky, pro něž jsou k dispozici dostatečné údaje o chronické toxicitě

Kategorie Chronická 1: (viz **POZNÁMKA 2**)

Chronická NOEC nebo EC_x (pro ryby)	$\leq 0,01$ mg/l a/nebo
Chronická NOEC nebo EC_x (pro koryše)	$\leq 0,01$ mg/l a/nebo
Chronická NOEC nebo EC_x (pro řasy nebo jiné vodní rostliny)	$\leq 0,01$ mg/l

¹⁴ Viz kapitola 4.1 a přílohu 9, odstavec A9.4.2.2.3 GHS.

Kategorie Chronická 2:

Chronická NOEC nebo EC _x (pro ryby)	≤ 0,1 mg/l a/nebo
Chronická NOEC nebo EC _x (pro koryše)	≤ 0,1 mg/l a/nebo
Chronická NOEC nebo EC _x (pro řasy nebo jiné vodní rostliny)	≤ 0,1 mg/l

(iii) Látky, pro něž nejsou k dispozici dostatečné údaje o chronické toxicitě

Kategorie Chronická 1: (viz POZNÁMKA 2)

96 hodin LC ₅₀ (pro ryby)	≤ 1 mg/l a/nebo
48 hodin EC ₅₀ (pro koryše)	≤ 1 mg/l a/nebo
72 nebo 96 hodin ErC ₅₀ (pro řasy nebo jiné vodní rostliny)	≤ 1 mg/l (viz POZNÁMKA 3)

a látka není rychle odbouratelná a/nebo experimentálně zjištěný BCF ≥ 500 (nebo, není-li, log K_{ow} ≥ 4) (viz **POZNÁMKA 4 a 5**).

Kategorie Chronická 2:

96 hodin LC ₅₀ (pro ryby)	> 1 ale ≤ 10 mg/l a/nebo
48 hodin EC ₅₀ (pro koryše)	> 1 ale ≤ 10 mg/l a/nebo
72 nebo 96 hodin ErC ₅₀ (pro řasy nebo jiné vodní rostliny)	> 1 až ≤ 10 mg/l (viz POZNÁMKA 3)

a látka není rychle odbouratelná a/nebo experimentálně zjištěný BCF ≥ 500 (nebo, není-li, log K_{ow} ≥ 4) (viz **POZNÁMKA 4 a 5**).

POZNÁMKA 1: Organismy ryby, koryši a řasy jsou testovány jako reprezentativní druhy pokrývající široký rozsah trofických úrovní a dávek a zkušební metody jsou ve vysoké míře standardizovány. Údaje o jiných organismech smějí být rovněž vzaty v úvahu, avšak za podmínky, že představují rovnocenné druhy a experimentální účinky.

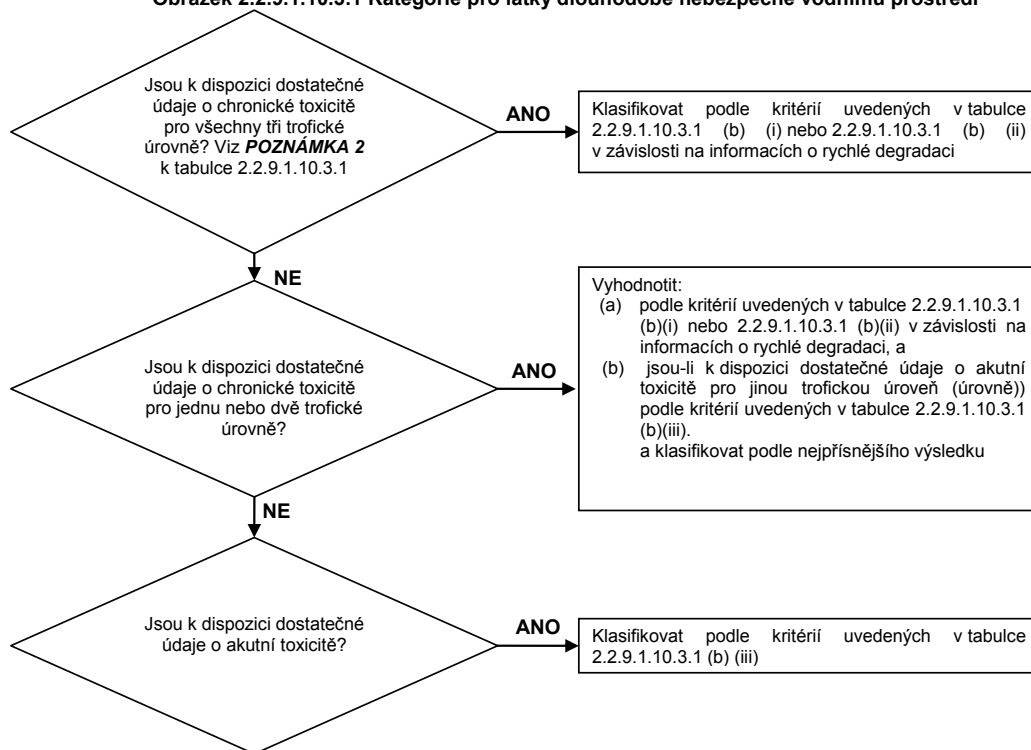
POZNÁMKA 2: Při klasifikaci látek jako Akutní 1 a/nebo Chronická 1 je třeba současně uvést náležitý součinitel M (viz 2.2.9.1.10.4.6.4) pro použití při součtové metodě.

POZNÁMKA 3: Pokud je toxicita pro řasy ErC₅₀ (= EC₅₀ (rychlost růstu)) více než 100 krát nižší než toxicita pro nejbližší nejcitlivější druh a povede ke klasifikaci založené pouze na tomto účinku, musí se uvážit, zda je tato toxicita reprezentativní pro toxicitu vůči vodním rostlinám. Pokud se může prokázat, že to není tento případ, musí znalec rozhodnout, zda klasifikaci provést. Klasifikace musí být založena na ErC₅₀. Za okolností, kdy podmínky pro určení EC₅₀ nejsou stanoveny a žádný ErC₅₀ není zaznamenán, musí být klasifikace založena na nejnižším disponibilním EC₅₀.

POZNÁMKA 4: Nedostatek rychlé odbouratelnosti je založen buď na nedostatku snadné biotické odbouratelnosti, nebo na jiných údajích ukazujících nedostatek rychlé degradace. Pokud nejsou k dispozici použitelné údaje o odbouratelnosti, buď údaje experimentálně zjištěné, nebo odhadnuté, musí být látka považována za látku, která není rychle odbouratelná.

POZNÁMKA 5: Bioakumulační potenciál, založený na experimentálně odvozeném BCF ≥ 500 nebo, není-li, log K_{ow} ≥ 4, za podmínky, že log K_{ow} je vhodným popisovačem pro bioakumulační potenciál látky. Naměřené hodnoty log K_{ow} mají přednost před odhadnutými hodnotami a naměřené hodnoty BCF mají přednost před hodnotami log K_{ow}.

Obrázek 2.2.9.1.10.3.1 Kategorie pro látky dlouhodobě nebezpečné vodnímu prostředí



2.2.9.1.10.3.2 Klasifikační schéma v tabulce 2.2.9.1.10.3.2 dále sumarizuje klasifikační kritéria pro látky

Tabulka 2.2.9.1.10.3.2 Klasifikační schéma pro látky ohrožující vodní prostředí

Klasifikační kategorie			
Akutní nebezpečí (viz POZNÁMKA 1)	Dlouhodobě nebezpečí (viz POZNÁMKA 2)		
	Dostatečné údaje o chronické toxicitě jsou k dispozici		Dostatečné údaje o chronické toxicitě nejsou k dispozici (viz POZNÁMKA 1)
	Látky, které nejsou rychle odbouratelné (viz POZNÁMKA 3)	Rychle odbouratelné látky (viz POZNÁMKA 3)	
Kategorie: Akutní 1	Kategorie: Chronická 1	Kategorie: Chronická 1	Kategorie: Chronická 1
$L(E)C_{50} \leq 1,00$	$NOEC$ nebo $EC_x \leq 0,1$	$NOEC$ nebo $EC_x \leq 0,01$	$L(E)C_{50} \leq 1,00$ a nedostatek rychlé odbouratelnosti a/nebo $BCF \geq 500$ nebo, není-li, $\log K_{ow} \geq 4$
	Kategorie: Chronická 2	Kategorie: Chronická 2	Kategorie: Chronická 2
	$0,1 < NOEC$ nebo $EC_x \leq 1$	$0,01 < NOEC$ nebo $EC_x \leq 0,1$	$1,00 < L(E)C_{50} \leq 10,0$ a nedostatek rychlé odbouratelnosti a/nebo $BCF \geq 500$ nebo, není-li, $\log K_{ow} \geq 4$

POZNÁMKA 1: Pásmo akutní toxicity založené na hodnotách $L(E)C_{50}$ v mg/l pro ryby, koryše a/nebo řasy nebo jiné vodní rostliny (nebo vyhodnocení QSAR (Quantitative Structure Activity Relationships), jestliže nejsou žádné experimentální údaje¹⁵).

POZNÁMKA 2: Látky jsou klasifikovány do různých chronických kategorií, pokud nejsou k dispozici dostatečné údaje o chronické toxicitě pro všechny tři trofické úrovně nad rozpustností ve vodě nebo nad 1 mg/l. („Dostatečný“ znamená, že údaje dostatečně pokrývají sledovaný rozsah. Obecně by to znamenalo naměřené údaje při zkoušce, aby se však vyhnulo zbytečnému zkoušení, je možno případ od případu použít údaje z vyhodnocení, např. QSAR, nebo pro jasné případy posudek experta).

POZNÁMKA 3: Pásmo chronické toxicity založené na NOEC nebo ekvivalentních hodnotách EC_x v mg/l pro ryby nebo koryše nebo jiných uznávaných měřeních chronické toxicity.

2.2.9.1.10.4 Kategorie a kritéria klasifikace směsí

2.2.9.1.10.4.1 Klasifikační systém pro směsi zahrnuje klasifikační kategorie, které jsou používány pro látky, tj. kategorie Akutní 1 a Chronické 1 a 2. Za účelem využití všech disponibilních údajů pro klasifikaci nebezpečí směsí pro vodní prostředí se vychází z následujícího předpokladu, který se použije, kde je to nutné:

„Relevantní složky“ směsi jsou ty složky, které jsou přítomny v koncentraci 0,1 % (hm.) nebo vyšší pro složky klasifikované jako Akutní a/nebo Chronická 1 a 1 % (hm.) nebo vyšší pro jiné složky, pokud neexistuje domněnka (např. v případě velmi toxických složek), že složka přítomná v koncentraci nižší než 0,1 % může být přesto významná pro klasifikaci směsí z hlediska jejich nebezpečí pro vodní prostředí.

2.2.9.1.10.4.2 Přístup ke klasifikaci nebezpečí pro vodní prostředí je víceúrovňový a je závislý na druhu disponibilních informací pro vlastní směs a pro její složky. Prvky víceúrovňového přístupu zahrnují:

(a) klasifikaci založenou na vyzkoušených směsích;

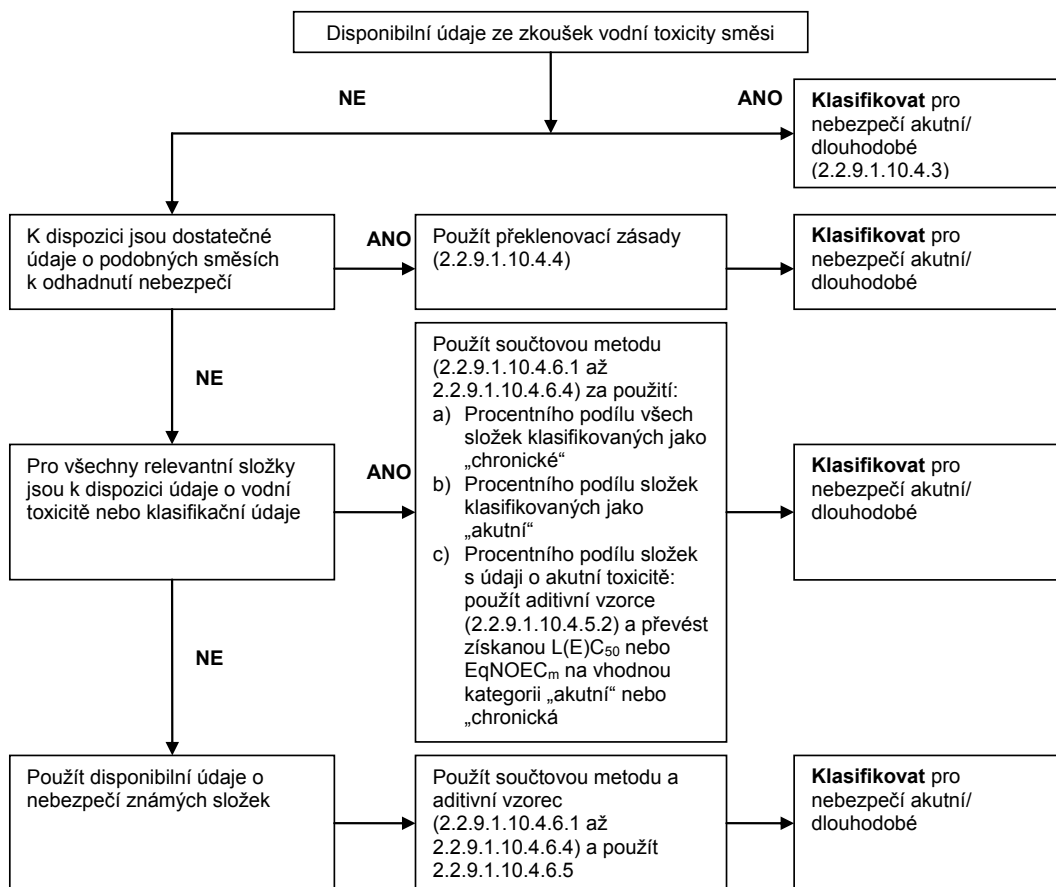
(b) klasifikaci založenou na překlenovacích zásadách;

(c) použití „součtu klasifikovaných složek“ a/nebo „aditivního vzorce“.

Dále uvedený obrázek 2.2.9.1.10.4.2 ukazuje postup, který je nutno dodržet:

¹⁵ Zvláštní návod je uveden v kapitole 4.1, odstavci 4.1.2.13 a příloze 9, oddílu A9.6 GHS.

Obrázek 2.2.9.1.10.4.2 Víceúrovňový přístup ke klasifikaci směsí z hlediska jejich akutních a dlouhodobých nebezpečí pro vodní prostředí



2.2.9.1.10.4.3 Klasifikace směsí, jsou-li k dispozici údaje o toxicitě pro kompletní směs

2.2.9.1.10.4.3.1 Pokud byla směs jako celek podrobena zkoušce za účelem zjištění její vodní toxicity, musí být tyto informace použity pro klasifikaci směsi podle kritérií, která byla schválena pro látky. Klasifikace je normálně založena na údajích pro ryby, korýše a řasy/rostliny (viz 2.2.9.1.10.2.3 a 2.2.9.1.10.2.4). Pokud se nedostává dostatečných akutních nebo chronických údajů pro směs jako celek, musí se použít „překlenovací zásady“ nebo „součtová metoda“ (viz 2.2.9.1.10.4.4 až 2.2.9.1.10.4.6).

2.2.9.1.10.4.3.2 Klasifikace směsí z hlediska dlouhodobého nebezpečí vyžaduje dodatečné informace o odbouratelnosti a v některých případech o bioakumulaci. Neexistují žádné údaje o odbouratelnosti a bioakumulaci pro směsi jako celek. Zkoušky odbouratelnosti a bioakumulace pro směsi se nepoužívají, neboť je obvykle obtížné je vyhodnotit, a takové zkoušky mohou mít význam jen pro jednotlivé látky.

2.2.9.1.10.4.3.3 Klasifikace do kategorie Akutní 1

(a) Jsou-li k dispozici dostatečné údaje ze zkoušek akutní toxicity (LC_{50} nebo EC_{50}) pro směs jako celek ukazující $L(E)C_{50} \leq 1$ mg/l:

Klasifikovat směs jako Akutní 1 podle tabulky 2.2.9.1.10.3.1 (a);

(b) Jsou-li k dispozici údaje ze zkoušek akutní toxicity ($LC_{50}(s)$ nebo $EC_{50}(s)$) pro směs jako celek ukazující $L(E)C_{50}(s) > 1$ mg/l, nebo nad rozpustností ve vodě:

Není nutno klasifikovat z hlediska akutního nebezpečí pod ADR.

2.2.9.1.10.4.3.4 Klasifikace do kategorií Chronická 1 a 2

(a) Jsou-li k dispozici dostatečné údaje o chronické toxicitě (EC_x nebo NOEC) pro směs jako celek ukazující EC_x nebo NOEC zkoušené směsi ≤ 1 mg/l:

(i) klasifikovat směs jako Chronickou 1 nebo 2 podle tabulky 2.2.9.1.10.3.1 (b) (ii) (rychle odbouratelná), pokud dostupné informace dovolují učinit závěr, že všechny relevantní složky směsi jsou rychle odbouratelné;

(ii) klasifikovat směs jako Chronickou 1 nebo 2 ve všech ostatních případech podle tabulky 2.2.9.1.10.3.1 (b) (i) (není rychle odbouratelná);

(b) Jsou-li k dispozici dostatečné údaje o chronické toxicitě (EC_x nebo NOEC) pro směs jako celek ukazující $EC_x(s)$ nebo NOEC(s) zkoušené směsi > 1 mg/l, nebo nad rozpustností ve vodě:

Není nutno klasifikovat z hlediska dlouhodobého nebezpečí pod ADR.

2.2.9.1.10.4.4 Klasifikace směsí, nejsou-li k dispozici údaje o toxicitě pro kompletní směs: překlenovací zásady

2.2.9.1.10.4.4.1 Pokud směs sama nebyla podrobena zkoušce ke zjištění jejího nebezpečí pro vodní prostředí, ale existují dostatečné údaje o jednotlivých složkách a podobných zkoušených směsích, aby přiměřeným způsobem charakterizovaly nebezpečí této směsi, musí se tyto údaje použít v souladu s následujícími schválenými překlenovacími pravidly. Tímto se zajišťuje, aby se při klasifikačním procesu využilo k charakteristice nebezpečí směsi v co největším možném rozsahu disponibilních údajů, bez nutnosti dodatečných zkoušek na zvířatech.

2.2.9.1.10.4.4.2 Ředění

Je-li nová směs vytvořena zředěním zkoušené směsi nebo látky ředidlem, které má stejnou nebo nižší klasifikaci z hlediska nebezpečí pro vodní prostředí, než nejméně toxická původní složka, a od něhož se neočekává, že ovlivní nebezpečí pro vodní prostředí jiných složek, musí být výsledná směs klasifikována jako rovnocenná s původní zkoušenou směsí nebo látkou. Alternativně smí být použita metoda vysvětlená v 2.2.9.1.10.4.5.“.

2.2.9.1.10.4.4.3 Dávkování

Klasifikace zkoušené výrobní šarže směsi z hlediska nebezpečí pro vodní prostředí musí být považována za v podstatě rovnocennou klasifikaci jiné nezkoušené výrobní šarže téhož obchodního produktu, je-li vyráběn tímž výrobcem nebo pod kontrolou téhož výrobce, pokud není důvodu věřit, že došlo k významné změně, takže se změnila klasifikace nezkoušené šarže z hlediska jejího nebezpečí pro vodní prostředí. Pokud k tomuto dojde, je nutná nová klasifikace.

2.2.9.1.10.4.4.4 Koncentrace směsí, které jsou zařazeny do nejpřísnějších klasifikačních kategorií (chronická 1 a akutní 1)

Je-li zkoušená směs klasifikována jako chronická 1 a/nebo akutní 1 a složky směsi, které jsou klasifikovány jako chronická 1 a/nebo akutní 1, jsou ještě více koncentrovány, musí být více koncentrovaná nezkoušená směs zařazena do stejné klasifikační kategorie jako původní zkoušená směs bez dodatečných zkoušek.

2.2.9.1.10.4.4.5 Interpolace uvnitř jedné kategorie toxicity

Pro tři směsi (A, B a C) s identickými složkami, jestliže směsi A a B byly vyzkoušeny a jsou v téže kategorii toxicity a jestliže nezkoušená směs C má tytéž toxikologicky aktivní složky jako směsi A a B, ale má koncentrace toxikologicky aktivních složek mezilehlé mezi koncentracemi ve směsích A a B, potom se předpokládá, že směs C je v téže kategorii jako A a B.

2.2.9.1.10.4.4.6 V podstatě podobné směsi

Jsou-li dány následující předpoklady:

(a) dvě směsi:

- (i) A + B;
(ii) C + B;

(b) koncentrace složky B je v podstatě stejná v obou směsích;

(c) koncentrace složky A ve směsi (i) se rovná koncentraci složky C ve směsi (ii);

(d) údaje o nebezpečích pro vodní prostředí pro A a C jsou k dispozici a jsou v podstatě rovnocenné, tj. jsou v téže kategorii nebezpečí a neočekává se, že ovlivní vodní toxicitu B,

jestliže směs (i) nebo (ii) je již klasifikována na základě údajů ze zkoušek, potom může být té druhé směsi přiřazena tatáž kategorie nebezpečí.

2.2.9.1.10.4.5 Klasifikace směsí, jsou-li k dispozici údaje o toxicitě pro všechny složky nebo jen pro některé složky směsi

2.2.9.1.10.4.5.1 Klasifikace směsi musí být založena na součtu koncentrací jejích klasifikovaných složek. Procentní podíl složek klasifikovaných jako „akutní“ nebo „chronická“ bude zahrnut přímo do součtové metody. Detaily součtové metody jsou popsány v 2.2.9.1.10.4.6.1 až 2.2.9.1.10.4.6.4.

2.2.9.1.10.4.5.2 Směsi mohou být vytvořeny jak ze složek, které jsou klasifikovány (jako Akutní 1 a/nebo Chronická 1,2), tak i ze složek, pro které jsou k dispozici dostatečné údaje ze zkoušek toxicity. Jsou-li k dispozici dostatečné údaje o toxicitě pro více než jednu složku ve směsi, vypočte se celková toxicita těchto složek použitím následujících aditivních vzorců (a) nebo (b) v závislosti na povaze údajů o toxicitě:

(a) Založeno na akutní vodní toxicitě:

$$\frac{\sum C_i}{L(E)C_{50m}} = \sum_n \frac{C_i}{L(E)C_{50i}}$$

kde:

C_i = koncentrace složky i (procento hmotnosti);

$L(E)C_{50i}$ = LC_{50} nebo EC_{50} pro složku i (mg/l);

n = počet složek, i se pohybuje od 1 do n ;

$L(E)C_{50m}$ = $L(E)C_{50}$ části směsi s údaji ze zkoušek.

Vypočtená toxicita se použije k tomu, aby se této části směsi přiřadila kategorie akutního nebezpečí, která se následně použije při aplikaci součtové metody;

(b) Založeno na chronické vodní toxicitě:

$$\frac{\sum C_i + \sum C_j}{EqNOEC_m} = \sum_n \frac{C_i}{NOEC_i} + \sum_n \frac{C_j}{0,1 \cdot NOEC_j}$$

kde:

C_i = koncentrace složky i (procento hmotnosti) pokrývající rychle odbouratelné složky;

C_j = koncentrace složky j (procento hmotnosti) pokrývající složky, které nejsou rychle odbouratelné;

$NOEC_i$ = NOEC (nebo jiná uznávaná měření chronické toxicity) pro složku i, pokrývající rychle odbouratelné složky, v mg/l;

$NOEC_j$ = NOEC (nebo jiná uznávaná měření chronické toxicity) pro složku j, pokrývající složky, které nejsou rychle odbouratelné, v mg/l;

n = počet složek, i a j se pohybují od 1 do n ;

$EqNOEC_m$ = ekvivalent NOEC části směsi s údaji ze zkoušek.

Ekvivalentní toxicita tak odráží skutečnost, že látky, které nejsou rychle odbouratelné, jsou klasifikovány o jednu úroveň kategorie nebezpečí „přísněji“ než rychle odbouratelné látky.

Vypočtená ekvivalentní toxicita se použije k tomu, aby se této části směsi přiřadila kategorie dlouhodobého nebezpečí podle kritérií pro rychle odbouratelné látky (tabulka 2.2.9.1.10.3.1 (b) (ii)), která se následně použije při aplikaci součtové metody.

2.2.9.1.10.4.5.3 Při použití aditivního vzorce pro část směsi je vhodnější vypočítat toxicitu této části směsi tak, že se pro každou složku použijí hodnoty toxicity, které se vztahují ke stejné systematické skupině (tj. rybám, koryšům nebo řasám), a pak se použije nejvyšší toxicita (nejnižší hodnota) (tj. použít nejcitlivější z těchto tří skupin). Nejsou-li však k dispozici údaje o toxicitě pro každou složku od stejné systematické skupiny, musí být hodnota toxicity pro každou složku zvolena stejným způsobem, jakým jsou voleny hodnoty toxicity pro klasifikaci látek, tj. použije se nejvyšší toxicita (od nejcitlivějšího pokusného organismu). Vypočtená akutní a chronická toxicita pak musí být použita pro klasifikaci této části směsi jako akutní 1 a/nebo chronická 1 nebo 2 za použití stejných kritérií, jaká jsou popsána pro látky.

2.2.9.1.10.4.5.4 Jestliže je směs klasifikována více než jen jedním způsobem, musí se použít ta metoda, která dává nejkonzervativnější výsledek.

2.2.9.1.10.4.6 Součtová metoda

2.2.9.1.10.4.6.1 Klasifikační postup

Všeobecně převažuje přísnější klasifikace pro směsi nad méně přísnou klasifikací, např. klasifikace chronická 1 převažuje nad klasifikací chronická 2. V důsledku toho je klasifikační postup již ukončen, je-li výsledkem klasifikace kategorie chronická 1. Přísnější klasifikace než chronická 1 není možná a proto není nutné pokračovat dále v klasifikačním postupu.

2.2.9.1.10.4.6.2 Klasifikace do kategorie akutní 1

2.2.9.1.10.4.6.2.1 Nejprve se posoudí všechny složky klasifikované jako akutní 1. Je-li součet koncentrací (v %) těchto složek nejméně 25 %, musí být celá směs klasifikována jako akutní 1. Je-li výsledkem výpočtu klasifikace směsi jako akutní 1, klasifikační postup je ukončen.

2.2.9.1.10.4.6.2.2 Klasifikace směsí z hlediska akutních nebezpečí založená na tomto součtu koncentrací klasifikovaných složek je sumarizována v tabulce 2.2.9.1.10.4.6.2.2 dále.

Tabulka 2.2.9.1.10.4.6.2.2: Klasifikace směsi z hlediska akutních nebezpečí, založená na součtu koncentrací klasifikovaných složek

Součet koncentrací (v %) složek klasifikovaných jako:	Směs klasifikována jako:
Akutní 1 x $M^{(a)}$ \geq 25 %	Akutní 1

^(a) *K vysvětlení součinitele M viz 2.2.9.1.10.4.6.4.*

2.2.9.1.10.4.6.3 Klasifikace do kategorií Chronická 1 a 2

2.2.9.1.10.4.6.3.1 Zprv se berou v úvahu všechny složky klasifikované jako chronické 1. Je-li součet koncentrací (v %) těchto složek nejméně 25 %, musí být směs klasifikována jako chronická 1. Je-li výsledkem výpočtu klasifikace směsi jako chronická 1, klasifikační postup je ukončen.

2.2.9.1.10.4.6.3.2 V případech, kdy směs není klasifikována jako chronická 1, uváží se klasifikace směsi jako chronické 2. Směs musí být klasifikována jako chronická 2, jestliže desetinásobek součtu koncentrací (v %) všech složek klasifikovaných jako chronické 1 plus součet koncentrací (v %) všech složek klasifikovaných jako chronické 2 je nejméně 25 %. Je-li výsledkem výpočtu klasifikace směsi jako kategorie chronická 2, klasifikační postup je ukončen.

2.2.9.1.10.4.6.3.3 Klasifikace směsí z hlediska dlouhodobých nebezpečí založená na tomto součtu koncentrací klasifikovaných složek je sumarizována v tabulce 2.2.9.1.10.4.6.3.3 dále.

Tabulka 2.2.9.1.10.4.6.3.3: Klasifikace směsi z hlediska dlouhodobých nebezpečí, založená na součtu koncentrací klasifikovaných složek

Součet koncentrací (v %) složek klasifikovaných jako:	Směs klasifikována jako:
Chronická 1 x M ^(a) ≥ 25 %	Chronická 1
(M x 10 x Chronická 1) + Chronická 2 ≥ 25 %	Chronická 2

^(a) K vysvětlení součinitele M viz 2.2.9.1.10.4.6.4.4.

2.2.9.1.10.4.6.4 Směsi s velmi toxickými složkami

Složky Akutní 1 nebo Chronická 1 s akutními toxicitami značně pod 1 mg/l a/nebo chronickými toxicitami značně pod 0,1 mg/l (nejsou-li rychle odbouratelné) a 0,01 mg/l (jsou-li rychle odbouratelné) mohou ovlivnit toxicitu směsi a dává se jim při použití součtové metody zvýšená váha. Jestliže směs obsahuje složky klasifikované jako kategorie akutní 1 nebo chronická 1, musí se aplikovat vícevrstvý přístup popsáný v odstavcích 2.2.9.1.10.4.6.2 a 2.2.9.1.10.4.6.3 za použití váženého součtu získaného vynásobením koncentrací složek kategorií Akutní 1 a Chronická 1 součinitelem, namísto jen pouhého sečtení procentních podílů. To znamená, že koncentrace „akutní 1“ v levém sloupci tabulky 2.2.9.1.10.4.6.2 a koncentrace „chronická 1“ v levém sloupci tabulky 2.2.9.1.10.4.6.3 se vynásobí příslušným násobným součinitelem. Násobné součinitele, které se musí použít pro tyto složky, jsou definovány za použití hodnoty toxicity, jak je to sumárně uvedeno v tabulce 2.2.9.1.10.4.6.4 dále. Z tohoto důvodu musí být osoba klasifikující směs, která obsahuje složky akutní 1 a/nebo chronická 1, informována o hodnotě součinitele M, aby mohla použít součtovou metodu. Alternativně smí být použit aditivní vzorec (viz 2.2.9.1.10.4.5.2), pokud jsou k dispozici údaje o toxicitě pro všechny velmi toxické složky ve směsi a existuje přesvědčivý důkaz, že všechny ostatní složky, včetně těch, pro něž nejsou k dispozici specifické údaje o akutní a/nebo chronické toxicitě, mají malou nebo nemají žádnou toxicitu a nepřispívají významným způsobem k nebezpečí, které směs představuje pro životní prostředí.

Tabulka 2.2.9.1.10.4.6.4: Násobné součinitele pro velmi toxické složky směsi

Akutní toxicita	Součinitel M	Chronická toxicita	Součinitel M	Součinitel M
Hodnota L(E)C ₅₀		Hodnota NOEC	Složky NRD ^a	Složky RD ^b
0,1 < L(E)C ₅₀ ≤ 1	1	0,01 < NOEC ≤ 0,1	1	-
0,01 < L(E)C ₅₀ ≤ 0,1	10	0,001 < NOEC ≤ 0,01	10	1
0,001 < L(E)C ₅₀ ≤ 0,01	100	0,0001 < NOEC ≤ 0,001	100	10
0,0001 < L(E)C ₅₀ ≤ 0,001	1 000	0,00001 < NOEC ≤ 0,0001	1 000	100
0,00001 < L(E)C ₅₀ ≤ 0,0001	10 000	0,000001 < NOEC ≤ 0,00001	10 000	1 000
(pokračuje v intervalech součinitele 10)		(pokračuje v intervalech součinitele 10)		

^a Nejsou rychle odbouratelné.

^b Rychle odbouratelné.

2.2.9.1.10.4.6.5 Klasifikace směsi se složkami bez použitelných informací

V případě, že nejsou pro jednu nebo více důležitých složek žádné použitelné informace o jejich akutní a/nebo chronické vodní toxicitě, usuzuje se, že směsi nemůže být přisouzena(y) definitivní kategorie nebezpečí (a). V této situaci se směs klasifikuje na základě známých složek jen s dodatečným prohlášením, že: „x procent směsi sestává ze složky (složek) neznámého nebezpečí pro vodní prostředí“.

2.2.9.1.10.5 Látky nebo směsi klasifikované jako látky ohrožující životní prostředí (vodní prostředí) na základě nařízení 1272/2008/ES¹⁶

Jestliže nejsou k dispozici údaje pro klasifikaci podle kritérií v 2.2.9.1.10.3 a 2.2.9.1.10.4, látka nebo směs:

(a) musí být klasifikována jako látka ohrožující životní prostředí (vodní prostředí), jestliže musí být přiřazena ke kategorii (kategoriím) Vodní akutní 1, Vodní chronická 1 nebo Vodní chronická 2 podle nařízení 1272/2008/ES¹⁶ nebo, pokud je to ještě relevantní, podle uvedeného nařízení, rizikové věty

¹⁶ Nařízení 1272/2008/ES Evropského parlamentu a Rady z 16. prosince 2008 o klasifikaci, označování a balení látek a směsí (Úřední věstník Evropské unie, č. L 353 ze dne 30. prosince 2008).

(vět) R50, R50/53 nebo R51/53 podle směrnic 67/548/EHS³ nebo 1999/45/ES⁴;

(b) smí být považována za látku, která neohrožuje životní prostředí (vodní prostředí), jestliže nemusí být přiřazena k takové rizikové větě nebo kategorii podle uvedených směrnic nebo nařízení.

- 2.2.9.1.10.6 Přiřazení látek nebo směsí klasifikovaných jako látky ohrožující životní prostředí (vodní prostředí) podle ustanovení v 2.2.9.1.10.3, 2.2.9.1.10.4 nebo 2.2.9.1.10.5

Látky nebo směsi klasifikované jako látky ohrožující životní prostředí (vodní prostředí), jinak neklasifikované pod ADR, musí být pojmenovány:

UN 3070 LÁTKA OHROŽUJÍCÍ ŽIVOTNÍ PROSTŘEDÍ, TUHÁ, J.N.; nebo

UN 3082 LÁTKA OHROŽUJÍCÍ ŽIVOTNÍ PROSTŘEDÍ, KAPALNÁ, J.N.

Musí být přiřazeny k obalové skupině III.

- 2.2.9.1.11 Geneticky změněné mikroorganismy (GMMO) a geneticky změněné organismy (GMO) jsou mikroorganismy a organismy, v nichž byl genetický materiál záměrně změněn genetickým inženýrstvím takovým způsobem, ke kterému v přírodě nedochází. Jsou přiřazeny ke třídě 9 (UN číslu 3245), pokud neodpovídají definici toxických látek nebo infekčních látek, ale jsou schopné měnit zvířata, rostliny nebo mikrobiologické látky způsobem, který není normálně výsledkem přirozené reprodukce.

POZNÁMKA 1: GMMO a GMO, které jsou infekční, jsou látkami třídy 6.2, UN čísel 2814, 2900 nebo 3373.

POZNÁMKA 2: GMMO nebo GMO nepodléhají ustanovením ADR, jestliže byly schváleny pro používání příslušnými orgány země původu, tranzitu a určení¹⁷.

POZNÁMKA 3: Živá zvířata nesmějí být používána k přepravě geneticky změněných mikroorganismů zařazených do třídy 9, ledaže by látka nemohla být přepravována jiným způsobem. Geneticky změněná živá zvířata musí být přepravována za podmínek stanovených příslušnými orgány země původu a určení.

- 2.2.9.1.12 (Vypuštěno)

Zahřáté látky

- 2.2.9.1.13 Zahřáté látky zahrnují látky, které jsou přepravovány nebo podávány k přepravě v kapalném stavu při teplotě 100 °C nebo vyšší a v případě látek, které mají bod vzplanutí, při teplotě pod jejich bodem vzplanutí. Zahrnují také tuhé látky, které jsou přepravovány nebo podávány k přepravě při teplotě 240 °C nebo vyšší.

POZNÁMKA: Zahřáté látky smějí být přiřazeny ke třídě 9 jen tehdy, jestliže nesplňují kritéria některé jiné třídy

Jiné látky, které během přepravy představují nebezpečí a neodpovídají definici žádné jiné třídy

- 2.2.9.1.14 Tyto různé látky neodpovídají definici žádné jiné třídy a jsou proto přiřazeny ke třídě 9: tuhé sloučeniny amoniaku (čpavku) s bodem vzplanutí pod 60 °C méně nebezpečné dithiončitany velmi lehce prchavé kapalné látky látky vyvíjející škodlivé páry látky obsahující alergeny chemické testovací soupravy a soupravy první pomoci elektrické dvouvrstvé kondenzátory (s kapacitou akumulace energie větší než 0,3 Wh)

³ Směrnice Rady 67/548/EHS z 27. června 1967 o přibližování zákonů, vyhlášek a administrativních nařízení, týkajících se klasifikace, balení a označování nebezpečných věcí (Úřední věstník Evropských společenství, č. L 196 ze dne 16. srpna 1967).

⁴ Směrnice 1999/45/ES Evropského parlamentu a Rady z 31. května 1999 o přibližování zákonů, vyhlášek a administrativních nařízení členských států, týkajících se klasifikace, balení a označování nebezpečných přípravků (Úřední věstník Evropských společenství, č. L 200 ze dne 30. července 1999).

¹⁷ Viz zejména díl C směrnice Evropského parlamentu a Rady 2001/18/ES o záměrném uvolňování geneticky modifikovaných organismů do životního prostředí a o zrušení směrnice Rady 90/220/EHS (Úřední věstník Evropských společenství, č. L 106 ze dne 17. dubna 2001, str. 8-14), v němž je stanoven schvalovací postup pro Evropská společenství.

POZNÁMKA: Následující látky a předměty, uvedené ve Vzorových předpisech OSN, nepodléhají ustanovením ADR :

UN 1845 OXID UHLIČITÝ, TUHÝ (SUCHÝ LED)¹⁸,
UN 2071 HNOJIVA OBSAHUJÍCÍ DUSIČNAN AMONNÝ,
UN 2216 MOUČKA RYBÍ (ODPAD RYBÍ), STABILIZOVANÁ(Y),
UN 2807 LÁTKY MAGNETIZOVANÉ,
UN 3166 MOTOR SPALOVACÍ nebo VOZIDLO POHÁNĚNÉ HOŘLAVÝM PLYNEM nebo 3166 VOZIDLO POHÁNĚNÉ HOŘLAVOU KAPALINOU nebo 3166 MOTOR POHÁNĚNÝ PALIVOVÝMI ČLÁNKY OBSAHUJÍCÍMI HOŘLAVÝ PLYN nebo 3166 MOTOR POHÁNĚNÝ PALIVOVÝMI ČLÁNKY OBSAHUJÍCÍMI HOŘLAVOU KAPALINU nebo 3166 VOZIDLO POHÁNĚNÉ PALIVOVÝMI ČLÁNKY OBSAHUJÍCÍMI HOŘLAVÝ PLYN nebo 3166 VOZIDLO POHÁNĚNÉ PALIVOVÝMI ČLÁNKY OBSAHUJÍCÍMI HOŘLAVOU KAPALINU
UN 3171 VOZIDLO NA AKUMULÁTOROVÝ POHON nebo UN 3171 PŘÍSTROJ NA AKUMULÁTOROVÝ POHON
UN 3334 LÁTKA KAPALNÁ KTERÁ PODLÉHÁ PŘEDPISŮM PLATNÝM PRO LETECKOU DOPRAVU, J.N.
UN 3335 LÁTKA TUHÁ KTERÁ PODLÉHÁ PŘEDPISŮM PLATNÝM PRO LETECKOU DOPRAVU, J.N.
UN 3363 NEBEZPEČNÉ VĚCI VE STROJÍCH nebo UN 3363 NEBEZPEČNÉ VĚCI V PŘÍSTROJÍCH

Přiřazení k obalovým skupinám

2.2.9.1.15 Je-li to udáno ve sloupci (4) tabulky A kapitoly 3.2, jsou látky a předměty třídy 9 přiřazeny k jedné z následujících obalových skupin podle svého stupně nebezpečnosti:

Obalová skupina II: středně nebezpečné látky;
Obalová skupina III: málo nebezpečné látky.

2.2.9.2 Látky a předměty nepřipustitelné k přepravě

Následující látky a předměty nejsou k přepravě připuštěny :

- Lithiové baterie, které neodpovídají příslušným podmínkám zvláštních ustanovení 188, 230 nebo 636 kapitoly 3.3;
- Nevycištěné prázdné zadržovací vany pro přístroje, jako jsou transformátory, kondenzátory a hydraulické přístroje, které obsahují látky přiřazené k UN číslům 2315, 3151, 3152 nebo 3432.

¹⁸ K UN 1845 oxid uhlíčitý, tuhý (suchý led), který se používá jako chladicí prostředek, viz 5.5.3.

2.2.9.3 Seznam položek

Vedlejší nebezpečí	Klasifikační kód	UN-číslo	Pojmenování látek nebo předmětů
Látky, které při vdechnutí jemného prachu mohou ohrozit zdraví	M1	2212	AZBEST, MODRÝ (krokydolit) nebo
		2212	AZBEST, HNĚDÝ (amosit, mysorit)
Látky a přístroje, které mohou v případě požáru vytvářet dioxiny	M2	2315	BIFENYLY POLYCHLOROVANÉ, KAPALNÉ
		3432	BIFENYLY POLYCHLOROVANÉ, TUHÉ
Látky uvolňující hořlavé páry	M3	3151	BIFENYLY POLYHALOGENOVANÉ, KAPALNÉ nebo
		3151	TERFENYLY POLYHALOGENOVANÉ, KAPALNÉ
Baterie lithiové	M4	3152	BIFENYLY POLYHALOGENOVANÉ, TUHÉ nebo
		3152	TERFENYLY POLYHALOGENOVANÉ, TUHÉ
Prostředky záchranné	M5	2211	KULIČKY POLYMERNÍ, ZPĚNOVATELNÉ, vylučující hořlavé páry
		3314	PLASTY, SMĚS LISOVACÍ, ve formě těsta, desek nebo tyčí, uvolňující hořlavé páry
Látky ohrožující životní prostředí	geneticky změněné mikroorganismy a organismy M 8	3090	BATERIE LITHIOVÉ KOVOVÉ (včetně baterií ze slitin lithia)
		3091	BATERIE LITHIOVÉ KOVOVÉ OBSAŽENÉ V ZAŘÍZENÍ (včetně baterií ze slitin lithia) nebo
Zahřáté látky	kapalná M6	3091	BATERIE LITHIOVÉ KOVOVÉ BALENÉ SE ZAŘÍZENÍM (včetně baterií ze slitin lithia)
		3480	BATERIE LITHIUM-IONTOVÉ (včetně baterií lithium-polymerových)
Zahřáté látky	tuhá M7	3481	BATERIE LITHIUM-IONTOVÉ OBSAŽENÉ V ZAŘÍZENÍCH (včetně baterií lithium-polymerových)
		3481	BATERIE LITHIUM-IONTOVÉ BALENÉ SE ZAŘÍZENÍMI (včetně baterií lithium-polymerových)
Zahřáté látky	kapalná M9	2990	PROSTŘEDKY ZÁCHRANNÉ, SAMONAFUKOVACÍ,
		3072	PROSTŘEDKY ZÁCHRANNÉ, NIKOLI SAMONAFUKOVACÍ, které obsahují nebezpečné látky jako výstavu
Zahřáté látky	tuhá M10	3268	PLNIČE AIRBAGŮ (nafukovacích vaků) nebo
		3268	MODULY AIRBAGŮ (nafukovacích vaků) nebo
Zahřáté látky	tuhá M10	3268	PŘEDPÍNAČE BEZPEČNOSTNÍCH PÁSŮ
		3082	LÁTKA OHROŽUJÍCÍ ŽIVOTNÍ PROSTŘEDÍ, KAPALNÁ, J.N.
Zahřáté látky	tuhá M10	3077	LÁTKA OHROŽUJÍCÍ ŽIVOTNÍ PROSTŘEDÍ, TUHÁ, J.N.
		3245	GENETICKY MODIFIKOVANÉ MIKROORGANISMY nebo GENETICKY MODIFIKOVANÉ ORGANISMY
Zahřáté látky	tuhá M10	3257	LÁTKA ZAHŘÁTÁ, KAPALNÁ, J.N., při teplotě 100 °C nebo vyšší a nižší než je její bod vzplanutí (včetně roztavených kovů, roztavených solí atd.)
		3258	LÁTKA ZAHŘÁTÁ, TUHÁ, J.N., při teplotě 240 °C nebo vyšší

Jiné látky, které během přepravy představují nebezpečí a neodpovídají definici žádné jiné třídy

M11

Není k dispozici žádná hromadná položka. Pouze následující látky uvedené v kapitole 3.2, tabulce A s tímto klasifikačním kódem podléhají předpisům třídy 9:

1841	1-AMINOETHANOL (ACETALDEHYD AMONIAK)
1931	DITHIONIČITAN ZINEČNATÝ
1941	DIBROMDIFLUORMETHAN
1990	BENZALDEHYD
2969	BOBY RICINOVÉ nebo
2969	MOUČKA RICINOVÁ nebo
2969	KOLÁČ RICINOVÝ nebo
2969	VLOČKY RICINOVÉ
3316	SOUPRAVA TESTOVACÍ, CHEMICKÁ nebo
3316	SOUPRAVA PRVNÍ POMOCI
3359	ZAPLYNOVANÁ JEDNOTKA
3499	KONDENZÁTOR, elektrický, dvouvrstvý (s kapacitou akumulace energie větší než 0,3 Wh)

KAPITOLA 2.3

ZKUŠEBNÍ POSTUPY

2.3.0 Všeobecně

Pokud v kapitole 2.2 nebo v této kapitole není stanoveno jinak, je třeba pro klasifikaci nebezpečných věcí použít zkušební postupy uvedené v Příručce pro zkoušky a kritéria.

2.3.1 Zkouška na výpotek pro trhaviny typu A

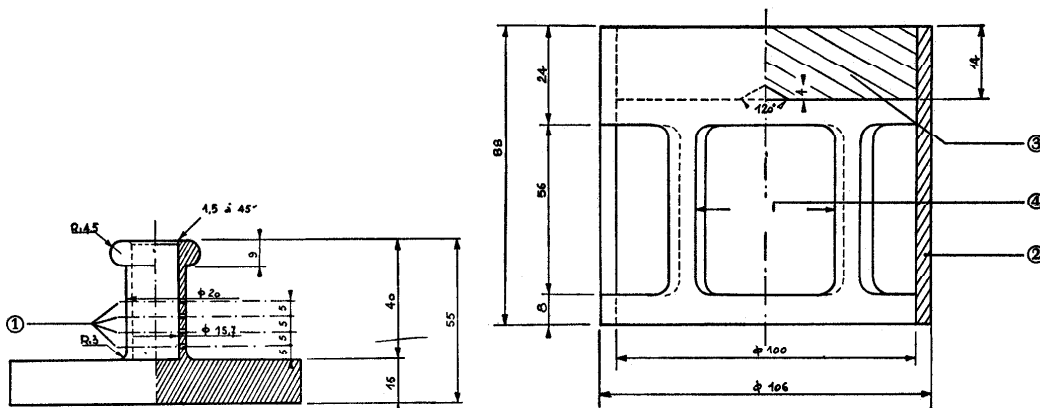
2.3.1.1 Trhaviny typu A (UN číslo 0081) musí, pokud obsahují více než 40 % kapalného esteru kyseliny dusičné, navíc ke zkouškám uvedeným v Příručce zkoušek a kritérií, vyhovět ještě následující zkoušce na výpotek.

2.3.1.2 Přístroj pro zkoušku trhavin na výpotek (obrázky 1 až 3) se skládá z dutého bronzového válce. Tento válec, který je na jedné straně uzavřen deskou z téhož kovu, má vnitřní průměr 15,7 mm a hloubku 40 mm. Ve stěně je po obvodu 20 otvorů o průměru 0,5 mm (4 řady po 5 otvorech). Bronzový píst tvaru válce o délce 48 mm, jehož celková délka činí 52 mm, vniká do svisle postaveného válce; tento píst, jehož průměr činí 15,6 mm se zatíží závažím o hmotnosti 2220 g tak, že se vyvine tlak 120 kPa (1,2 bar) na dno válce.

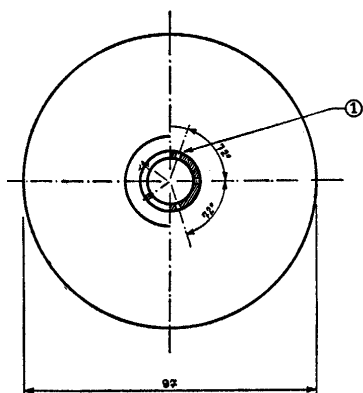
2.3.1.3 Z 5 až 8 gramů trhaviny se vytvoří žmolek o délce 30 mm a průměru 15 mm, který se obalí velmi jemnou gázou a vloží se do válce; na něj se potom přiloží píst se závažím, aby byla trhavina vystavena tlaku 120 kPa (1,2 bar). Zaznamená se doba, která uplyne, než se ve vnějších otvorech ve válci objeví první olejové kapičky (nitroglycerin).

2.3.1.4 Trhavina se považuje za vyhovující, jestliže se při zkoušce provedené při teplotě 15 až 25 °C objeví první kapičky po časovém období delším než 5 minut.

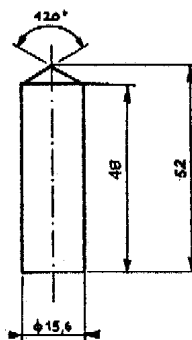
Zkouška trhavin na výpotek



Obr.1: Těleso závaží, tvaru zvonu; hmotnost 2220 g; pro zavěšení na bronzový píst



Obr.2: Dutý bronzový válec, z jedné strany uzavřen, nárys a půdorys rozměry v mm



Obr.3: Válcovitý bronzový píst, rozměry v mm

Rozměry v mm

- (1) 4 řady po 5 otvorech o průměru 0,5
- (2) Měď
- (3) Olověná deska se středovým kuželem na spodní straně
- (4) 4 otvory, cca 46 x 56, rozděleny rovnoměrně po obvodu

2.3.2 Zkoušky týkající se nitrovaných směsí celulózy třídy 4.1

- 2.3.2.1 Nitrocelulóza nesmí během půlhodinového zahřívání při teplotě 132 °C vyvíjet žádné viditelné žlutohnědé nitrozní páry (nitrozní plyny). Zápalná teplota musí být vyšší než 180 °C. Viz 2.3.2.3 až 2.3.2.8, 2.3.2.9a) a 2.3.2.10 dále.
- 2.3.2.2 3 gramy zvláčené nitrocelulózy nesmějí během hodinového zahřívání při teplotě 132 °C vyvíjet žádné viditelné žlutohnědé nitrozní páry (nitrozní plyny). Zápalná teplota musí být vyšší než 170 °C. Viz 2.3.2.3 až 2.3.2.8, 2.3.2.9 b) a 2.3.2.10 dále.
- 2.3.2.3 Dále uvedené zkušební postupy se použijí, pokud vzniknou názorové rozdíly v otázce přípustnosti přepravy těchto látek silniční dopravou.

2.3.2.4 Pokud se při zkouškách pro ověření podmínek stálosti, uvedených výše v tomto oddílu, zvolí jiné zkušební postupy, musí tyto postupy vést ke stejným závěrům k jakým vedou postupy uvedené dále.

2.3.2.5 Při dále popsané zkoušce tepelné stálosti se nesmí teplota v sušárně, ve které se zkoušený vzorek nachází, odchylovat o více než 2 °C od předepsané teploty; předepsaná doba zkoušky 30 nebo 60 minut musí být dodržena s odchylkou nejvýše 2 minut. Sušárna musí být uzpůsobena tak, aby po vložení vzorku bylo dosaženo požadované teploty nejdéle do 5 minut.

2.3.2.6 Zkušební vzorky se musí před zkouškami podle pododdílů 2.3.2.9 a 2.3.2.10 sušit ve vakuovém exsikátoru, obsahujícím roztavený a zrnitý chlorid vápenatý, při okolní teplotě po dobu nejméně 15 hodin, přičemž musí být zkušební látka rozprostřena v tenké vrstvě; k tomuto účelu musí být látka, které nejsou práškovité ani vláknité, rozdrčeny, rozstrouhány nebo rozřezány na malé kousky. Tlak v exsikátoru se musí udržovat pod 6,5 kPa (0,065 bar).

2.3.2.7 Před sušením za podmínek uvedených v pododdílu 2.3.2.6 musí být látky odpovídající pododdílu 2.3.2.2 předsušeny v sušárně s dobrým provzdušněním při teplotě udržované na 70 °C tak dlouho, dokud úbytek hmotnosti za 15 minut není menší než 0,3 % původní hmotnosti.

2.3.2.8 Slabě nitrovaná nitrocelulóza podle pododdílu 2.3.2.1 je nejdříve podrobena předsušení podle podmínek uvedených v pododdílu 2.3.2.7; sušení se dokončí ponecháním nitrocelulózy po dobu nejméně 15 hodin v exsikátoru obsahujícím koncentrovanou kyselinou sírovou.

2.3.2.9 Zkouška chemické stálosti za tepla

(a) *Zkouška látky uvedené v pododdílu 2.3.2.1.*

(i) Do každé ze dvou skleněných zkumavek, které mají

délku	350 mm
vnitřní průměr	16 mm
tloušťku stěny	1,5 mm

se vloží 1 g látky vysušené chloridem vápenatým (látka pro sušení se musí v případě potřeby zmenšit na kousky, jejichž hmotnost jednotlivě nepřesahuje 0,05 g).

Obě zkumavky se úplně přikryjí tak, aby uzávěry nekladly odpor, a vloží se do sušárny tak, aby bylo vidět alespoň 4/5 jejich délky a ponechají se tam po dobu 30 minut při konstantní teplotě 132 °C. Po tuto dobu se pozoruje, zda se vyvíjejí nitrózní plyny ve formě žlutohnědých par, které jsou dobře viditelné na bílém pozadí.

(ii) Látka se považuje za stálou, jestliže se takové páry neobjeví.

(b) *Zkouška zvláčené nitrocelulózy (viz 2.3.2.2)*

(i) 3 g zvláčené nitrocelulózy se vloží do obdobných skleněných zkumavek jako pod písmenem a), které se pak naplněné vloží do sušárny s konstantní teplotou 132 °C.

(ii) Zkumavky se zvláčenou nitrocelulózou zůstanou v sušárně jednu hodinu. Po tuto dobu nesmějí být viditelné žádné žlutohnědé nitrózní páry (nitrózní plyny). Pozorování a vyhodnocení jako pod písmenem (a).

2.3.2.10 Zápalná teplota (viz 2.3.2.1 a 2.3.2.2)

(a) Zápalná teplota se určí zahříváním 0,2 g látky uzavřené ve skleněné zkumavce, která je ponořena do lázně z Woodovy slitiny (kovové lázně). Zkumavka se ponoří do lázně, jakmile tato dosáhla teploty 100 °C. Teplota lázně se pak progresivně zvyšuje každou minutu o 5 °C.

(b) Zkumavky musí mít:

délku	125 mm
-------	--------

vnitřní průměr 15 mm
tloušťku stěny 0,5 mm

a musí být ponořeny do hloubky 20 mm;

- (c) Zkouška se musí opakovat třikrát a pokaždé se musí zaznamenat teplota, při níž došlo k zapálení/vznícení látky, t.j. k pomalému nebo rychlému shoření, deflagraci nebo výbuchu;
- (d) Nejnížší teplota zaznamenaná při těchto třech zkouškách je zápalnou teplotou.

2.3.3 Zkoušky hořlavých kapalných látek tříd 3, 6.1 a 8

2.3.3.1 Zkouška pro stanovení bodu vzplanutí

2.3.3.1.1 Ke stanovení bodu vzplanutí hořlavých kapalin směji být použity následující metody:

Mezinárodní normy:

ISO 1516 (Determination of flash/no flash – Closed cup equilibrium method)
(Zjišťování vzplanutí/nevzplanutí – Rovnovážná metoda s uzavřeným kelímkem)

ISO 1523 (Determination of flash point – Closed cup equilibrium method)
(Stanovení bodu vzplanutí – Rovnovážná metoda s uzavřeným kelímkem)

ISO 2719 (Determination of flash point – Pensky-Martens closed cup method)
(Stanovení bodu vzplanutí – Metoda Pensky-Martens s uzavřeným kelímkem)

ISO 13736 (Determination of flash point – Abel closed cup method)
(Stanovení bodu vzplanutí – Metoda Abel s uzavřeným kelímkem)

ISO 3679 (Determination of flash point – Rapid equilibrium closed cup method)
(Stanovení bodu vzplanutí – Rychlá rovnovážná metoda s uzavřeným kelímkem)

ISO 3680 (Determination of flash/no flash – Rapid equilibrium; closed cup method)
(Zjišťování vzplanutí/nevzplanutí – Rychlá rovnovážná metoda s uzavřeným kelímkem)

Vnitrostátní normy:

American Society for Testing Materials International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, Pennsylvania, USA 19428-2959:

ASTM D3828-07a, Standard Test Methods for Flash Point by Small Scale Closed-Cup Tester

ASTM D56-05, Standard Test Method for Flash Point by Tag Closed-Cup Tester

ASTM D3278-96(2004)e1, Standard Test Methods for Flash Point of Liquids by Small Scale Closed-Cup Apparatus

ASTM D93-08, Standard Test Methods for Flash Point by Pensky-Martens Closed-Cup Tester

Association française de normalisation, AFNOR, 11, rue de Pressensé, F-93571 La Plaine Saint-Denis Cedex:

Francouzská norma NF M 07-019

Francouzské normy NF M 07-011 / NF T 30-050 / NF T 66-009

Francouzská norma NF M 07-036

Deutsches Institut für Normung, Burggrafenstr. 6, D-10787 Berlin:

Norma DIN 51755 (body vzplanutí pod 65 °C)

State Committee of the Council of Ministers for Standardization, RUS-113813, GSP, Moscow, M-49 Leninsky Prospect, 9:

GOST 12.1.044-84

2.3.3.1.2 Pro stanovení bodu vzplanutí nátěrových hmot, lepidel a podobných viskózních výrobků obsahujících rozpouštědla, smí být použito jen přístrojů a zkušebních metod, které jsou vhodné ke stanovení bodu vzplanutí viskózních kapalin podle těchto norem:

- (a) Mezinárodní norma ISO 3679:1983;
- (b) Mezinárodní norma ISO 3680:1983;
- (c) Mezinárodní norma ISO 1523:1983;
- (d) Mezinárodní normy EN ISO 13736 a EN ISO 2719, metoda B

2.3.3.1.3 Normy uvedené v 2.3.3.1.1 se používají jen pro rozsahy bodů vzplanutí, které jsou v nich uvedené. Při výběru normy je třeba vzít v úvahu možnost chemických reakcí mezi látkou a zkušební nádobou. Přístroj je třeba, pokud to dovoluje bezpečnost, umístit na místě, které je chráněno před průvanem. Z bezpečnostních důvodů se používá pro organické peroxidy a samovolně se rozkládající látky (zvané též "energetické" látky) nebo pro toxické látky metoda, při níž se používá jen malý zkušební vzorek o objemu cca 2 ml.

2.3.3.1.4 Jestliže je bod vzplanutí stanovený nerovnovážnou metodou $23\text{ °C} \pm 2\text{ °C}$ nebo $60\text{ °C} \pm 2\text{ °C}$, je třeba tento výsledek potvrdit pro každý teplotní rozsah jednou z rovnovážných metod.

2.3.3.1.5 Je-li zařazení hořlavé kapalné látky sporné, je směrodatné zařazení, které navrhl odesílatel, jestliže se výsledek kontrolní zkoušky pro stanovení bodu vzplanutí dotyčné kapaliny neliší o více než 20 °C od mezích hodnot (23 °C , popř. 60 °C) uvedených v pododdílu 2.2.3.1. Liší-li se výsledek kontrolní zkoušky o více než 20 °C , je nutno provést druhou kontrolní zkoušku a jako rozhodující platí nejnižší hodnota bodu vzplanutí zjištěná ve dvou kontrolních zkouškách.

2.3.3.2 Stanovení teploty počátku varu

Ke stanovení teploty počátku varu hořlavých kapalin smějí být použity:

Mezinárodní normy:

ISO 3924 (Petroleum products - Determination of boiling range distribution – Gas chromatography method)

(Ropné produkty – Stanovení rozložení destilačního rozmezí – Metoda plynové chromatografie)

ISO 4626 (Volatile organic liquids - Determination of boiling range of organic solvents used as raw materials)

(Těkavé organické kapaliny – Stanovení destilačního rozmezí organických rozpouštědel používaných jako suroviny)

ISO 3405 (Petroleum products - Determination of distillation characteristics at atmospheric pressure)

(Ropné produkty – Stanovení destilačních charakteristik při atmosférickém tlaku)

Vnitrostátní normy:

American Society for Testing Materials International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, Pennsylvania, USA 19428-2959:

ASTM D86-07a, Standard Test Method for Distillation of Petroleum Products at Atmospheric Pressure

ASTM D1078-05, Standard Test Method for Distillation Range of Volatile Organic Liquids

Další přípustné metody:

Metoda A.2, popsaná v části A přílohy k nařízení Komise (ES) č. 440/2008¹.

2.3.3.3 Zkouška pro stanovení obsahu peroxidu

Obsah peroxidu v kapalné látce se určuje následujícím postupem:

Množství p (asi 5 g s přesností vážení na 0,01 g) zkoušené kapaliny se nalije do Erlenmeyerovy baňky; přidá se 20 cm³ anhydridu kyseliny octové a asi 1 g tuhého jodidu draselného rozetřeného na prášek, obsah baňky se protřepe a po 10 minutách se ohřeje během 3 minut na cca 60 °C; poté se nechá chladnout po dobu 5 minut a přidá se 25 cm³ vody. Potom se nechá stát po dobu půl hodiny a poté se uvolněný jód titruje desetinným roztokem sirmatanu sodného bez přidání indikátoru. Úplné odbarvení značí konec reakce. Označíme-li potřebný počet cm³ roztoku sirmatanu písmenem n, vypočítá se procentní obsah peroxidu ve vzorku (počítán jako H₂O₂) podle vzorce:

$$\frac{17n}{100p}$$

2.3.4 Zkouška ke stanovení tekutosti

Ke stanovení tekutosti kapalných, viskózních nebo pastovitých látek a směsí se používá následující zkušební postup:

2.3.4.1 Zkušební přístroj

Obchodně běžný penetrometr podle normy ISO 2137:1985 s vodící tyčí o hmotnosti 47,5 g ± 0,05 g; děrovaný kotouč z duralu s kónickými otvory o hmotnosti 102,5 g ± 0,05 g (viz obrázek 1); penetrační nádobka o vnitřním průměru 72 až 80 mm k jímání vzorku.

2.3.4.2 Zkušební postup

Vzorek se naplní do penetrační nádobky nejméně půl hodiny před začátkem měření. Nádobka se hermeticky uzavře a ponechá v klidu až do začátku měření. Vzorek se v hermeticky uzavřené penetrační nádobce ohřeje na 35 °C ± 0,5 °C a teprve bezprostředně před měřením (nejvýše 2 minuty) se přemístí na stolek penetrometru. Nyní se na povrch kapaliny nasadí hrot S děrovaného kotouče a změří se hloubka průniku.

2.3.4.3 Vyhodnocení výsledků zkoušky

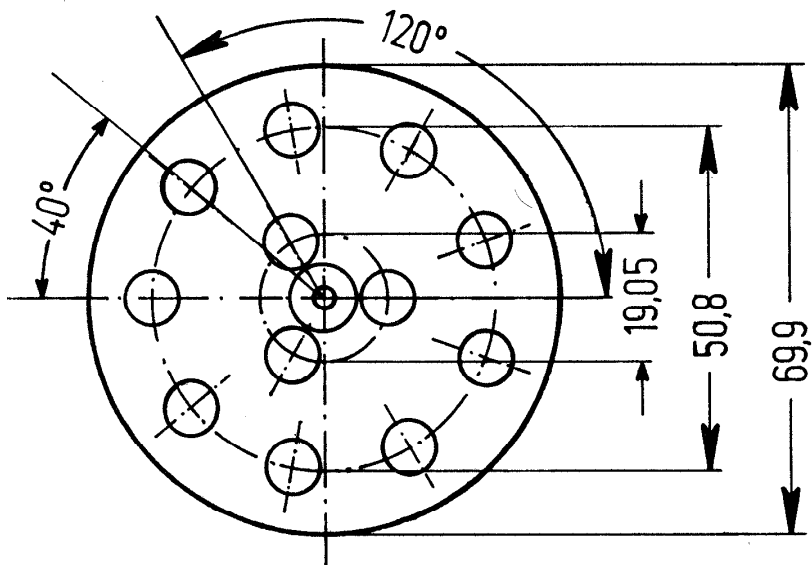
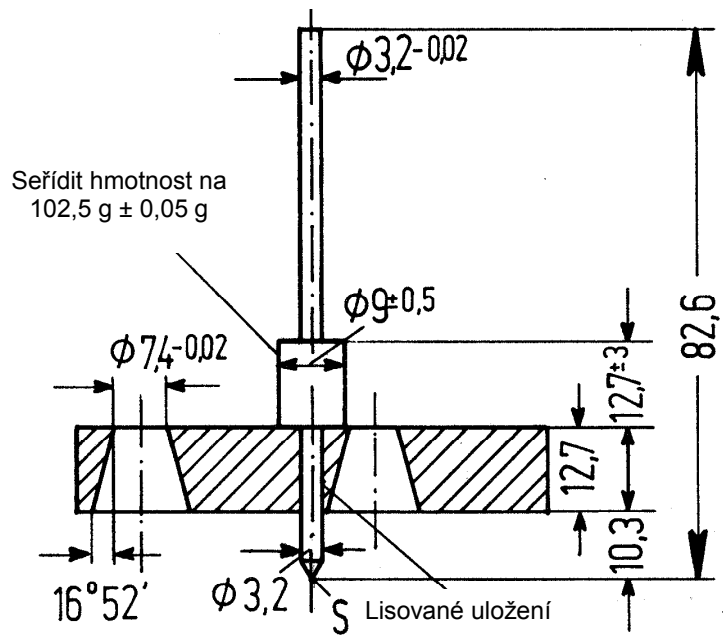
Látka je pastovitá, jestliže po nasazení hrotu S na povrch vzorku je hodnota penetrace odečtená na stupnici:

- (a) po době zatížení 5 s ± 0,1 s je menší než 15 mm ± 0,3 mm, nebo
- (b) při době zatížení 5 s ± 0,1 s je větší než 15 mm ± 0,3 mm, avšak dodatečná penetrace po dalších 55 s ± 0,5 s je menší než 5,0 mm ± 0,5 mm.

POZNÁMKA: U vzorků majících bod tečení je často nemožné dosáhnout v penetrační nádobce stálého rovného povrchu a tím zajistit při nasazení hrotu S jednoznačné počáteční podmínky měření. Navíc může u některých vzorků nastat při nárazu děrovaného kotouče elastická deformace povrchu a v prvních vteřinách může dojít k naměření vyšších hodnot penetrace. Ve všech těchto případech může být vhodné vyhodnotit výsledky podle odstavce b) výše.

¹ Nařízení Komise (ES) č.440/2008 z 30. května 2008 stanovící zkušební metody v souladu s nařízením (ES) č. 1907/2006 Evropského parlamentu a Rady o registraci, hodnocení, povolování a omezování chemických látek (REACH) (Úřední věstník Evropské unie, č. L 142 ze dne 31.5. 2008, str. 1-739 a č. L 143 ze dne 3.6.2008, str. 55).

Penetrometr



Pro míry bez udání tolerance platí $\pm 0,1 \text{ mm}$

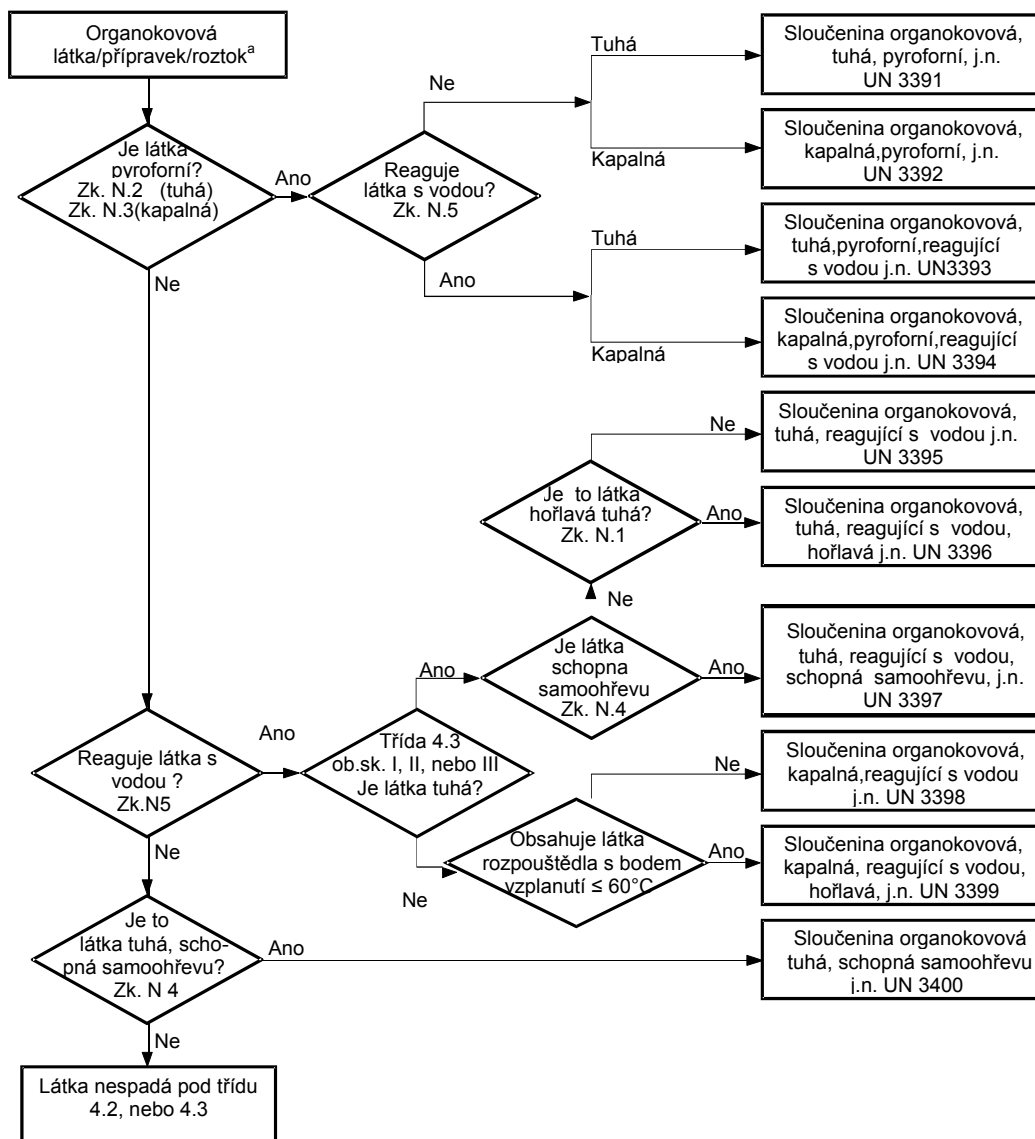
2.3.5 Klasifikace organokovových látek do tříd 4.2 a 4.3

V závislosti na svých vlastnostech, určených na základě zkoušek N.1 až N.5. Příručky zkoušek a kritérií, části III, oddílu 33, mohou být organokovové látky zařazeny do třídy 4.2, popřípadě 4.3 podle postupového diagramu uvedeného na obrázku 2.3.5.

POZNÁMKA 1: *V závislosti na svých jiných vlastnostech a na přednosti v tabulce převažujících nebezpečí (viz 2.1.3.10) mohou být organokovové látky zařazeny do jiných tříd, jak je to vhodné.*

POZNÁMKA 2: *Hořlavé roztoky s organokovovými sloučeninami v koncentracích, které nejsou samozápalné, ani ve styku s vodou nevyvíjejí hořlavé plyny, jsou látkami třídy 3.*

2.3.5 Postupový diagram pro klasifikaci organokovových látek do tříd 4.2 a 4.3^b



a Pokud lze aplikovat a pokud je zkouška s přihlédnutím k reakčním vlastnostem odpovídající, určí se vlastnosti tříd 6.1. a 8 dle tabulky převažujícího nebezpečí v pododdíle 2.1.3.10.

b Zkušební metody N. 1 až N. 5 jsou obsaženy v Příručce zkoušek a kritérií část III, oddíl 33.

ČÁST 3

**VYJMENOVÁNÍ NEBEZPEČNÝCH VĚCÍ, ZVLÁŠTNÍ
USTANOVENÍ A VYNĚTÍ Z PLATNOSTI PRO OMEZENÁ
A VYŇATÁ MNOŽSTVÍ**

KAPITOLA 3.1

VŠEOBECNĚ

3.1.1 Úvod

Vedle ustanovení, která jsou uvedena v tabulkách této části, nebo na která se odkazuje, je nutno dbát všeobecných ustanovení každé části, kapitoly a/nebo oddílu. Tato všeobecná ustanovení nejsou v tabulkách uvedena. Jestliže všeobecné ustanovení je v rozporu se zvláštním ustanovením, má zvláštní ustanovení přednost.

3.1.2 Oficiální pojmenování pro přepravu

POZNÁMKA.: *K oficiálním pojmenováním používaným pro přepravu vzorků viz pododdíl 2.1.4.1.*

3.1.2.1

Oficiální pojmenování pro přepravu je tou částí položky, která věci uvedené v tabulce A kapitoly 3.2 nejpřesněji popisuje, a je napsáno velkými písmeny (číslice, řecká písmena a údaje napsané malými písmeny "sec", "terc", "m", "n", "o", a "p" jsou nedílnou součástí pojmenování). Za hlavním oficiálním pojmenováním pro přepravu může být udáno alternativní oficiální pojmenování pro přepravu v závorkách [např. ETHANOL (ETHYLALKOHOL)]. Části názvu položky, které jsou napsány malými písmeny, se nepovažují za součást oficiálního pojmenování pro přepravu.

3.1.2.2

Pokud jsou spojky "a" nebo "nebo" napsány malými písmeny nebo jsou-li části pojmenování odděleny čárkami, nemusí být v přepravním dokladu nebo v označení kusu uvedeno úplné pojmenování položky. Toto platí zvláště v případech, jestliže je pod jedním UN číslem uvedena kombinace více rozdílných položek. Následující příklady znázorňují postup při výběru oficiálního pojmenování pro přepravu v takových případech:

- (a) UN 1057 ZAPALOVAČE nebo NÁDOBKY S NÁPLNÍ DO ZAPALOVAČŮ – jako oficiální pojmenování pro přepravu se použije to z uvedených pojmenování, které je nejvhodnější:

ZAPALOVAČE
NÁDOBKY S NÁPLNÍ DO ZAPALOVAČŮ;

- (b) UN 2793 KOVY ŽELEZNÉ JAKO TŘÍSKY PŘI VRTÁNÍ, FRÉZOVÁNÍ, SOUSTRUŽENÍ, ODPADY ve formě schopné samoohřevu. Oficiální pojmenování pro přepravu je nejvhodnější z následujících kombinací:

KOVY ŽELEZNÉ JAKO TŘÍSKY PŘI VRTÁNÍ
KOVY ŽELEZNÉ JAKO TŘÍSKY PŘI FRÉZOVÁNÍ
KOVY ŽELEZNÉ JAKO TŘÍSKY PŘI SOUSTRUŽENÍ
KOVY ŽELEZNÉ ODPADY

3.1.2.3

Oficiální pojmenování pro přepravu může být použito v jednotném nebo množném čísle. Kromě toho, pokud toto pojmenování obsahuje blíže určující pojmy, je pořadí těchto pojmů v přepravním dokladu nebo v označení kusů libovolné. Například smí být namísto "DIMETHYLAMIN, VODNÝ ROZTOK" alternativně udáno "VODNÝ ROZTOK DIMETHYLAMINU". Pro věci třídy 1 mohou být použity obchodní nebo vojenské názvy, které obsahují oficiální pojmenování pro přepravu doplněné dodatečným popisným textem.

3.1.2.4

Mnoho látek má položku jak pro kapalný, tak i tuhý stav (viz definice kapaliny a tuhé látky v oddílu 1.2.1), nebo pro tuhou látku a roztok. Jsou jim přidělena různá UN čísla, která nemusí nutně následovat po sobě¹.

¹ *Detaily jsou uvedeny v abecedním seznamu (Tabulka B kapitoly 3.2), např.:*

NITROXYLENY, KAPALNÉ	6.1	1665;
NITROXYLENY, TUHÉ	6.1	3447

3.1.2.5 Je-li látka, která je podle definice uvedené v oddílu 1.2.1 látkou tuhou, podávána k přepravě v roztaveném stavu, doplní se oficiální pojmenování pro přepravu upřesňujícím slovem "ROZTAVENÝ", pokud toto slovo není již uvedeno velkými písmeny v pojmenování obsaženém v tabulce A kapitoly 3.2 (například ALKYLFENOL, TUHÝ, J.N., ROZTAVENÝ).

3.1.2.6 S výjimkou samovolně se rozkládajících látek a organických peroxidů, a pokud není slovo „STABILIZOVANÝ“ již velkými písmeny uvedeno v pojmenování obsaženém ve sloupci (2) tabulky A kapitoly 3.2, musí být toto slovo doplněno jako součást oficiálního pojmenování látky, která by bez stabilizace nebyla připuštěna k přepravě podle pododdílů 2.2.X.2 z důvodu své náchylnosti nebezpečně reagovat za normálních podmínek přepravy (např. LÁTKA TOXICKÁ, KAPALNÁ, ORGANICKÁ, J.N., STABILIZOVANÁ“)

Je-li ke stabilizaci takových látek použito řízení teploty k zamezení vzniku nebezpečného přetlaku, pak:

- a) pro kapaliny: je-li SADT nejvýše 50 °C, platí ustanovení odstavce 2.2.41.1.17, zvláštní ustanovení V8 kapitoly 7.2, zvláštní ustanovení S4 kapitoly 8.5 a požadavky kapitoly 9.6; pro přepravu v IBC a v cisternách platí všechna ustanovení vztahující se na UN číslo 3239 (viz zejména pododdíl 4.1.7.2, pokyn pro balení IBC520 a pododdíl 4.2.1.13);
- b) pro plyny: podmínky přepravy musí být schváleny příslušným orgánem.

3.1.2.7 Hydráty smějí být přepravovány pod oficiálním pojmenováním pro přepravu pro bezvodou látku.

3.1.2.8 Druhé položky nebo "jinde nejmenované" (J.N.) položky

3.1.2.8.1 Druhá a "J.N." oficiální pojmenování pro přepravu, u nichž je ve sloupci (6) tabulky A kapitoly 3.2 uvedeno zvláštní ustanovení 274 nebo 318, musí být doplněna technickým názvem věci, pokud jeho zveřejnění nezakazují vnitrostátní předpisy nebo mezinárodní dohoda u látek podléhajících kontrole. Pro výbušné látky třídy 1 může být popis nebezpečných věcí doplněn dodatečným popisným textem uvádějícím obchodní nebo vojenské názvy. Technické názvy musí být uvedeny v závorkách hned za oficiálním pojmenováním pro přepravu. Rovněž je možno použít vhodný modifikátor, jako „obsahuje“ nebo „obsahující“, nebo jiná upřesňující slova, jako „směs“, „roztok“ atd., a procentní podíl technické složky. Např. „UN 1993 LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (OBSAHUJE XYLEN A BENZEN), 3,II“.

3.1.2.8.1.1 Technickým názvem musí být uznávaný chemický název nebo biologický název nebo jiný název běžně používaný ve vědeckých a technických publikacích, časopisech a textech. Obchodní názvy nesmějí být k tomuto účelu používány. U pesticidů se smějí používat jen obvyklé názvy ISO, jiné názvy uvedené v publikaci Světové zdravotnické organizace (WHO) Recommended Classification of Pesticides by Hazard and Guidelines to Classification anebo pojmenování jejich aktivní látky (aktivních látek).

3.1.2.8.1.2 Pokud je směs nebezpečných věcí popsána "J.N." položkou nebo „druhou“ položkou a je-li u této položky uvedeno ve sloupci (6) tabulky A kapitoly 3.2 zvláštní ustanovení 274, stačí uvést jen dva komponenty, které převážně přispívají k nebezpečnosti směsi, vyjma látek, které podléhají kontrole a jejichž přesný popis je zakázán vnitrostátním předpisem nebo mezinárodní dohodou. Je-li kus, který směs obsahuje, opatřen bezpečnostní značkou, která označuje vedlejší nebezpečí, musí být jedním z obou v závorkách udaných technických názvů název komponentu, který vyžaduje použití bezpečnostní značky pro vedlejší nebezpečí.

POZNÁMKA: Viz odstavec 5.4.1.2.2

3.1.2.8.1.3 Následující příklady ukazují, jakým způsobem se u J.N. položek doplňují oficiální pojmenování pro přepravu technickým názvem věci:

UN 2902 PESTICID KAPALNÝ, TOXICKÝ, J.N. (drazoxolon).
UN 3394 LÁTKA ORGANOKOVOVÁ, KAPALNÁ, PYROFORNÍ, REAGUJÍCÍ S VODOU (trimethylgalium).

3.1.3 **Roztoky nebo směsi**

POZNÁMKA: Tam, kde je látka jmenovitě uvedená v tabulce A kapitoly 3.2, musí být identifikována oficiálním pojmenováním pro přepravu uvedeným ve sloupci (2) tabulky A kapitoly 3.2. Takové látky mohou obsahovat technické nečistoty (pocházející například z výrobního procesu) nebo stabilizační přísady nebo jiné účely nemající vliv na klasifikaci. Avšak, látka jmenovitě uvedená obsahující technické nečistoty nebo stabilizační přísady nebo jiné účely mající vliv na klasifikaci musí být považována za roztok nebo směs (viz. 2.1.3.3).

3.1.3.1 Roztok nebo směs nepodléhá předpisům ADR, jestliže charakteristiky, vlastnosti, forma nebo skupenství roztoku nebo směsi jsou takové, že nesplňují kritéria, včetně kritérií z osobní praxe, pro zařazení do žádné z tříd.

3.1.3.2 Roztok nebo směs splňující klasifikační kritéria ADR, složené z jedné převažující látky, jmenovitě uvedené v tabulce A kapitoly 3.2, a z jedné nebo více látek nepodléhající(ch) ADR, nebo stopových množství jedné nebo více látek jmenovitě uvedených v tabulce A kapitoly 3.2, musí být přiřazeny k UN číslu a oficiálnímu pojmenování pro přepravu převažující látky, jmenovitě uvedené v tabulce A kapitoly 3.2, ledaže:

- (a) roztok nebo směs je jmenovitě uveden(a) v tabulce A kapitoly 3.2;
- (b) pojmenování a popis látky jmenovitě uvedené v tabulce A kapitoly 3.2 výslovně vyjadřují, že se vztahují jen na čistou látku;
- (c) třída, klasifikační kód, obalová skupina nebo fyzikální stav tohoto roztoku nebo směsi jsou odlišné od třídy, klasifikačního kódu, obalové skupiny nebo fyzikálního stavu látky jmenovitě uvedené v tabulce A kapitoly 3.2; nebo
- (d) charakteristiky nebezpečnosti a vlastnosti roztoku nebo směsi vyžadují opatření v případě nehody nebo nouzové situace, která jsou odlišná od opatření vyžadovaných pro látku jmenovitě uvedenou v tabulce A kapitoly 3.2.

Upřesňující slova jako jsou "ROZTOK" nebo "SMĚS", musí být přiřazena jako součást oficiálního pojmenování pro přepravu, např. "ACETON ROZTOK". Kromě toho, koncentrace roztoku nebo směsi může být uvedena za základním popisem roztoku nebo směsi, např. "ACETON 75 % ROZTOK".

3.1.3.3 Roztok nebo směs, splňující klasifikační kritéria ADR, který není jmenovitě uveden(a) v tabulce A kapitoly 3.2 a je složen(a) ze dvou nebo více nebezpečných věcí se přiřadí pod položku, jejíž oficiální pojmenování pro přepravu, popis, třída, klasifikační kód a obalová skupina popisuje co nejpřesněji roztok nebo směs.

KAPITOLA 3.2

SEZNAM NEBEZPEČNÝCH VĚCÍ

3.2.1 Tabulka A: Seznam nebezpečných věcí

VYSVĚTLIVKY

Každý řádek v tabulce A se týká zpravidla látky (látek) nebo předmětu (předmětů), které jsou zahrnuty pod určité UN číslo. Jestliže však látky nebo předměty, které náleží ke stejnému UN číslu, mají rozdílné chemické nebo fyzikální vlastnosti a/nebo přepravní podmínky, může být pro toto UN číslo použito více po sobě jdoucích řádků.

Každý ze sloupců tabulky A je věnován určitému tématu, jak je uvedeno v následujících vysvětlujících poznámkách. Průsečík sloupců a řádků (buňka) obsahuje informace týkající se tématu, o kterém se v tomto sloupci pojednává, pro látku(y) nebo předmět(y) tohoto řádku:

- první čtyři buňky identifikují látku(y) nebo předmět(y) patřící k tomuto řádku (dodatečné informace v tomto ohledu mohou být uvedeny ve zvláštních ustanoveních sloupce (6));
- následující buňky udávají platná zvláštní ustanovení, buď ve formě úplné informace, nebo ve formě kódu. Kódy odkazují na detailní informace obsažené v části, kapitole, oddílu a/nebo pododdílu, které jsou uvedeny v následujících vysvětlujících poznámkách. Prázdná buňka znamená buď, že není žádné zvláštní ustanovení a že platí pouze všeobecná ustanovení, anebo, že platí omezení přepravy uvedené v platných vysvětlujících poznámkách.

Jednotlivé buňky neobsahují odvolávky na platná všeobecná ustanovení. Následující vysvětlující poznámky udávají pro každý sloupec část(i), kapitolu(y), oddíl(y) a/nebo pododdíl(y), kde jsou obsažena.

Vysvětlující poznámky pro každý sloupec:

Sloupec (1) "UN číslo"

Tento sloupec obsahuje UN číslo

- nebezpečné látky nebo předmětu, jestliže této látce nebo předmětu bylo přiděleno vlastní specifické UN číslo, nebo
- druhové položky nebo J.N. položky, k níž musí být přiřazeny jmenovitě neuvedené nebezpečné látky nebo předměty podle kritérií („rozhodovacích stromů“) části 2.

Sloupec (2) "Pojmenování a popis"

Tento sloupec obsahuje pojmenování látky nebo předmětu, napsané velkými písmeny, pokud této látce nebo předmětu bylo přiděleno vlastní specifické UN číslo, nebo pojmenování druhové položky nebo J.N. položky, ke které byly nebezpečné látky nebo předměty přiřazeny podle kritérií („rozhodovacích stromů“) části 2. Toto pojmenování musí být použito jako oficiální pojmenování pro přepravu, popřípadě jako část oficiálního pojmenování pro přepravu (pro další podrobnosti k oficiálnímu pojmenování pro přepravu viz oddíl 3.1.2).

Za oficiálním pojmenováním pro přepravu je malými písmeny připojen popisný text k upřesnění rozsahu platnosti položky, pokud mohou být klasifikace a/nebo přepravní podmínky látky nebo předmětu za určitých okolností rozdílné.

Sloupec (3a) "Třída"

Tento sloupec obsahuje číslo třídy, pod jejíž název spadá nebezpečná látka nebo předmět. Toto číslo třídy se přiřazuje podle postupů a kritérií části 2.

Sloupec (3b)	<p>“Klasifikační kód“</p> <p>Tento sloupec obsahuje klasifikační kód nebezpečné látky nebo předmětu.</p> <ul style="list-style-type: none"> - Pro nebezpečné látky nebo předměty třídy 1 sestává kód z čísla podtřídy a písmena skupiny snášenlivosti, které jsou přiřazeny podle postupů a kritérií uvedených v odstavci 2.2.1.1.4. - Pro nebezpečné látky nebo předměty třídy 2 sestává kód z číslice a písmena nebo písmen pro skupinu nebezpečných vlastností, které jsou vysvětleny v odstavcích 2.2.2.1.2 a 2.2.2.1.3. - Pro nebezpečné látky nebo předměty tříd 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 6.2, 8 a 9 jsou kódy vysvětleny v odstavcích 2.2 x.1.2¹. - Nebezpečné látky nebo předměty třídy 7 nemají klasifikační kód.
Sloupec (4)	<p>“Obalová skupina“</p> <p>Tento sloupec obsahuje číslo(a) obalové skupiny (I, II nebo III), která je k nebezpečné látce přiřazena. Tato čísla obalových skupin jsou přiřazena na základě postupů a kritérií uvedených v části 2. Některým předmětům a látkám není přiřazena žádná obalová skupina.</p>
Sloupec (5)	<p>“Bezpečnostní značky“</p> <p>Tento sloupec obsahuje číslo vzoru bezpečnostních značek/ velkých bezpečnostních značek (viz pododdíly 5.2.2.2 a 5.3.1.7), které se musí umístit na kusy, kontejnery, cisternové kontejnery, přemístitelné cisterny, MEGC a vozidla. Avšak pro látky nebo předměty třídy 7 znamená “7X“ vzor bezpečnostní značky č. 7A, 7B, popř. 7C v závislosti na kategorii (viz odstavce 5.1.5.3.4 a 5.2.2.1.11.1) nebo velkou bezpečnostní značku č. 7D (viz odstavce 5.3.1.1.3 a 5.3.1.7.2);</p> <p>Všeobecná ustanovení pro umístění bezpečnostních značek a velkých bezpečnostních značek (např. počet bezpečnostních značek nebo jejich umístění) jsou obsažena pro kusy v pododdílu 5.2.2.1 a pro kontejnery, cisternové kontejnery, MEGC, přemístitelné cisterny a vozidla v oddílu 5.3.1.</p> <p>POZNÁMKA: <i>Výše uvedená ustanovení o označování bezpečnostními značkami nebo velkými bezpečnostními značkami mohou být pozměněna zvláštními ustanoveními uvedenými ve sloupci (6).</i></p>
Sloupec (6)	<p>“Zvláštní ustanovení“</p> <p>Tento sloupec obsahuje číselné kódy zvláštních ustanovení, která je nutno dodržet. Tato ustanovení postihují široký okruh témat, která souvisejí hlavně s obsahem sloupců (1) až (5) (např. zákazy přepravy, vynětí z platnosti některých požadavků, vysvětlivky ke klasifikaci určitých forem dotyčných nebezpečných věcí, jakož i dodatečná ustanovení pro označování nápisy a bezpečnostními značkami), a jsou uvedena v kapitole 3.3 v číselném pořadí. Je-li sloupec (6) prázdný, neplatí pro dotyčné nebezpečné věci ve vztahu k obsahu sloupců (1) až (5) žádné zvláštní ustanovení.</p>
Sloupec (7a)	<p>“Omezená množství“</p> <p>Stanovuje maximální množství na vnitřní obal nebo kus pro přepravu nebezpečných věcí v omezených množstvích podle kapitoly 3.4.</p>
Sloupec (7b)	<p>“Vyňatá množství“</p> <p>Tento sloupec obsahuje alfanumerický kód s následujícím významem:</p>

¹ X = číslo třídy nebezpečné látky nebo předmětu, popřípadě bez tečky.

- „E0“ znamená, že pro nebezpečné věci zabalené ve vyňatých množstvích neplatí žádné vynětí z platnosti ustanovení ADR;
- všechny ostatní alfanumerické kódy začínající písmenem „E“ znamenají, že ustanovení ADR neplatí, pokud jsou splněny podmínky uvedené v kapitole 3.5.

Sloupec (8) „Pokyny pro balení“

Tento sloupec obsahuje alfanumerické kódy příslušných pokynů pro balení:

- alfanumerické kódy začínající písmenem „P“ se vztahují na pokyny pro balení pro obaly a nádoby (vyjma IBC a velkých obalů), alfanumerické kódy začínající písmenem „R“ se vztahují na pokyny pro balení pro obaly z jemného plechu. Tyto pokyny jsou uvedeny v pododdílu 4.1.4.1 v číselném pořadí a určují, které obaly a nádoby jsou dovoleny. Udávají rovněž, která všeobecná ustanovení pro balení oddílů 4.1.1, 4.1.2 a 4.1.3 a která zvláštní ustanovení pro balení oddílů 4.1.5, 4.1.6, 4.1.7, 4.1.8 a 4.1.9 je nutno dodržet. Pokud sloupec (8) neobsahuje žádný kód začínající písmeny „P“ nebo „R“, nesmějí být dotyčné nebezpečné věci přepravovány v obalech;
- alfanumerické kódy začínající písmeny „IBC“ se vztahují na pokyny pro balení pro IBC. Tyto pokyny jsou uvedeny v pododdílu 4.1.4.2 v číselném pořadí a určují, které IBC jsou dovoleny. Udávají rovněž, která všeobecná ustanovení pro balení oddílů 4.1.1, 4.1.2 a 4.1.3 a která zvláštní ustanovení pro balení oddílů 4.1.5, 4.1.6, 4.1.7, 4.1.8 a 4.1.9 je nutno dodržet. Pokud sloupec (8) neobsahuje žádný kód začínající písmeny „IBC“, nesmějí být dotyčné nebezpečné věci přepravovány v IBC;
- alfanumerické kódy začínající písmeny „LP“ se vztahují na pokyny pro balení pro velké obaly. Tyto pokyny jsou uvedeny v pododdílu 4.1.4.3 v číselném pořadí a určují, které velké obaly jsou dovoleny. Udávají rovněž, která všeobecná ustanovení pro balení oddílů 4.1.1, 4.1.2 a 4.1.3 a která zvláštní ustanovení pro balení oddílů 4.1.5, 4.1.6, 4.1.7, 4.1.8 a 4.1.9 je nutno dodržet. Pokud sloupec (8) neobsahuje žádný kód začínající písmeny „LP“, nesmějí být dotyčné nebezpečné věci přepravovány ve velkých obalech.;

POZNÁMKA: Výše uvedené pokyny pro balení mohou být pozměněny zvláštními ustanoveními pro balení uvedenými ve sloupci (9a).

Sloupec (9a) „Zvláštní ustanovení pro balení“

Tento sloupec obsahuje alfanumerické kódy použitelných zvláštních ustanovení pro balení:

- alfanumerické kódy začínající písmeny „PP“ nebo „RR“ se vztahují na zvláštní ustanovení pro balení pro obaly a nádoby (vyjma IBC a velkých obalů), která musí být navíc dodržena. Ta jsou uvedena v pododdílu 4.1.4.1 na konci odpovídajícího pokynu pro balení, udaného ve sloupci (8) (s písmeny „P“ nebo „R“). Pokud sloupec (9a) neobsahuje žádný kód začínající písmeny „PP“ nebo „RR“, neplatí žádné zvláštní ustanovení pro balení, uvedené na konci odpovídajícího pokynu pro balení;
- alfanumerické kódy začínající písmenem „B“ nebo písmeny „BB“ se vztahují na zvláštní ustanovení pro balení pro IBC, která musí být navíc dodržena. Ta jsou uvedena v pododdílu 4.1.4.2 na konci odpovídajícího pokynu pro balení, udaného ve sloupci (8) (s písmeny „IBC“). Pokud sloupec (9a) neobsahuje žádný kód začínající písmenem „B“ nebo písmeny „BB“, neplatí žádné zvláštní ustanovení pro balení, uvedené na konci odpovídajícího pokynu pro balení;
- alfanumerické kódy začínající písmenem „L“ se vztahují na zvláštní ustanovení pro balení pro velké obaly, která musí být navíc dodržena. Ta jsou uvedena v pododdílu 4.1.4.3 na konci odpovídajícího pokynu pro balení, udaného ve sloupci (8) (s písmeny „LP“). Pokud sloupec (9a) neobsahuje

žádný kód začínající písmenem "L", neplatí žádné zvláštní ustanovení pro balení, uvedené na konci odpovídajícího pokynu pro balení.

Sloupec (9b) "Ustanovení o společném balení"

Tento sloupec obsahuje alfanumerické kódy, začínající písmeny "MP", ustanovení vztahujících se na společné balení. Tato ustanovení jsou uvedena v oddílu 4.1.10 v číselném pořadí. Jestliže sloupec (9b) neobsahuje žádný kód začínající písmeny "MP", platí jen všeobecná ustanovení (viz pododdíly 4.1.1.5 a 4.1.1.6).

Sloupec (10) "Pokyny pro přemístitelné cisterny a kontejnery pro volně ložené látky"

Tento sloupec obsahuje alfanumerický kód, který je podle odstavců 4.2.5.2.1 až 4.2.5.2.4 a 4.2.5.2.6 přiřazen pokynu pro přemístitelné cisterny. Tento pokyn pro přemístitelné cisterny odpovídá nejméně přísným požadavkům, které jsou dovoleny pro přepravu látky v přemístitelných cisternách. Kódy označující ostatní pokyny pro přemístitelné cisterny, které jsou rovněž dovoleny pro přepravu látky, jsou obsaženy v odstavci 4.2.5.2.5. Pokud není uveden žádný kód, není přeprava v přemístitelných cisternách dovolena, ledaže je uděleno schválení příslušným orgánem, jak je podrobně uvedeno v pododdílu 6.7.1.3.

Všeobecná ustanovení pro konstrukci, výrobu, výstroj, schvalování typu, zkoušení a značení přemístitelných cisteren jsou obsažena v kapitole 6.7. Všeobecná ustanovení pro používání (např. plnění) jsou obsažena v oddílech 4.2.1 až 4.2.4.

Údaj „M“ znamená, že látka smí být přepravována v UN vícečlánkových kontejnerech na plyn (MEGC).

POZNÁMKA: *Výše uvedené požadavky mohou být pozměněny zvláštními ustanoveními uvedenými ve sloupci (11).*

Může také obsahovat alfanumerické kódy začínající písmeny „BK“ vztahující se k druhým kontejnerům pro volně ložené látky, popsaným v kapitole 6.11, které smějí být používány pro přepravu věcí ve volně loženém stavu podle pododdílu 7.3.1.1 (a) a oddílu 7.3.2.

Sloupec (11) "Zvláštní ustanovení pro přemístitelné cisterny a kontejnery pro volně ložené látky"

Tento sloupec obsahuje alfanumerické kódy zvláštních ustanovení pro přemístitelné cisterny, která musí být navíc dodržena. Tyto kódy, začínající písmeny "TP", se vztahují na zvláštní ustanovení pro výrobu nebo pro používání přemístitelných cisteren. Ta jsou obsažena v pododdílu 4.2.5.3.

POZNÁMKA: *Pokud je to technicky aplikovatelné, vztahují se tato zvláštní ustanovení nejen na přemístitelné cisterny uvedené ve sloupci (10), ale i na přemístitelné cisterny, které mohou být používány podle tabulky v 4.2.5.2.5.*

Sloupec (12) "Kódy cisteren pro cisterny ADR"

Tento sloupec obsahuje alfanumerické kódy odpovídající typu cisterny podle odstavce 4.3.3.1.1 (pro plyny třídy 2) nebo odstavce 4.3.4.1.1 (pro látky tříd 3 až 9). Tento typ cisterny odpovídá nejméně přísným požadavkům na cisterny, které jsou dovoleny pro přepravu dotyčné látky v cisternách ADR. Kódy odpovídající ostatním dovoleným typům cisteren jsou uvedeny v odstavci 4.3.3.1.2 (pro plyny třídy 2) nebo v odstavci 4.3.4.1.2 (pro látky tříd 3 až 9). Není-li uveden žádný kód, přeprava v cisternách ADR není dovolena.

Pokud je v tomto sloupci uveden kód cisterny pro tuhé látky (S) a pro kapalné látky (L), znamená to, že tato látka smí být podávána k přepravě v cisternách v tuhém nebo kapalném (roztaveném) stavu. Obvyčejně platí toto ustanovení pro látky s bodem tání mezi 20 °C a 180 °C.

Pokud je v tomto sloupci uveden pro tuhou látku pouze kód cisterny pro kapalné látky (L) znamená to, že tato látka smí být podávána k přepravě v cisternách jen v kapalném (roztaveném) stavu.

Všeobecné požadavky na konstrukci, výstroj, schvalování typu, zkoušení a značení, které nejsou uvedeny v kódu cisteren, jsou obsaženy v oddílech 6.8.1, 6.8.2, 6.8.3 a 6.8.5. Všeobecná ustanovení pro používání (např. nejvyšší stupeň plnění, nejnižší zkušební tlak) jsou obsažena v oddílech 4.3.1 až 4.3.4.

Písmeno "(M)" za kódem cisterny znamená, že látka smí být přepravována také v bateriových vozidlech nebo MEGC.

Znaménko "(+)" za kódem cisterny znamená, že alternativní používání cisteren je povoleno pouze tehdy, je-li to uvedeno v osvědčení o schválení typu.

K cisternám z vyztužených plastů viz oddíl 4.4.1 a kapitolu 6.9.; k cisternám pro podtlakové vyčerpávání odpadů viz oddíl 4.5.1 a kapitolu 6.10.

POZNÁMKA: *Výše uvedené požadavky mohou být pozměněny zvláštními ustanoveními uvedenými ve sloupci (13).*

Sloupec (13) "Zvláštní ustanovení pro cisterny ADR"

Tento sloupec obsahuje alfanumerické kódy zvláštních ustanovení pro cisterny ADR, která je nutno navíc dodržet:

- Alfanumerické kódy začínající písmeny "TU" se vztahují na zvláštní ustanovení pro používání těchto cisteren. Ta jsou obsažena v oddílu 4.3.5.
- Alfanumerické kódy začínající písmeny "TC" se vztahují na zvláštní ustanovení pro konstrukci těchto cisteren. Ta jsou obsažena v oddílu 6.8.4 (a).
- Alfanumerické kódy začínající písmeny "TE" se vztahují na zvláštní ustanovení pro výstroj těchto cisteren. Ta jsou obsažena v oddílu 6.8.4 (b).
- Alfanumerické kódy začínající písmeny "TA" se vztahují na zvláštní ustanovení pro schvalování typu těchto cisteren. Ta jsou obsažena v oddílu 6.8.4 (c).
- Alfanumerické kódy začínající písmeny "TT" se vztahují na zvláštní ustanovení pro zkoušení těchto cisteren. Ta jsou obsažena v oddílu 6.8.4 (d).
- Alfanumerické kódy začínající písmeny "TM" se vztahují na zvláštní ustanovení pro značení těchto cisteren. Ta jsou obsažena v oddílu 6.8.4 (e).

POZNÁMKA: *Pokud je to technicky aplikovatelné, vztahují se tato zvláštní ustanovení nejen na cisterny uvedené ve sloupci (12), ale i na cisterny, které mohou být používány podle hierarchie cisteren v 4.3.3.1.2 a 4.3.4.1.2.*

Sloupec (14) "Vozidla pro přepravu v cisternách"

Tento sloupec obsahuje kód specifikující vozidlo (včetně tažného vozidla přívěsů nebo návěsů) (viz oddíl 9.1.1), které je třeba použít pro přepravu látky v cisterně podle oddílu 7.4.2. Požadavky týkající se konstrukce a schvalování těchto vozidel jsou obsaženy v kapitolách 9.1, 9.2 a 9.7.

Sloupec (15) "Přepravní kategorie / (Kód omezení pro tunely)"

Tento sloupec obsahuje v horní části buňky číslici udávající přepravní kategorii, do které látka nebo předmět patří, za účelem vynětí z platnosti vztahujícího se k množstvím přepravovaným dopravní jednotkou (viz pododdíl 1.1.3.6).

Ve spodní části buňky (v závorkách) obsahuje kód omezení pro tunely, které odkazuje na omezení pro průjezd vozidel převážející látky nebo předměty silničními tunely. Tyto jsou uvedeny v kapitole 8.6. Není-li uveden žádný kód omezení pro tunely, je to označeno '(—)'.
(—)

- Sloupec (16) "Zvláštní ustanovení pro přepravu kusů"
- Tento sloupec obsahuje alfanumerický(é) kód(y), začínající písmenem „V“, příslušných zvláštních ustanovení (pokud jsou) pro přepravu v kusech. Tato ustanovení jsou uvedena v oddílu 7.2.4. Všeobecná ustanovení pro přepravu v kusech jsou obsažena v kapitolách 7.1 a 7.2.
- POZNÁMKA:** *Navíc platí zvláštní ustanovení pro nakládku, vykládku a manipulaci uvedená ve sloupci (18).*
- Sloupec (17) "Zvláštní ustanovení pro přepravu ve volně loženém stavu"
- Tento sloupec obsahuje alfanumerický(é) kód(y), začínající písmeny "VV", příslušných zvláštních ustanovení pro přepravu ve volně loženém stavu. Tato ustanovení jsou uvedena v oddílu 7.3.3. Pokud sloupec (17) neobsahuje žádný kód, přeprava ve volně loženém stavu není povolena. Všeobecná ustanovení pro přepravu ve volně loženém stavu jsou obsažena v kapitolách 7.1 a 7.3.
- POZNÁMKA:** *Navíc platí zvláštní ustanovení pro nakládku, vykládku a manipulaci uvedená ve sloupci (18).*
- "Sloupec (18) "Zvláštní ustanovení pro nakládku, vykládku a manipulaci"
- Tento sloupec obsahuje alfanumerický(é) kód(y), začínající písmeny "CV", příslušných zvláštních ustanovení pro nakládku, vykládku a manipulaci. Tato ustanovení jsou uvedena v oddílu 7.5.11. Jestliže sloupec (18) neobsahuje žádný kód, platí jen všeobecná ustanovení (viz oddíly 7.5.1 až 7.5.10).
- Sloupec (19) "Zvláštní ustanovení pro provoz"
- Tento sloupec obsahuje alfanumerický(é) kód(y), začínající písmenem "S", příslušných zvláštních ustanovení pro provoz, která jsou uvedena v kapitole 8.5. Tato ustanovení je nutno použít vedle předpisů kapitol 8.1 až 8.4, avšak v případě rozporu s předpisy kapitol 8.1 až 8.4 platí zvláštní ustanovení.
- Sloupec (20) "Identifikační číslo nebezpečnosti"
- Tento sloupec obsahuje číslo, složené ze dvou nebo tří číslic (v určitých případech s předřazeným písmenem "X") pro látky a předměty tříd 2 až 9 a pro látky a předměty třídy 1 klasifikační kód /viz sloupec (3b)/. V případech popsaných v pododdílu 5.3.2.1 se toto číslo musí objevit v horní části oranžové tabulky. Význam identifikačních čísel nebezpečnosti je vysvětlen v pododdílu 5.3.2.3.

Tabulka A
SEZNAM LÁTEK A PŘEDMĚTŮ ADR

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
0004	PIKRÁT AMONNÝ, suchý nebo vlhčený méně než 10 % hm. vody	1	1.1D		1		0	E0	P112a P112b P112c	PP26	MP20		
0005	NÁBOJE PRO ZBRANĚ, s trhací náplní	1	1.1F		1		0	E0	P130		MP23		
0006	NÁBOJE PRO ZBRANĚ, s trhací náplní	1	1.1E		1		0	E0	P130 LP101	PP67 L1	MP21		
0007	NÁBOJE PRO ZBRANĚ, s trhací náplní	1	1.2F		1		0	E0	P130		MP23		
0009	MUNICE, ZÁPALNÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	1	1.2G		1		0	E0	P130 LP101	PP67 L1	MP23		
0010	MUNICE, ZÁPALNÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23		
0012	NÁBOJE PRO ZBRANĚ S INERTNÍ STŘELOU nebo NÁBOJE, MALORÁŽOVÉ	1	1.4S		1.4	364	5 kg	E0	P130		MP23 MP24		
0014	NÁBOJE PRO ZBRANĚ, CVIČNÉ nebo NÁBOJE, MALORÁŽOVÉ, CVIČNÉ nebo NÁBOJE PRO NÁSTROJE, CVIČNÉ	1	1.4S		1.4	364	5 kg	E0	P130		MP23 MP24		
0015	MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	1	1.2G		1		0	E0	P130 LP101	PP67 L1	MP23		
0015	MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně, obsahující žíravé látky	1	1.2G		1+8		0	E0	P130 LP101	PP67 L1	MP23		
0016	MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23		
0016	MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně, obsahující žíravé látky	1	1.3G		1+8		0	E0	P130 LP101	PP67 L1	MP23		
0018	MUNICE, SLZOTVORNÁ, s trhavou náložkou, výmetnou nebo hnací náplní	1	1.2G		1+6.1+8		0	E0	P130 LP101	PP67 L1	MP23		
0019	MUNICE, SLZOTVORNÁ, s trhavou náložkou, výmetnou nebo hnací náplní	1	1.3G		1+6.1+8		0	E0	P130 LP101	PP67 L1	MP23		
0020	MUNICE, TOXICKÁ, s trhavou náložkou, výmetnou nebo hnací náplní	1	1.2K	PŘEPRAVA ZAKÁZÁNA									
0021	MUNICE, TOXICKÁ, s trhavou náložkou, výmetnou nebo hnací náplní	1	1.3K	PŘEPRAVA ZAKÁZÁNA									
0027	PRACH ČERNÝ, zrnitý nebo moučkový	1	1.1D		1		0	E0	P113	PP50	MP20 MP24		
0028	PRACH ČERNÝ, LISOVANÝ nebo PRACH ČERNÝ, V PELETÁCH	1	1.1D		1		0	E0	P113	PP51	MP20 MP24		
0029	ROZBUŠKY, NEELEKTRICKÉ, pro trhací práce	1	1.1B		1		0	E0	P131	PP68	MP23		
0030	ROZBUŠKY, ELEKTRICKÉ, pro trhací práce	1	1.1B		1		0	E0	P131		MP23		
0033	PUMY, s trhací náplní	1	1.1F		1		0	E0	P130		MP23		
0034	PUMY, s trhací náplní	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0004	PIKRÁT AMONNÝ, suchý nebo vlhčený méně než 10 % hm. vody
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0005	NÁBOJE PRO ZBRANĚ, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0006	NÁBOJE PRO ZBRANĚ, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0007	NÁBOJE PRO ZBRANĚ, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0009	MUNICE, ZÁPALNÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0010	MUNICE, ZÁPALNÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně
			4 (E)			CV1 CV2 CV3	SI		0012	NÁBOJE PRO ZBRANĚ S INERTNÍ STŘELOU nebo NÁBOJE, MALORÁŽOVÉ
			4 (E)			CV1 CV2 CV3	SI		0014	NÁBOJE PRO ZBRANĚ, CVIČNÉ nebo NÁBOJE, MALORÁŽOVÉ, CVIČNÉ nebo NÁBOJE PRO NÁSTROJE, CVIČNÉ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0015	MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0015	MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně, obsahující žíravé látky
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0016	MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0016	MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně, obsahující žíravé látky
			1 (B1000C)	V2		CV1 CV2 CV3 CV28	SI		0018	MUNICE, SLZOTVORNÁ, s trhavou náložkou, výmetnou nebo hnací náplní
			1 (C5000D)	V2		CV1 CV2 CV3 CV28	SI		0019	MUNICE, SLZOTVORNÁ, s trhavou náložkou, výmetnou nebo hnací náplní
PŘEPRAVA ZAKÁZÁNA									0020	MUNICE, TOXICKÁ, s trhavou náložkou, výmetnou nebo hnací náplní
PŘEPRAVA ZAKÁZÁNA									0021	MUNICE, TOXICKÁ, s trhavou náložkou, výmetnou nebo hnací náplní
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0027	PRACH ČERNÝ, zrnitý nebo moučkový
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0028	PRACH ČERNÝ, LISOVANÝ nebo PRACH ČERNÝ, V PELETÁCH
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0029	ROZBUŠKY, NEELEKTRICKÉ, pro trhací práce
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0030	ROZBUŠKY, ELEKTRICKÉ, pro trhací práce
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0033	PUMY, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0034	PUMY, s trhací náplní

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
0035	PUMY, s trhací náplní	1	1.2D		1		0	E0	P130 LP101	PP67 L1	MP21		
0037	PUMY, ZÁBLESKOVÉ	1	1.1F		1		0	E0	P130		MP23		
0038	PUMY, ZÁBLESKOVÉ	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0039	PUMY, ZÁBLESKOVÉ	1	1.2G		1		0	E0	P130 LP101	PP67 L1	MP23		
0042	NÁLOŽE, POČINOVÉ, bez rozbušky	1	1.1D		1		0	E0	P132a P132b		MP21		
0043	TRHAVÉ NÁLOŽKY, výbušné	1	1.1D		1		0	E0	P133	PP69	MP21		
0044	ZÁPALKY, KALIŠKOVÉ	1	1.4S		1.4		0	E0	P133		MP23 MP24		
0048	NÁLOŽE, DESTRUKČNÍ	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0049	NÁBOJE, ZÁBLESKOVÉ	1	1.1G		1		0	E0	P135		MP23		
0050	NÁBOJE, ZÁBLESKOVÉ	1	1.3G		1		0	E0	P135		MP23		
0054	NÁBOJE, SIGNÁLNÍ	1	1.3G		1		0	E0	P135		MP23 MP24		
0055	NÁBOJNICE, PRAZDĚNÉ, SE ZÁPALKOU	1	1.4S		1.4	364	5 kg	E0	P136		MP23		
0056	NÁLOŽE, HLUBINNÉ	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0059	NÁLOŽE, KUMULATIVNÍ, bez rozbušky	1	1.1D		1		0	E0	P137	PP70	MP21		
0060	NÁLOŽE, PŘÍDAVNÉ, VÝBUŠNÉ	1	1.1D		1		0	E0	P132a P132b		MP21		
0065	BLESKOVICE, ohebná	1	1.1D		1		0	E0	P139	PP71 PP72	MP21		
0066	ZÁPALNICE	1	1.4G		1.4		0	E0	P140		MP23		
0070	ŘEZAČKY KABELŮ, VÝBUŠNÉ	1	1.4S		1.4		0	E0	P134 LP102		MP23		
0072	CYKLOTIMETHYLENTRINITRAMIN (CYKLONIT; HEXOGEN; RDX), VLNĚNÝ nejméně 15 % hm. vody	1	1.1D		1	266	0	E0	P112a	PP45	MP20		
0073	ROZBUŠKY PRO MUNICI	1	1.1B		1		0	E0	P133		MP23		
0074	DIAZONITROFENOL, VLNĚNÝ nejméně 40 % hm. vody nebo směsí alkoholu s vodou	1	1.1A		1	266	0	E0	P110b	PP42	MP20		
0075	DIETHYLENGLYKOLDINITRÁT, ZNECHTLIVĚNÝ nejméně 25 % hm. netěkavého, ve vodě nerozpustného flegmatizačního prostředku	1	1.4D		1	266	0	E0	P115	PP53 PP54 PP57 PP58	MP20		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0035	PUMY, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0037	PUMY, ZÁBLESKOVÉ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0038	PUMY, ZÁBLESKOVÉ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0039	PUMY, ZÁBLESKOVÉ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0042	NÁLOŽE, POČINOVÉ, bez rozbušky
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0043	TRHAVÉ NÁLOŽKY, výbušné
			4 (E)			CV1 CV2 CV3	SI		0044	ZÁPALKY, KALIŠKOVÉ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0048	NÁLOŽE, DESTRUKČNÍ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0049	NABOJE, ZÁBLESKOVÉ
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0050	NABOJE, ZÁBLESKOVÉ
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0054	NABOJE, SIGNÁLNÍ
			4 (E)			CV1 CV2 CV3	SI		0055	NÁBOJNICE, PRAZDŇNÉ, SE ZÁPALKOU
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0056	NÁLOŽE, HLUBINNÉ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0059	NÁLOŽE, KUMULATIVNÍ, bez rozbušky
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0060	NÁLOŽE, PŘÍDAVNÉ, VÝBUŠNÉ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0065	BLESKOVICE, ohebná
			2 (E)	V2		CV1 CV2 CV3	SI		0066	ZÁPALNICE
			4 (E)			CV1 CV2 CV3	SI		0070	ŘEZAČKY KABELŮ, VÝBUŠNÉ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0072	CYKLOTIMETHYLENTRINITRAMIN (CYKLONIT; HEXOGEN; RDX), VLNĚNÝ nejméně 15 % hm. vody
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0073	ROZBUŠKY PRO MUNICE
			0 (B)	V2		CV1 CV2 CV3	SI		0074	DIAZONITROFENOL, VLNĚNÝ nejméně 40 % hm. vody nebo směsí alkoholu s vodou
			1 (E)	V2		CV1 CV2 CV3	SI		0075	DIETHYLENGLYKOLDINITRÁT, ZNECITLIVĚNÝ nejméně 25 % hm. netěkavého, ve vodě nerozpustného flegmatizačního prostředku

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
0076	DINITROFENOL, suchý nebo vlhčený méně než 15 % hm. vody	1	1.1D		1+6.1		0	E0	P112a P112b P112c	PP26	MP20		
0077	DINITROFENOLÁTY alkalických kovů, suché nebo vlhčené méně než 15 % hm. vody	1	1.3C		1+6.1		0	E0	P114a P114b	PP26	MP20		
0078	DINITRORESORCIN, suchý nebo vlhčený méně než 15 % hm. vody	1	1.1D		1		0	E0	P112a P112b P112c	PP26	MP20		
0079	HEXANITRODIFENYLAMIN (DIPIKRYLAMIN; HEXYL)	1	1.1D		1		0	E0	P112b P112c		MP20		
0081	TRHAVINA, TYP A	1	1.1D		1	616 617	0	E0	P116	PP63 PP66	MP20		
0082	TRHAVINA, TYP B	1	1.1D		1	617	0	E0	P116 IBC100	PP61 PP62 PP65 B9	MP20		
0083	TRHAVINA, TYP C	1	1.1D		1	267 617	0	E0	P116		MP20		
0084	TRHAVINA, TYP D	1	1.1D		1	617	0	E0	P116		MP20		
0092	SVĚTLICE, POZEMNÍ	1	1.3G		1		0	E0	P135		MP23		
0093	SVĚTLICE, LETECKÉ	1	1.3G		1		0	E0	P135		MP23		
0094	SLOŽ PYROTECHNICKÁ, ZÁBLESKOVÁ	1	1.1G		1		0	E0	P113	PP49	MP20		
0099	ROZRUŠOVACÍ ZAŘÍZENÍ, VÝBUŠNÁ, pro ropné vrty, bez rozbušky	1	1.1D		1		0	E0	P134 LP102		MP21		
0101	STOPINA	1	1.3G		1		0	E0	P140	PP74 PP75	MP23		
0102	BLESKOVICE, s kovovým pláštěm	1	1.2D		1		0	E0	P139	PP71	MP21		
0103	ZÁPALNICE, trubičková, s kovovým pláštěm	1	1.4G		1.4		0	E0	P140		MP23		
0104	BLESKOVICE, S MALÝM ÚČINKEM, s kovovým pláštěm	1	1.4D		1.4		0	E0	P139	PP71	MP21		
0105	ZÁPALNICE, BEZPEČNOSTNÍ	1	1.4S		1.4		0	E0	P140	PP73	MP23		
0106	ZAPALOVAČE, DETONAČNÍ	1	1.1B		1		0	E0	P141		MP23		
0107	ZAPALOVAČE, DETONAČNÍ	1	1.2B		1		0	E0	P141		MP23		
0110	GRANÁTY, CVIČNÉ, ruční nebo puškové	1	1.4S		1.4		0	E0	P141		MP23		
0113	GUANYLNITROSOAMINO GUANYLI D-HYDRAZIN, VLHČENÝ nejméně 30 % hm. vody	1	1.1A		1	266	0	E0	P110b	PP42	MP20		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2 V3		CV1 CV2 CV3 CV28	SI		0076	DINITROFENOL, suchý nebo vlhčený méně než 15 % hm. vody
			1 (C5000D)	V2 V3		CV1 CV2 CV3 CV28	SI		0077	DINITROFENOLÁTY alkalických kovů, suché nebo vlhčené méně než 15 % hm. vody
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0078	DINITRORESORCIN, suchý nebo vlhčený méně než 15 % hm. vody
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0079	HEXANITRODIFENYLAMIN (DIPIKRYLAMIN; HEXYL)
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0081	TRHAVINA, TYP A
			1 (B1000C)	V2 V3 V12		CV1 CV2 CV3	SI		0082	TRHAVINA, TYP B
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0083	TRHAVINA, TYP C
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0084	TRHAVINA, TYP D
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0092	SVĚTLICE, POZEMNÍ
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0093	SVĚTLICE, LETECKÉ
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0094	SLOŽ PYROTECHNICKÁ, ZÁBLESKOVÁ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0099	ROZRUŠOVACÍ ZAŘÍZENÍ, VÝBUŠNÁ, pro ropné vrty, bez rozbušky
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0101	STOPINA
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0102	BLESKOVICE, s kovovým pláštěm
			2 (E)	V2		CV1 CV2 CV3	SI		0103	ZÁPALNICE, trubičková, s kovovým pláštěm
			2 (E)	V2		CV1 CV2 CV3	SI		0104	BLESKOVICE, S MALÝM ÚČINKEM, s kovovým pláštěm
			4 (E)			CV1 CV2 CV3	SI		0105	ZÁPALNICE, BEZPEČNOSTNÍ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0106	ZAPALOVAČE, DETONAČNÍ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0107	ZAPALOVAČE, DETONAČNÍ
			4 (E)			CV1 CV2 CV3	SI		0110	GRANÁTY, CVIČNÉ, ruční nebo puškové
			0 (B)	V2		CV1 CV2 CV3	SI		0113	GUANYLNITROSOAMINO GUANYLID-HYDRAZIN, VLHČENÝ nejméně 30 % hm. vody

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
0114	GUANYL-4-NITROSO-AMINO GUANYL (TETRAZEN), VLNĚNÝ nejméně 30 % hm. vody nebo směsí alkoholu s vodou	1	1.1A		1	266	0	E0	P110b	PP42	MP20		
0118	HEXOLIT (HEXOTOL), suchý nebo vlněný méně než 15 % hm. vody	1	1.1D		1		0	E0	P112a P112b P112c		MP20		
0121	ZAŽEHOVAČE	1	1.1G		1		0	E0	P142		MP23		
0124	NÁLOŽE, KUMULATIVNÍ, PERFORAČNÍ, pro ropné vrty, bez rozbušky	1	1.1D		1		0	E0	P101		MP21		
0129	AZID OLOVNATÝ, VLNĚNÝ nejméně 20 % hm. vody nebo směsí alkoholu s vodou	1	1.1A		1	266	0	E0	P110b	PP42	MP20		
0130	TRINITRORESORCINÁT OLOVNATÝ, VLNĚNÝ nejméně 20 % hm. vody nebo směsí alkoholu s vodou	1	1.1A		1	266	0	E0	P110b	PP42	MP20		
0131	ZAŽEHOVAČE ZÁPALNIC	1	1.4S		1,4		0	E0	P142		MP23		
0132	DEFLAGRUJÍCÍ KOVOVÉ SOLI AROMATICKÝCH NITROSLOUČENIN, J.N.	1	1.3C		1	274	0	E0	P114a P114b	PP26	MP2		
0133	MANNITHEXANITRÁT (NITROMANNIT), VLNĚNÝ nejméně 40 % hm. vody nebo směsí alkoholu s vodou	1	1.1D		1	266	0	E0	P112a		MP20		
0135	FULMINÁT RTUŤNATÝ, VLNĚNÝ nejméně 20 % hm. vody nebo směsí alkoholu s vodou	1	1.1A		1	266	0	E0	P110b	PP42	MP20		
0136	MINY, s trhací náplní	1	1.1F		1		0	E0	P130		MP23		
0137	MINY, s trhací náplní	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0138	MINY, s trhací náplní	1	1.2D		1		0	E0	P130 LP101	PP67 L1	MP21		
0143	NITROGLYCERIN, ZNECITLIVĚNÝ nejméně 40 % hm. netěkavého, ve vodě nerozpustného flegmatizačního prostředku	1	1.1D		1+6.1	266 271	0	E0	P115	PP53 PP54 PP57 PP58	MP20		
0144	NITROGLYCERIN, ROZTOK V ALKOHOLU, s více než 1 %, ale nejvíce 10 % nitroglycerinu	1	1.1D		1	358	0	E0	P115	PP45 PP55 PP56 PP59 PP60	MP20		
0146	NITROŠKROB, suchý nebo vlněný méně než 20 % hm. vody	1	1.1D		1		0	E0	P112a P112b P112c		MP20		
0147	NITROMOČOVINA	1	1.1D		1		0	E0	P112b		MP20		
0150	PENTAERYTHRITETRANITRÁT (PENTAERYTHRITOLTETRANITRÁT; PENTAERYTHRIT-TETRANITRÁT; PENTAERYTHRITOL-TETRANITRÁT; PĚTN), VLNĚNÝ nejméně 25 % hm. vody, nebo ZNECITLIVĚNÝ nejméně 15 % hm. flegmatizačního prostředku	1	1.1D		1	266	0	E0	P112a P112b		MP20		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
			0 (B)	V2		CV1 CV2 CV3	S1		0114	GUANYL-4-NITROSO-AMINO GUANYL (TETRAZEN), VLNĚNÝ nejméně 30 % hm. vody nebo směsí alkoholu s vodou
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0118	HEXOLIT (HEXOTOL), suchý nebo vlhčený méně než 15 % hm. vody
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0121	ZÁŽEHOVAČE
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0124	NÁLOŽE, KUMULATIVNÍ, PERFORAČNÍ, pro ropné vrty, bez rozbušky
			0 (B)	V2		CV1 CV2 CV3	S1		0129	AZID OLOVNATÝ, VLNĚNÝ nejméně 20 % hm. vody nebo směsí alkoholu s vodou
			0 (B)	V2		CV1 CV2 CV3	S1		0130	TRINITRORESORCINÁT OLOVNATÝ, VLNĚNÝ nejméně 20 % hm. vody nebo směsí alkoholu s vodou
			4 (E)			CV1 CV2 CV3	S1		0131	ZÁŽEHOVAČE ZÁPALNIC
			1 (C5000D)	V2 V3		CV1 CV2 CV3	S1		0132	DEFLAGRUJÍCÍ KOVOVÉ SOLI AROMATICKÝCH NITROSLOUČENIN, J.N.
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0133	MANNITHEXANITRÁT (NITROMANNIT), VLNĚNÝ nejméně 40 % hm. vody nebo směsí alkoholu s vodou
			0 (B)	V2		CV1 CV2 CV3	S1		0135	FULMINÁT RTUŤNATÝ, VLNĚNÝ nejméně 20 % hm. vody nebo směsí alkoholu s vodou
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0136	MINY, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0137	MINY, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0138	MINY, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3 CV28	S1		0143	NITROGLYCERIN, ZNECITLIVĚNÝ nejméně 40 % hm. netěkavého, ve vodě nerozpuštěného flegmatizačního prostředku
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0144	NITROGLYCERIN, ROZTOK V ALKOHOLU, s více než 1 %, ale nejvíce 10 % nitroglycerinu
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0146	NITROŠKROB, suchý nebo vlhčený méně než 20 % hm. vody
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0147	NITROMOČOVINA
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0150	PENTAERYTHRITETRANITRÁT (PENTAERYTHRITOL-TETRANITRÁT; PENTAERYTHRIT-TETRANITRÁT; PENTAERYTHRITOL-TETRANITRÁT; PETN), VLNĚNÝ nejméně 25 % hm. vody, nebo ZNECITLIVĚNÝ nejméně 15 % hm. flegmatizačního prostředku

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
0151	PENTOLIT, suchý nebo vlhčený méně než 15 % hm. vody	1	1.1D		1		0	E0	P112a P112b P112c		MP20		
0153	TRINITROANILIN (PIKRAMID)	1	1.1D		1		0	E0	P112b P112c		MP20		
0154	TRINITROFENOL (Kyselina PIKROVÁ), suchý nebo vlhčený méně než 30 % hm. vody	1	1.1D		1		0	E0	P112a P112b P112c	PP26	MP20		
0155	TRINITROCHLORBENZEN (PIKRYLCHLORID)	1	1.1D		1		0	E0	P112b P112c		MP20		
0159	PRACHOVINA SUROVÁ, VLHCENA nejméně 25 % hm. vody	1	1.3C		1	266	0	E0	P111	PP43	MP20		
0160	PRACH, BEZDÝMNÝ	1	1.1C		1		0	E0	P114b	PP50 PP52	MP20 MP24		
0161	PRACH, BEZDÝMNÝ	1	1.3C		1		0	E0	P114b	PP50 PP52	MP20 MP24		
0167	STŘELY, s trhací náplní	1	1.1F		1		0	E0	P130		MP23		
0168	STŘELY, s trhací náplní	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0169	STŘELY, s trhací náplní	1	1.2D		1		0	E0	P130 LP101	PP67 L1	MP21		
0171	MUNICE, OSVĚTLOVACÍ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	1	1.2G		1		0	E0	P130 LP101	PP67 L1	MP23		
0173	ZAŘÍZENÍ UVOLŇOVACÍ, VÝBUŠNÁ	1	1.4S		1,4		0	E0	P134 LP102		MP23		
0174	NÝTY, VÝBUŠNÉ	1	1.4S		1,4		0	E0	P134 LP102		MP23		
0180	RAKETY, s trhací náplní	1	1.1F		1		0	E0	P130		MP23		
0181	RAKETY, s trhací náplní	1	1.1E		1		0	E0	P130 LP101	PP67 L1	MP21		
0182	RAKETY, s trhací náplní	1	1.2E		1		0	E0	P130 LP101	PP67 L1	MP21		
0183	RAKETY, s inertní hlavici	1	1.3C		1		0	E0	P130 LP101	PP67 L1	MP22		
0186	RAKETOVÉ MOTORY	1	1.3C		1		0	E0	P130 LP101	PP67 L1	MP22 MP24		
0190	VZORKY, VÝBUŠNÉ, kromě třaskavin	1				16 274	0	E0	P101		MP2		
0191	PROSTŘEDKY SIGNÁLNÍ, RUČNÍ	1	1.4G		1,4		0	E0	P135		MP23 MP24		
0192	TŘASKAVKY, ŽELEZNIČNÍ	1	1.1G		1		0	E0	P135		MP23		
0193	TŘASKAVKY, ŽELEZNIČNÍ	1	1.4S		1,4		0	E0	P135		MP23		
0194	PROSTŘEDKY SIGNÁLNÍ, TÍŠŇOVÉ, lodní	1	1.1G		1		0	E0	P135		MP23 MP24		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0151	PENTOLIT, suchý nebo vlhčený méně než 15 % hm. vody
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0153	TRINITROANILIN (PIKRAMID)
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0154	TRINITROFENOL (Kyselina pikrová), suchý nebo vlhčený méně než 30 % hm. vody
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0155	TRINITROCHLORBENZEN (PIKRYLCHLORID)
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0159	PRACHOVINA SUROVÁ, VLHČENÁ nejméně 25 % hm. vody
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0160	PRACH, BEZDÝMNÝ
			1 (C5000D)	V2 V3		CV1 CV2 CV3	SI		0161	PRACH, BEZDÝMNÝ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0167	STŘELY, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0168	STŘELY, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0169	STŘELY, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0171	MUNICE, OSVĚTLOVACÍ, s nebo bez trhavé náložky, výmetné nebo hnací náplně
			4 (E)			CV1 CV2 CV3	SI		0173	ZAŘÍZENÍ UVOLŇOVACÍ, VÝBUŠNÁ
			4 (E)			CV1 CV2 CV3	SI		0174	NÝTY, VÝBUŠNÉ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0180	RAKETY, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0181	RAKETY, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0182	RAKETY, s trhací náplní
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0183	RAKETY, s inertní hlavicí
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0186	RAKETOVÉ MOTORY
			0 (E)	V2		CV1 CV2 CV3	SI		0190	VZORKY, VÝBUŠNÉ, kromě třaskavin
			2 (E)	V2		CV1 CV2 CV3	SI		0191	PROSTŘEDKY SIGNALNÍ, RUČNÍ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0192	TŘASKAVKY, ŽELEZNIČNÍ
			4 (E)			CV1 CV2 CV3	SI		0193	TŘASKAVKY, ŽELEZNIČNÍ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0194	PROSTŘEDKY SIGNALNÍ, TÍSNOVÉ, lodní

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
0195	PROSTŘEDKY SIGNÁLNÍ, TÍŠŇOVÉ, lodní	1	1.3G		1		0	E0	P135		MP23 MP24		
0196	PROSTŘEDKY SIGNÁLNÍ, DÝMOVÉ	1	1.1G		1		0	E0	P135		MP23		
0197	PROSTŘEDKY SIGNÁLNÍ, DÝMOVÉ	1	1.4G		1.4		0	E0	P135		MP23 MP24		
0204	HLOUBKOVÉ SONDY, VÝBUŠNĚ	1	1.2F		1		0	E0	P134 LP102		MP23		
0207	TETRANITROANILIN	1	1.1D		1		0	E0	P112b P112c		MP20		
0208	TRINITROFENYLMETHYLNITRAMIN (TETRYL)	1	1.1D		1		0	E0	P112b P112c		MP20		
0209	TRINITROTOLUEN (TNT), suchý nebo vlhčený méně než 30 % hm. vody	1	1.1D		1		0	E0	P112b P112c	PP46	MP20		
0212	STOPOVKY PRO MUNICI	1	1.3G		1		0	E0	P133	PP69	MP23		
0213	TRINITROANISOL	1	1.1D		1		0	E0	P112b P112c		MP20		
0214	TRINITROBENZEN, suchý nebo vlhčený méně než 30 % hm. vody	1	1.1D		1		0	E0	P112a P112b P112c		MP20		
0215	KYSELINA TRINITROBENZOOVÁ, suchá nebo vlhčená méně než 30 % hm. vody	1	1.1D		1		0	E0	P112a P112b P112c		MP20		
0216	TRINITRO-m-KRESOL	1	1.1D		1		0	E0	P112b P112c	PP26	MP20		
0217	TRINITRONAFTALEN	1	1.1D		1		0	E0	P112b P112c		MP20		
0218	TRINITROFENETOL	1	1.1D		1		0	E0	P112b P112c		MP20		
0219	TRINITRORESORCIN (KYSELINA STYFNOVÁ), suchý nebo vlhčený méně než 20 % hm. vody nebo směsí alkoholu s vodou	1	1.1D		1		0	E0	P112a P112b P112c	PP26	MP20		
0220	NITROMOČOVINA, suchá nebo vlhčená méně než 20 % hm. vody	1	1.1D		1		0	E0	P112a P112b P112c		MP20		
0221	BOJOVÉ HLAVICE, TŮRPÉDO, s trhací náplní	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0222	DUSIČNAN AMONNÝ, s více než 0,2 % hořlavých látek, včetně všech organických látek započítaných jako uhlík, s vyloučením všech jiných přídavných látek	1	1.1D		1		0	E0	P112b P112c	PP47	MP20		
0224	AZID BARNATÝ, suchý nebo vlhčený méně než 50 % hm. vody	1	1.1A		1+6.1		0	E0	P110b	PP42	MP20		
0225	NÁLOŽE, POČINOVÉ, S ROZBUŠKOU	1	1.1B		1		0	E0	P133	PP69	MP23		
0226	CYKLOTETRAMETHYLENTETRAMIN (HMX; OKTOGEN), VHLHČENÝ nejméně 15 % hm. vody	1	1.1D		1	266	0	E0	P112a	PP45	MP20		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0195	PROSTŘEDKY SIGNÁLNÍ, TÍSŇOVÉ, lodní
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0196	PROSTŘEDKY SIGNÁLNÍ, DÝMOVÉ
			2 (E)	V2		CV1 CV2 CV3	S1		0197	PROSTŘEDKY SIGNÁLNÍ, DÝMOVÉ
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0204	HLOUBKOVÉ SONDY, VÝBUŠNÉ
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0207	TETRANITROANILIN
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0208	TRINITROFENYLMETHYLNITRAMIN (TETRYL)
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0209	TRINITROTOLUEN (TNT), suchý nebo vlhčený méně než 30 % hm. vody
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0212	STOPOVKY PRO MUNICI
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0213	TRINITROANISOL
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0214	TRINITROBENZEN, suchý nebo vlhčený méně než 30 % hm. vody
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0215	KYSELINA TRINITROBENZOOVÁ, suchá nebo vlhčená méně než 30 % hm. vody
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0216	TRINITRO-m-KRESOL
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0217	TRINITRONAFTALEN
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0218	TRINITROFENETOL
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0219	TRINITRORESORCIN (KYSELINA STYFNOVÁ), suchý nebo vlhčený méně než 20 % hm. vody nebo směsí alkoholu s vodou
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0220	NITROMOČOVINA, suchá nebo vlhčená méně než 20 % hm. vody
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0221	BOJOVÉ HLAVICE, TORPÉDO, s trhací náplní
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0222	DUSIČNAN AMONNÝ, s více než 0,2 % hořlavých látek, včetně všech organických látek započítaných jako uhlík, s vyloučením všech jiných přidaných látek
			0 (B)	V2 V3		CV1 CV2 CV3 CV28	S1		0224	AZID BARNATÝ, suchý nebo vlhčený méně než 50 % hm. vody
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0225	NÁLOŽE, POČINOVÉ, S ROZBUŠKOU
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0226	CYKLOTETRAMETHYLETETRAMIN (HMX; OKTOGEN), VLNĚNÝ nejméně 15 % hm. vody

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
0234	DINITRO-o-KRESOLÁT SODNÝ, suchý nebo vlhčený méně než 15 % hm. vody	1	1.3C		1		0	E0	P114a P114b	PP26	MP20		
0235	PIKRAMÁT SODNÝ, suchý nebo vlhčený méně než 20 % hm. vody	1	1.3C		1		0	E0	P114a P114b	PP26	MP20		
0236	PIKRAMÁT ZIRKONIČITÝ, suchý nebo vlhčený méně než 20 % hm. vody	1	1.3C		1		0	E0	P114a P114b	PP26	MP20		
0237	NÁLOŽE, KUMULATIVNÍ, OHEBNÉ, LINEÁRNÍ	1	1.4D		1.4		0	E0	P138		MP21		
0238	RAKETY, TAHAČE LAN	1	1.2G		1		0	E0	P130		MP23 MP24		
0240	RAKETY, TAHAČE LAN	1	1.3G		1		0	E0	P130		MP23 MP24		
0241	TRHAVINA, TYP E	1	1.1D		1	617	0	E0	P116 IBC100	PP61 PP62 PP65 B10	MP20		
0242	NÁPLNĚ HNACÍ, PRO DÉLA	1	1.3C		1		0	E0	P130		MP22		
0243	MUNICE, ZÁPALNÁ, S BÍLÝM FOSFOREM, s trhavou náložkou, výmetnou nebo hnací náplní	1	1.2H		1		0	E0	P130 LP101	PP67 L1	MP23		
0244	MUNICE, ZÁPALNÁ, S BÍLÝM FOSFOREM s trhavou náložkou, výmetnou nebo hnací náplní	1	1.3H		1		0	E0	P130 LP101	PP67 L1	MP23		
0245	MUNICE, DÝMOVÁ, S BÍLÝM FOSFOREM, s trhavou náložkou, výmetnou nebo hnací náplní	1	1.2H		1		0	E0	P130 LP101	PP67 L1	MP23		
0246	MUNICE, DÝMOVÁ, S BÍLÝM FOSFOREM, s trhavou náložkou, výmetnou nebo hnací náplní	1	1.3H		1		0	E0	P130 LP101	PP67 L1	MP23		
0247	MUNICE, ZÁPALNÁ, s kapalinou nebo gelem, s trhavou náložkou, výmetnou nebo hnací náplní	1	1.3J		1		0	E0	P101		MP23		
0248	ZAŘÍZENÍ, AKTIVOVATELNÁ VODOU, s trhavou náložkou, výmetnou nebo hnací náplní	1	1.2L		1	274	0	E0	P144	PP77	MP1		
0249	ZAŘÍZENÍ, AKTIVOVATELNÁ VODOU, s trhavou náložkou, výmetnou nebo hnací náplní	1	1.3L		1	274	0	E0	P144	PP77	MP1		
0250	RAKETOVÉ MOTORY S HYPERGOLY, s nebo bez výmetné nálože	1	1.3L		1		0	E0	P101		MP1		
0254	MUNICE, OSVĚTLOVACÍ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23		
0255	ROZBUŠKY, ELEKTRICKÉ, pro trhací práce	1	1.4B		1.4		0	E0	P131		MP23		
0257	ZAPALOVAČE, DETONAČNÍ	1	1.4B		1.4		0	E0	P141		MP23		
0266	OKTOLIT (OKTOL), suchý nebo vlhčený méně než 15 % hm. vody	1	1.1D		1		0	E0	P112a P112b P112c		MP20		
0267	ROZBUŠKY, NEELEKTRICKÉ, pro trhací práce	1	1.4B		1.4		0	E0	P131	PP68	MP23		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (C5000D)	V2 V3		CV1 CV2 CV3	SI		0234	DINITRO-o-KRESOLÁT SODNÝ, suchý nebo vlhčený méně než 15 % hm. vody
			1 (C5000D)	V2 V3		CV1 CV2 CV3	SI		0235	PIKRAMÁT SODNÝ, suchý nebo vlhčený méně než 20 % hm. vody
			1 (C5000D)	V2 V3		CV1 CV2 CV3	SI		0236	PIKRAMÁT ZIRKONIČITÝ, suchý nebo vlhčený méně než 20 % hm. vody
			2 (E)	V2		CV1 CV2 CV3	SI		0237	NÁLOŽE, KUMULATIVNÍ, OHEBNÉ, LINEÁRNÍ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0238	RAKETY, TAHAČE LAN
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0240	RAKETY, TAHAČE LAN
			1 (B1000C)	V2 V12		CV1 CV2 CV3	SI		0241	TRHAVINA, TYP E
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0242	NAPLNĚ HNACÍ, PRO DÉLA
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0243	MUNICE, ZÁPALNÁ, S BÍLÝM FOSFOREM, s trhavou náložkou, výmetnou nebo hnací náplní
			1 (C)	V2		CV1 CV2 CV3	SI		0244	MUNICE, ZÁPALNÁ, S BÍLÝM FOSFOREM s trhavou náložkou, výmetnou nebo hnací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0245	MUNICE, DÝMOVÁ, S BÍLÝM FOSFOREM, s trhavou náložkou, výmetnou nebo hnací náplní
			1 (C)	V2		CV1 CV2 CV3	SI		0246	MUNICE, DÝMOVÁ, S BÍLÝM FOSFOREM, s trhavou náložkou, výmetnou nebo hnací náplní
			1 (C)	V2		CV1 CV2 CV3	SI		0247	MUNICE, ZÁPALNÁ, s kapalinou nebo gelem, s trhavou náložkou, výmetnou nebo hnací náplní
			0 (B)	V2		CV1 CV2 CV3 CV4	SI		0248	ZAŘÍZENÍ, AKTIVOVATELNÁ VODOU, s trhavou náložkou, výmetnou nebo hnací náplní
			0 (B)	V2		CV1 CV2 CV3 CV4	SI		0249	ZAŘÍZENÍ, AKTIVOVATELNÁ VODOU, s trhavou náložkou, výmetnou nebo hnací náplní
			0 (B)	V2		CV1 CV2 CV3 CV4	SI		0250	RAKETOVÉ MOTORY S HYPERGOLY, s nebo bez výmetné nálože
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0254	MUNICE, OSVĚTLOVACÍ, s nebo bez trhavé náložky, výmetné nebo hnací náplně
			2 (E)	V2		CV1 CV2 CV3	SI		0255	ROZBUŠKY, ELEKTRICKÉ, pro trhací práce
			2 (E)	V2		CV1 CV2 CV3	SI		0257	ZAPALOVAČE, DETONAČNÍ
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0266	OKTOLIT (OKTOL), suchý nebo vlhčený méně než 15 % hm. vody
			2 (E)	V2		CV1 CV2 CV3	SI		0267	ROZBUŠKY, NEELEKTRICKÉ, pro trhací práce

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
0268	NÁLOŽE, POČINOVÉ, S ROZBUŠKOU	1	1.2B		1		0	E0	P133	PP69	MP23		
0271	NÁPLNĚ HNACÍ	1	1.1C		1		0	E0	P143	PP76	MP22		
0272	NÁPLNĚ HNACÍ	1	1.3C		1		0	E0	P143	PP76	MP22		
0275	NÁBOJKY PRO TECHNICKÉ ÚČELY	1	1.3C		1		0	E0	P134 LP102		MP22		
0276	NÁBOJKY PRO TECHNICKÉ ÚČELY	1	1.4C		1.4		0	E0	P134 LP102		MP22		
0277	NÁBOJKY PRO ROPNÉ VRTY	1	1.3C		1		0	E0	P134 LP102		MP22		
0278	NÁBOJKY PRO ROPNÉ VRTY	1	1.4C		1.4		0	E0	P134 LP102		MP22		
0279	NÁPLNĚ HNACÍ, PRO DÉLA	1	1.1C		1		0	E0	P130		MP22		
0280	RAKETOVÉ MOTORY	1	1.1C		1		0	E0	P130 LP101	PP67 L1	MP22		
0281	RAKETOVÉ MOTORY	1	1.2C		1		0	E0	P130 LP101	PP67 L1	MP22		
0282	NITROGUANIDIN (PIKRIT), suchý nebo vlhčený méně než 20 % hm. vody	1	1.1D		1		0	E0	P112a P112b P112c		MP20		
0283	NÁLOŽE, POČINOVÉ, bez rozbušky	1	1.2D		1		0	E0	P132a P132b		MP21		
0284	GRANÁTY, ruční nebo puškové, s trhací náplní	1	1.1D		1		0	E0	P141		MP21		
0285	GRANÁTY, ruční nebo puškové, s trhací náplní	1	1.2D		1		0	E0	P141		MP21		
0286	BOJOVÉ HLAVICE, RAKETA, s trhací náplní	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0287	BOJOVÉ HLAVICE, RAKETA, s trhací náplní	1	1.2D		1		0	E0	P130 LP101	PP67 L1	MP21		
0288	NÁLOŽE, KUMULATIVNÍ, OHEBNÉ, LINEÁRNÍ	1	1.1D		1		0	E0	P138		MP21		
0289	BLESKOVICE, ohebná	1	1.4D		1.4		0	E0	P139	PP71 PP72	MP21		
0290	BLESKOVICE, s kovovým pláštěm	1	1.1D		1		0	E0	P139	PP71	MP21		
0291	PUMY, s trhací náplní	1	1.2F		1		0	E0	P130		MP23		
0292	GRANÁTY, ruční nebo puškové, s trhací náplní	1	1.1F		1		0	E0	P141		MP23		
0293	GRANÁTY, ruční nebo puškové, s trhací náplní	1	1.2F		1		0	E0	P141		MP23		
0294	MINY, s trhací náplní	1	1.2F		1		0	E0	P130		MP23		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0268	NÁLOŽE, POČINOVÉ, S ROZBUŠKOU
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0271	NÁPLNĚ HNACÍ
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0272	NÁPLNĚ HNACÍ
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0275	NÁBOJKY PRO TECHNICKÉ ÚČELY
			2 (E)	V2		CV1 CV2 CV3	SI		0276	NÁBOJKY PRO TECHNICKÉ ÚČELY
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0277	NÁBOJKY PRO ROPNÉ VRTY
			2 (E)	V2		CV1 CV2 CV3	SI		0278	NÁBOJKY PRO ROPNÉ VRTY
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0279	NÁPLNĚ HNACÍ, PRO DÉLA
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0280	RAKETOVÉ MOTORY
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0281	RAKETOVÉ MOTORY
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0282	NITROGUANIDIN (PIKRIT), suchý nebo vlhčený méně než 20 % hm. vody
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0283	NÁLOŽE, POČINOVÉ, bez rozbušky
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0284	GRANÁTY, ruční nebo puškové, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0285	GRANÁTY, ruční nebo puškové, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0286	BOJOVÉ HLAVICE, RAKETA, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0287	BOJOVÉ HLAVICE, RAKETA, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0288	NÁLOŽE, KUMULATIVNÍ, OHEBNÉ, LINEÁRNÍ
			2 (E)	V2		CV1 CV2 CV3	SI		0289	BLESKOVICE, ohebná
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0290	BLESKOVICE, s kovovým pláštěm
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0291	PUMY, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0292	GRANÁTY, ruční nebo puškové, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0293	GRANÁTY, ruční nebo puškové, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0294	MINY, s trhací náplní

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
0295	RAKETY, s trhací náplní	1	1.2F		1		0	E0	P130		MP23		
0296	HLOUBKOVÉ SONDY, VÝBUŠNÉ	1	1.1F		1		0	E0	P134 LP102		MP23		
0297	MUNICE, OSVĚTLOVACÍ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0299	PUMY, ZÁBLESKOVÉ	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23		
0300	MUNICE, ZÁPALNÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0301	MUNICE, SLZOTVORNÁ, s trhavou náložkou, výmetnou nebo hnací náplní	1	1.4G		1.4+6.1+8		0	E0	P130 LP101	PP67 L1	MP23		
0303	MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0303	MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně, obsahující žiravé látky	1	1.4G		1.4+8		0	E0	P130 LP101	PP67 L1	MP23		
0305	SLOŽ PYROTECHNICKÁ, ZÁBLESKOVÁ	1	1.3G		1		0	E0	P113	PP49	MP20		
0306	STOPOVKY PRO MUNICI	1	1.4G		1.4		0	E0	P133	PP69	MP23		
0312	NÁBOJE, SIGNÁLNÍ	1	1.4G		1.4		0	E0	P135		MP23 MP24		
0313	PROSTŘEDKY SIGNÁLNÍ, DÝMOVÉ	1	1.2G		1		0	E0	P135		MP23		
0314	ZÁŽEHOVAČE	1	1.2G		1		0	E0	P142		MP23		
0315	ZÁŽEHOVAČE	1	1.3G		1		0	E0	P142		MP23		
0316	ZAPALOVAČE, ZÁŽEHOVÉ	1	1.3G		1		0	E0	P141		MP23		
0317	ZAPALOVAČE, ZÁŽEHOVÉ	1	1.4G		1.4		0	E0	P141		MP23		
0318	GRANÁTY, CVIČNÉ, ruční nebo puškové	1	1.3G		1		0	E0	P141		MP23		
0319	ZÁPALKOVÉ ŠROUBY	1	1.3G		1		0	E0	P133		MP23		
0320	ZÁPALKOVÉ ŠROUBY	1	1.4G		1.4		0	E0	P133		MP23		
0321	NÁBOJE PRO ZBRANĚ, s trhací náplní	1	1.2E		1		0	E0	P130 LP101	PP67 L1	MP21		
0322	RAKETOVÉ MOTORY, s HYPERGOLEM, s nebo bez výmetné náplně	1	1.2L		1		0	E0	P101		MP1		
0323	NÁBOJKY PRO TECHNICKÉ ÚČELY	1	1.4S		1.4	347	0	E0	P134 LP102		MP23		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0295	RAKETY, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0296	HLOUBKOVÉ SONDY, VÝBUŠNĚ
			2 (E)	V2		CV1 CV2 CV3	SI		0297	MUNICE, OSVĚTLOVACÍ, s nebo bez trhavé náložky, výmetné nebo hnací náplně
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0299	PUMY, ZÁBLESKOVÉ
			2 (E)	V2		CV1 CV2 CV3	SI		0300	MUNICE, ZÁPALNÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně
			2 (E)	V2		CV1 CV2 CV3 CV28	SI		0301	MUNICE, SLZOTVORNÁ, s trhavou náložkou, výmetnou nebo hnací náplní
			2 (E)	V2		CV1 CV2 CV3	SI		0303	MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně
			2 (E)	V2		CV1 CV2 CV3	SI		0303	MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně, obsahující žiravé látky
			1 (C5000D)	V2 V3		CV1 CV2 CV3	SI		0305	SLOŽ PYROTECHNICKÁ, ZÁBLESKOVÁ
			2 (E)	V2		CV1 CV2 CV3	SI		0306	STOPOVKY PRO MUNICI
			2 (E)	V2		CV1 CV2 CV3	SI		0312	NÁBOJE, SIGNÁLNÍ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0313	PROSTŘEDKY SIGNÁLNÍ, DÝMOVÉ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0314	ZÁŽEHOVAČE
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0315	ZÁŽEHOVAČE
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0316	ZAPALOVAČE, ZÁŽEHOVÉ
			2 (E)	V2		CV1 CV2 CV3	SI		0317	ZAPALOVAČE, ZÁŽEHOVÉ
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0318	GRANÁTY, CVIČNÉ, ruční nebo puškové
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0319	ZÁPALKOVÉ ŠROUBY
			2 (E)	V2		CV1 CV2 CV3	SI		0320	ZÁPALKOVÉ ŠROUBY
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0321	NÁBOJE PRO ZBRANĚ, s trhací náplní
			0 (B)	V2		CV1 CV2 CV3 CV4	SI		0322	RAKETOVÉ MOTORY, S HYPERGOLEM, s nebo bez výmetné náplně
			4 (E)			CV1 CV2 CV3	SI		0323	NÁBOJKY PRO TECHNICKÉ ÚČELY

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
0324	STŘELY, s trhací náplní	1	1.2F		1		0	E0	P130		MP23		
0325	ZAŽEHOVAČE	1	1.4G		1.4		0	E0	P142		MP23		
0326	NÁBOJE PRO ZBRANĚ, CVIČNÉ	1	1.1C		1		0	E0	P130		MP22		
0327	NÁBOJE PRO ZBRANĚ, CVIČNÉ nebo NÁBOJE, MALORÁŽOVÉ, CVIČNÉ	1	1.3C		1		0	E0	P130		MP22		
0328	NÁBOJE PRO ZBRANĚ, S INERTNÍ STŘELOU	1	1.2C		1		0	E0	P130 LP101	PP67 L1	MP22		
0329	TORPÉDA, s trhací náplní	1	1.1E		1		0	E0	P130 LP101	PP67 L1	MP21		
0330	TORPÉDA, s trhací náplní	1	1.1F		1		0	E0	P130		MP23		
0331	TRHAVINA, TYP B	1	1.5D		1.5	617	0	E0	P116 IBC100	PP61 PP62 PP64 PP65	MP20	T1	TP1 TP17 TP32
0332	TRHAVINA, TYP E	1	1.5D		1.5	617	0	E0	P116 IBC100	PP61 PP62 PP65	MP20	T1	TP1 TP17 TP32
0333	VÝROBKY ZÁBAVNÉ PYROTECHNIKY	1	1.1G		1	645	0	E0	P135		MP23 MP24		
0334	VÝROBKY ZÁBAVNÉ PYROTECHNIKY	1	1.2G		1	645	0	E0	P135		MP23 MP24		
0335	VÝROBKY ZÁBAVNÉ PYROTECHNIKY	1	1.3G		1	645	0	E0	P135		MP23 MP24		
0336	VÝROBKY ZÁBAVNÉ PYROTECHNIKY	1	1.4G		1.4	645 651	0	E0	P135		MP23 MP24		
0337	VÝROBKY ZÁBAVNÉ PYROTECHNIKY	1	1.4S		1.4	645	0	E0	P135		MP23 MP24		
0338	NÁBOJE PRO ZBRANĚ, CVIČNÉ nebo NÁBOJE, MALORÁŽOVÉ, CVIČNÉ	1	1.4C		1.4		0	E0	P130		MP22		
0339	NÁBOJE PRO ZBRANĚ, S INERTNÍ STŘELOU nebo NÁBOJE MALORÁŽOVÉ	1	1.4C		1.4		0	E0	P130		MP22		
0340	NITROCELULOZA, suchá nebo vlhčená méně než 25 % hm. vody (nebo alkoholu)	1	1.1D		1		0	E0	P112a P112b		MP20		
0341	NITROCELULOZA, neupravená nebo plastifikovaná méně než 18 % hm. plastifikátoru	1	1.1D		1		0	E0	P112b		MP20		
0342	NITROCELULOZA, VLNĚNÁ nejméně 25 % hm. alkoholu	1	1.3C		1	105	0	E0	P114a	PP43	MP20		
0343	NITROCELULOZA, PLASTIFIKOVANÁ nejméně 18 % hm. plastifikátoru	1	1.3C		1	105	0	E0	P111		MP20		
0344	STŘELY, s trhací náplní	1	1.4D		1.4		0	E0	P130 LP101	PP67 L1	MP21		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0324	STŘELY, s trhací náplní
			2 (E)	V2		CV1 CV2 CV3	SI		0325	ZÁŽEHOVAČE
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0326	NÁBOJE PRO ZBRANĚ, CVIČNÉ
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0327	NÁBOJE PRO ZBRANĚ, CVIČNÉ nebo NÁBOJE, MALORÁŽOVÉ, CVIČNÉ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0328	NÁBOJE PRO ZBRANĚ, S INERTNÍ STŘELOU
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0329	TORPÉDA, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0330	TORPÉDA, s trhací náplní
S2.65AN(+)	TU3 TU12 TU41 TC8 TA1 TA5	EX/III	1 (B1000C)	V2 V12		CV1 CV2 CV3	SI	1.5D	0331	TRHAVINA, TYP B
		EX/III	1 (B1000C)	V2 V12		CV1 CV2 CV3	SI	1.5D	0332	TRHAVINA, TYP E
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0333	VÝROBKY ZÁBAVNÉ PYROTECHNIKY
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0334	VÝROBKY ZÁBAVNÉ PYROTECHNIKY
			1 (C5000D)	V2 V3		CV1 CV2 CV3	SI		0335	VÝROBKY ZÁBAVNÉ PYROTECHNIKY
			2 (E)	V2		CV1 CV2 CV3	SI		0336	VÝROBKY ZÁBAVNÉ PYROTECHNIKY
			4 (E)			CV1 CV2 CV3	SI		0337	VÝROBKY ZÁBAVNÉ PYROTECHNIKY
			2 (E)	V2		CV1 CV2 CV3	SI		0338	NÁBOJE PRO ZBRANĚ, CVIČNÉ nebo NÁBOJE, MALORÁŽOVÉ, CVIČNÉ
			2 (E)	V2		CV1 CV2 CV3	SI		0339	NÁBOJE PRO ZBRANĚ, S INERTNÍ STŘELOU nebo NÁBOJE MALORÁŽOVÉ
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0340	NITROCELULOZA, suchá nebo vlhčená méně než 25 % hm. vody (nebo alkoholu)
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0341	NITROCELULOZA, neupravená nebo plastifikovaná méně než 18 % hm. plastifikátoru
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0342	NITROCELULOZA, VLNĚNÁ nejméně 25 % hm. alkoholu
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0343	NITROCELULOZA, PLASTIFIKOVANÁ nejméně 18 % hm. plastifikátoru
			2 (E)	V2		CV1 CV2 CV3	SI		0344	STŘELY, s trhací náplní

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
0345	STŘELY, inertní, se stopovkou	1	1.4S		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0346	STŘELY, s trhavou náložkou nebo výmetnou náplní	1	1.2D		1		0	E0	P130 LP101	PP67 L1	MP21		
0347	STŘELY, s trhavou náložkou nebo výmetnou náplní	1	1.4D		1.4		0	E0	P130 LP101	PP67 L1	MP21		
0348	NÁBOJE PRO ZBRANĚ, s trhací náplní	1	1.4F		1.4		0	E0	P130		MP23		
0349	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.4S		1.4	178 274	0	E0	P101		MP2		
0350	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.4B		1.4	178 274	0	E0	P101		MP2		
0351	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.4C		1.4	178 274	0	E0	P101		MP2		
0352	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.4D		1.4	178 274	0	E0	P101		MP2		
0353	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.4G		1.4	178 274	0	E0	P101		MP2		
0354	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.1L		1	178 274	0	E0	P101		MP1		
0355	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.2L		1	178 274	0	E0	P101		MP1		
0356	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.3L		1	178 274	0	E0	P101		MP1		
0357	LÁTKY VÝBUŠNÉ, J.N.	1	1.1L		1	178 274	0	E0	P101		MP1		
0358	LÁTKY VÝBUŠNÉ, J.N.	1	1.2L		1	178 274	0	E0	P101		MP1		
0359	LÁTKY VÝBUŠNÉ, J.N.	1	1.3L		1	178 274	0	E0	P101		MP1		
0360	ROZBUŠKOVÉ SESTAVY, NEELEKTRICKÉ, pro trhací práce	1	1.1B		1		0	E0	P131		MP23		
0361	ROZBUŠKOVÉ SESTAVY, NEELEKTRICKÉ, pro trhací práce	1	1.4B		1.4		0	E0	P131		MP23		
0362	MUNICE, CVIČNÁ	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0363	MUNICE, ZKUŠEBNÍ	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0364	ROZBUŠKY PRO MUNICI	1	1.2B		1		0	E0	P133		MP23		
0365	ROZBUŠKY PRO MUNICI	1	1.4B		1.4		0	E0	P133		MP23		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			4 (E)			CV1 CV2 CV3	SI		0345	STŘELY, inertní, se stopovkou
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0346	STŘELY, s trhavou náložkou nebo výmetnou náplní
			2 (E)	V2		CV1 CV2 CV3	SI		0347	STŘELY, s trhavou náložkou nebo výmetnou náplní
			2 (E)	V2		CV1 CV2 CV3	SI		0348	NÁBOJE PRO ZBRANĚ, s trhací náplní
			4 (E)			CV1 CV2 CV3	SI		0349	PŘEDMĚTY VÝBUŠNÉ, J.N.
			2 (E)	V2		CV1 CV2 CV3	SI		0350	PŘEDMĚTY VÝBUŠNÉ, J.N.
			2 (E)	V2		CV1 CV2 CV3	SI		0351	PŘEDMĚTY VÝBUŠNÉ, J.N.
			2 (E)	V2		CV1 CV2 CV3	SI		0352	PŘEDMĚTY VÝBUŠNÉ, J.N.
			2 (E)	V2		CV1 CV2 CV3	SI		0353	PŘEDMĚTY VÝBUŠNÉ, J.N.
			0 (B)	V2		CV1 CV2 CV3 CV4	SI		0354	PŘEDMĚTY VÝBUŠNÉ, J.N.
			0 (B)	V2		CV1 CV2 CV3 CV4	SI		0355	PŘEDMĚTY VÝBUŠNÉ, J.N.
			0 (B)	V2		CV1 CV2 CV3 CV4	SI		0356	PŘEDMĚTY VÝBUŠNÉ, J.N.
			0 (B)	V2		CV1 CV2 CV3 CV4	SI		0357	LÁTKY VÝBUŠNÉ, J.N.
			0 (B)	V2		CV1 CV2 CV3 CV4	SI		0358	LÁTKY VÝBUŠNÉ, J.N.
			0 (B)	V2		CV1 CV2 CV3 CV4	SI		0359	LÁTKY VÝBUŠNÉ, J.N.
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0360	ROZBUŠKOVÉ SESTAVY, NEELEKTRICKÉ, pro trhací práce
			2 (E)	V2		CV1 CV2 CV3	SI		0361	ROZBUŠKOVÉ SESTAVY, NEELEKTRICKÉ, pro trhací práce
			2 (E)	V2		CV1 CV2 CV3	SI		0362	MUNICE, CVIČNÁ
			2 (E)	V2		CV1 CV2 CV3	SI		0363	MUNICE, ZKUŠEBNÍ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0364	ROZBUŠKY PRO MUNICI
			2 (E)	V2		CV1 CV2 CV3	SI		0365	ROZBUŠKY PRO MUNICI

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
0366	ROZBUŠKY PRO MUNICI	1	1.4S		1.4	347	0	E0	P133		MP23		
0367	ZAPALOVAČE, DETONAČNÍ	1	1.4S		1.4		0	E0	P141		MP23		
0368	ZAPALOVAČE, ZÁŽEHOVÉ	1	1.4S		1.4		0	E0	P141		MP23		
0369	BOJOVÉ HLAVICE, RAKETA, s trhací náplní	1	1.1F		1		0	E0	P130		MP23		
0370	BOJOVÉ HLAVICE, RAKETA, s trhací náložkou nebo výmetnou náplní	1	1.4D		1.4		0	E0	P130 LP101	PP67 L1	MP21		
0371	BOJOVÉ HLAVICE, RAKETA, s trhací náložkou nebo výmetnou náplní	1	1.4F		1.4		0	E0	P130		MP23		
0372	GRANÁTY, CVIČNÉ, ruční nebo puškové	1	1.2G		1		0	E0	P141		MP23		
0373	PROSTŘEDKY SIGNALNÍ, RUČNÍ	1	1.4S		1.4		0	E0	P135		MP23 MP24		
0374	HLOUBKOVÉ SONDY, VÝBUŠNÉ	1	1.1D		1		0	E0	P134 LP102		MP21		
0375	HLOUBKOVÉ SONDY, VÝBUŠNÉ	1	1.2D		1		0	E0	P134 LP102		MP21		
0376	ZÁPALKOVÉ ŠROUBY	1	1.4S		1.4		0	E0	P133		MP23		
0377	ZÁPALKY, KALIŠKOVÉ	1	1.1B		1		0	E0	P133		MP23		
0378	ZÁPALKY, KALIŠKOVÉ	1	1.4B		1.4		0	E0	P133		MP23		
0379	NÁBOJNICE, PRAZDNÉ, SE ZÁPALKOU	1	1.4C		1.4		0	E0	P136		MP22		
0380	PŘEDMĚTY PYROFORICKÉ	1	1.2L		1		0	E0	P101		MP1		
0381	NÁBOJKY PRO TECHNICKÉ ÚČELY	1	1.2C		1		0	E0	P134 LP102		MP22		
0382	SOUČÁSTI ROZNĚTNÝCH ŘETĚZCŮ, J.N.	1	1.2B		1	178 274	0	E0	P101		MP2		
0383	SOUČÁSTI ROZNĚTNÝCH ŘETĚZCŮ, J.N.	1	1.4B		1.4	178 274	0	E0	P101		MP2		
0384	SOUČÁSTI ROZNĚTNÝCH ŘETĚZCŮ, J.N.	1	1.4S		1.4	178 274	0	E0	P101		MP2		
0385	5-NITROBENZOTRIAZOL	1	1.1D		1		0	E0	P112b P112c		MP20		
0386	KYSELINA TRINITROBENZENSULFONOVÁ	1	1.1D		1		0	E0	P112b P112c	PP26	MP20		
0387	TRINITROFLUORENON	1	1.1D		1		0	E0	P112b P112c		MP20		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			4 (E)			CV1 CV2 CV3	SI		0366	ROZBUŠKY PRO MUNICI
			4 (E)			CV1 CV2 CV3	SI		0367	ZAPALOVAČE, DETONAČNÍ
			4 (E)			CV1 CV2 CV3	SI		0368	ZAPALOVAČE, ZÁŽEHOVÉ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0369	BOJOVÉ HLAVICE, RAKETA, s trhací náplní
			2 (E)	V2		CV1 CV2 CV3	SI		0370	BOJOVÉ HLAVICE, RAKETA, s trhací náložkou nebo výmetnou náplní
			2 (E)	V2		CV1 CV2 CV3	SI		0371	BOJOVÉ HLAVICE, RAKETA, s trhací náložkou nebo výmetnou náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0372	GRANÁTY, CVIČNÉ, ruční nebo puškové
			4 (E)			CV1 CV2 CV3	SI		0373	PROSTŘEDKY SIGNÁLNÍ, RUCNÍ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0374	HLOUBKOVÉ SONDY, VÝBUŠNÉ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0375	HLOUBKOVÉ SONDY, VÝBUŠNÉ
			4 (E)			CV1 CV2 CV3	SI		0376	ZAPALKOVÉ ŠROUBY
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0377	ZAPALKY, KALIŠKOVÉ
			2 (E)	V2		CV1 CV2 CV3	SI		0378	ZAPALKY, KALIŠKOVÉ
			2 (E)	V2		CV1 CV2 CV3	SI		0379	NÁBOJNICE, PRAZDNĚ, SE ZAPALKOU
			0 (B)	V2		CV1 CV2 CV3 CV4	SI		0380	PŘEDMĚTY PYROFORICKÉ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0381	NÁBOJKY PRO TECHNICKÉ ÚČELY
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0382	SOUČÁSTI ROZNĚTNÝCH ŘETĚZCŮ, J.N.
			2 (E)	V2		CV1 CV2 CV3	SI		0383	SOUČÁSTI ROZNĚTNÝCH ŘETĚZCŮ, J.N.
			4 (E)			CV1 CV2 CV3	SI		0384	SOUČÁSTI ROZNĚTNÝCH ŘETĚZCŮ, J.N.
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0385	5-NITROBENZOTRIAZOL
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0386	KYSELINA TRINITROBENZENSULFONOVÁ
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0387	TRINITROFLUORENON

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřátá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
0388	TRINITROTOLUEN (TNT) A TRINITROBENZEN, SMĚS nebo TRINITROTOLUEN (TNT) A HEXANITROSTILBEN, SMĚS	1	1.1D		1		0	E0	P112b P112c		MP20		
0389	TRINITROTOLUEN (TNT) VE SMĚSI S TRINITROBENZENEM A HEXANITROSTILBENEM	1	1.1D		1		0	E0	P112b P112c		MP20		
0390	TRITONAL	1	1.1D		1		0	E0	P112b P112c		MP20		
0391	CYKLOTRIMETHYLENTRINITRAMIN (CYKLOINIT; HEXOGEN; RDX) A CYKLOTETRAMETHYLENTRINITRAMIN (HMX; OKTOGEN), SMĚS VLNĚNÁ nejméně 15 % hm. vody nebo ZNECITLIVĚNÁ nejméně 10 % hm. flegmatizačního prostředku	1	1.1D		1	266	0	E0	P112a P112b		MP20		
0392	HEXANITROSTILBEN	1	1.1D		1		0	E0	P112b P112c		MP20		
0393	HEXOTONAL	1	1.1D		1		0	E0	P112b		MP20		
0394	TRINITRORESORCIN (Kyselina styfnohá), VLNĚNÝ(-Á) nejméně 20 % hm. vody (nebo směsí alkoholu s vodou)	1	1.1D		1		0	E0	P112a	PP26	MP20		
0395	RAKETOVÉ MOTORY, S KAPALNÝM PALIVEM	1	1.2J		1		0	E0	P101		MP23		
0396	RAKETOVÉ MOTORY, S KAPALNÝM PALIVEM	1	1.3J		1		0	E0	P101		MP23		
0397	RAKETY, S KAPALNÝM PALIVEM, s trhací náplní	1	1.1J		1		0	E0	P101		MP23		
0398	RAKETY, S KAPALNÝM PALIVEM, s trhací náplní	1	1.2J		1		0	E0	P101		MP23		
0399	PUMY, S HOŘLAVOU KAPALINOU, s trhací náplní	1	1.1J		1		0	E0	P101		MP23		
0400	PUMY, S HOŘLAVOU KAPALINOU, s trhací náplní	1	1.2J		1		0	E0	P101		MP23		
0401	SULFID DIPIKRYLU (SIRNÍK DIPIKRYLU), suchý nebo vlněný méně než 10 % hm. vody	1	1.1D		1		0	E0	P112a P112b P112c		MP20		
0402	CHLORISTAN AMONNÝ	1	1.1D		1	152	0	E0	P112b P112c		MP20		
0403	SVĚTLICE, LETECKÉ	1	1.4G		1.4		0	E0	P135		MP23		
0404	SVĚTLICE, LETECKÉ	1	1.4S		1.4		0	E0	P135		MP23		
0405	NÁBOJE, SIGNÁLNÍ	1	1.4S		1.4		0	E0	P135		MP23 MP24		
0406	DINITROBENZEN	1	1.3C		1		0	E0	P114b		MP20		
0407	KYSELINA TETRAZOL-1-OCTOVÁ	1	1.4C		1.4		0	E0	P114b		MP20		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0388	TRINITROTOLUEN (TNT) A TRINITROBENZEN, SMĚS nebo TRINITROTOLUEN (TNT) A HEXANITROSTILBEN, SMĚS
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0389	TRINITROTOLUEN (TNT) VE SMĚSI S TRINITROBENZENEM A HEXANITROSTILBENEM
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0390	TRITONAL
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0391	CYKLOTETRAMETHYLENTETRAMIN (CYKLONIT; HEXOGEN; RDX) A CYKLOTETRAMETHYLETETRAMIN (HMX; OKTOGEN), SMĚS VLHČENÁ nejméně 15 % hm. vody nebo ZNECITLIVĚNÁ nejméně 10 % hm. flegmatizačního prostředku
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0392	HEXANITROSTILBEN
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0393	HEXOTONAL
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0394	TRINITRORESORCIN (Kyselina styfnová), VLHČENÝ(-Á) nejméně 20 % hm. vody (nebo směsí alkoholu s vodou)
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0395	RAKETOVÉ MOTORY, S KAPALNÝM PALIVEM
			1 (C)	V2		CV1 CV2 CV3	S1		0396	RAKETOVÉ MOTORY, S KAPALNÝM PALIVEM
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0397	RAKETY, S KAPALNÝM PALIVEM, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0398	RAKETY, S KAPALNÝM PALIVEM, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0399	PUMY, S HOŘLAVOU KAPALINOU, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0400	PUMY, S HOŘLAVOU KAPALINOU, s trhací náplní
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0401	SULFID DIPIKRYLU (SIRNÍK DIPIKRYLU), suchý nebo vlhčený méně než 10 % hm. vody
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0402	CHLORISTAN AMONNÝ
			2 (E)	V2		CV1 CV2 CV3	S1		0403	SVĚTLICE, LETECKÉ
			4 (E)			CV1 CV2 CV3	S1		0404	SVĚTLICE, LETECKÉ
			4 (E)			CV1 CV2 CV3	S1		0405	NÁBOJE, SIGNÁLNÍ
			1 (C5000D)	V2 V3		CV1 CV2 CV3	S1		0406	DINITROBENZEN
			2 (E)	V2		CV1 CV2 CV3	S1		0407	Kyselina tetrazol-1-octová

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
0408	ZAPALOVAČE, DETONAČNÍ, s pojistným zařízením	1	1.1D		1		0	E0	P141		MP21		
0409	ZAPALOVAČE, DETONAČNÍ, s pojistným zařízením	1	1.2D		1		0	E0	P141		MP21		
0410	ZAPALOVAČE, DETONAČNÍ, s pojistným zařízením	1	1.4D		1.4		0	E0	P141		MP21		
0411	PENTAERYTHRITETETRANITRÁT (PENTAERYTHRITOLTETRANITRÁT; PENTAERYTHRIT-TETRANITRÁT; PENTAERYTHRITOL-TETRANITRÁT; PÉT), s nejméně 7 % hm. vosku	1	1.1D		1	131	0	E0	P112b P112c		MP20		
0412	NÁBOJE PRO ZBRANĚ, s trhací náplní	1	1.4E		1.4		0	E0	P130 LP101	PP67 L1	MP21		
0413	NÁBOJE PRO ZBRANĚ, CVIČNÉ	1	1.2C		1		0	E0	P130		MP22		
0414	NÁPLNĚ HNACÍ, PRO DĚLA	1	1.2C		1		0	E0	P130		MP22		
0415	NÁPLNĚ HNACÍ	1	1.2C		1		0	E0	P143	PP76	MP22		
0417	NÁBOJE PRO ZBRANĚ, S INERTNÍ STŘELOU nebo NÁBOJE, MALORÁŽOVÉ	1	1.3C		1		0	E0	P130		MP22		
0418	SVĚTLICE, POZEMNÍ	1	1.1G		1		0	E0	P135		MP23		
0419	SVĚTLICE, POZEMNÍ	1	1.2G		1		0	E0	P135		MP23		
0420	SVĚTLICE, LETECKÉ	1	1.1G		1		0	E0	P135		MP23		
0421	SVĚTLICE, LETECKÉ	1	1.2G		1		0	E0	P135		MP23		
0424	STŘELY, inertní, se stopovkou	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23		
0425	STŘELY, inertní, se stopovkou	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0426	STŘELY, s trhavou náložkou nebo výmetnou náplní	1	1.2F		1		0	E0	P130		MP23		
0427	STŘELY, s trhavou náložkou nebo výmetnou náplní	1	1.4F		1.4		0	E0	P130		MP23		
0428	PŘEDMĚTY PYROTECHNICKÉ pro technické účely	1	1.1G		1		0	E0	P135		MP23 MP24		
0429	PŘEDMĚTY PYROTECHNICKÉ pro technické účely	1	1.2G		1		0	E0	P135		MP23 MP24		
0430	PŘEDMĚTY PYROTECHNICKÉ pro technické účely	1	1.3G		1		0	E0	P135		MP23 MP24		
0431	PŘEDMĚTY PYROTECHNICKÉ pro technické účely	1	1.4G		1.4		0	E0	P135		MP23 MP24		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0408	ZAPALOVAČE, DETONAČNÍ, s pojistným zařízením
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0409	ZAPALOVAČE, DETONAČNÍ, s pojistným zařízením
			2 (E)	V2		CV1 CV2 CV3	S1		0410	ZAPALOVAČE, DETONAČNÍ, s pojistným zařízením
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0411	PENTAERYTHRITETRANITRÁT (PENTAERYTHRITOL-TETRANITRÁT; PENTAERYTHRIT-TETRANITRÁT; PENTAERYTHRITOL-TETRANITRÁT; PETN), s nejméně 7 % hm. vosku
			2 (E)	V2		CV1 CV2 CV3	S1		0412	NÁBOJE PRO ZBRANĚ, s trhací náplní
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0413	NÁBOJE PRO ZBRANĚ, CVIČNÉ
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0414	NÁPLNĚ HNACÍ, PRO DĚLA
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0415	NÁPLNĚ HNACÍ
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0417	NÁBOJE PRO ZBRANĚ, S INERTNÍ STŘELOU nebo NÁBOJE, MALORÁŽOVÉ
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0418	SVĚTLICE, POZEMNÍ
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0419	SVĚTLICE, POZEMNÍ
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0420	SVĚTLICE, LETECKÉ
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0421	SVĚTLICE, LETECKÉ
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0424	STŘELY, inertní, se stopovkou
			2 (E)	V2		CV1 CV2 CV3	S1		0425	STŘELY, inertní, se stopovkou
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0426	STŘELY, s trhavou náložkou nebo výmetnou náplní
			2 (E)	V2		CV1 CV2 CV3	S1		0427	STŘELY, s trhavou náložkou nebo výmetnou náplní
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0428	PŘEDMĚTY PYROTECHNICKÉ pro technické účely
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0429	PŘEDMĚTY PYROTECHNICKÉ pro technické účely
			1 (C5000D)	V2		CV1 CV2 CV3	S1		0430	PŘEDMĚTY PYROTECHNICKÉ pro technické účely
			2 (E)	V2		CV1 CV2 CV3	S1		0431	PŘEDMĚTY PYROTECHNICKÉ pro technické účely

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
0432	PŘEDMĚTY PYROTECHNICKÉ pro technické účely	1	1.4S		1.4		0	E0	P135		MP23 MP24		
0433	PRACHOVINA SUROVÁ, VLNĚNÁ nejméně 17 % hm. alkoholu	1	1.1C		1	266	0	E0	P111		MP20		
0434	STŘELY, s trhavou náložkou nebo výmetnou náplní	1	1.2G		1		0	E0	P130 LP101	PP67 L1	MP23		
0435	STŘELY, s trhavou náložkou nebo výmetnou náplní	1	1.4G		1.4		0	E0	P130 LP101	PP67 L1	MP23		
0436	RAKETY s výmetnou náplní	1	1.2C		1		0	E0	P130 LP101	PP67 L1	MP22		
0437	RAKETY s výmetnou náplní	1	1.3C		1		0	E0	P130 LP101	PP67 L1	MP22		
0438	RAKETY s výmetnou náplní	1	1.4C		1.4		0	E0	P130 LP101	PP67 L1	MP22		
0439	NÁLOŽE, KUMULATIVNÍ, bez rozbušky	1	1.2D		1		0	E0	P137	PP70	MP21		
0440	NÁLOŽE, KUMULATIVNÍ, bez rozbušky	1	1.4D		1.4		0	E0	P137	PP70	MP21		
0441	NÁLOŽE, KUMULATIVNÍ, bez rozbušky	1	1.4S		1.4	347	0	E0	P137	PP70	MP23		
0442	NÁLOŽE, VÝBUŠNÉ, PRŮMYSLOVÉ, bez rozbušky	1	1.1D		1		0	E0	P137		MP21		
0443	NÁLOŽE, VÝBUŠNÉ, PRŮMYSLOVÉ, bez rozbušky	1	1.2D		1		0	E0	P137		MP21		
0444	NÁLOŽE, VÝBUŠNÉ, PRŮMYSLOVÉ, bez rozbušky	1	1.4D		1.4		0	E0	P137		MP21		
0445	NÁLOŽE, VÝBUŠNÉ, PRŮMYSLOVÉ, bez rozbušky	1	1.4S		1.4	347	0	E0	P137		MP23		
0446	NÁBOJNICE, SPALITELNÉ, PRÁZDNÉ, BEZ ZÁPALKY	1	1.4C		1.4		0	E0	P136		MP22		
0447	NÁBOJNICE, SPALITELNÉ, PRÁZDNÉ, BEZ ZÁPALKY	1	1.3C		1		0	E0	P136		MP22		
0448	KYSELINA 5-MERKAPTOTETRAZOL-1-OCTOVÁ	1	1.4C		1.4		0	E0	P114b		MP20		
0449	TORPÉDA, S KAPALNÝM PALIVEM, s nebo bez trhací náplně	1	1.1J		1		0	E0	P101		MP23		
0450	TORPÉDA, S KAPALNÝM PALIVEM, s inertní hlavicí	1	1.3J		1		0	E0	P101		MP23		
0451	TORPÉDA, s trhací náplní	1	1.1D		1		0	E0	P130 LP101	PP67 L1	MP21		
0452	GRANÁTY, CVIČNÉ, ruční nebo puškové	1	1.4G		1.4		0	E0	P141		MP23		
0453	RAKETY, TAHAČE LAN	1	1.4G		1.4		0	E0	P130		MP23		
0454	ZAŽEHOVAČE	1	1.4S		1.4		0	E0	P142		MP23		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			4 (E)			CV1 CV2 CV3	SI		0432	PŘEDMĚTY PYROTECHNICKÉ pro technické účely
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0433	PRACHOVINA SUROVÁ, VLNĚNÁ nejméně 17 % hm. alkoholu
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0434	STŘELY, s trhavou náložkou nebo výmetnou náplní
			2 (E)	V2		CV1 CV2 CV3	SI		0435	STŘELY, s trhavou náložkou nebo výmetnou náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0436	RAKETY s výmetnou náplní
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0437	RAKETY s výmetnou náplní
			2 (E)	V2		CV1 CV2 CV3	SI		0438	RAKETY s výmetnou náplní
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0439	NÁLOŽE, KUMULATIVNÍ, bez rozbušky
			2 (E)	V2		CV1 CV2 CV3	SI		0440	NÁLOŽE, KUMULATIVNÍ, bez rozbušky
			4 (E)			CV1 CV2 CV3	SI		0441	NÁLOŽE, KUMULATIVNÍ, bez rozbušky
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0442	NÁLOŽE, VÝBUŠNÉ, PRŮMYSLOVÉ, bez rozbušky
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0443	NÁLOŽE, VÝBUŠNÉ, PRŮMYSLOVÉ, bez rozbušky
			2 (E)	V2		CV1 CV2 CV3	SI		0444	NÁLOŽE, VÝBUŠNÉ, PRŮMYSLOVÉ, bez rozbušky
			4 (E)			CV1 CV2 CV3	SI		0445	NÁLOŽE, VÝBUŠNÉ, PRŮMYSLOVÉ, bez rozbušky
			2 (E)	V2		CV1 CV2 CV3	SI		0446	NÁBOJNICE, SPALITELNÉ, PRAZDNÉ, BEZ ZÁPALKY
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0447	NÁBOJNICE, SPALITELNÉ, PRAZDNÉ, BEZ ZÁPALKY
			2 (E)	V2		CV1 CV2 CV3	SI		0448	KYSELINA 5-MERKAPTOTETRAZOL-1-OCTOVÁ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0449	TORPÉDA, S KAPALNÝM PALIVEM, s nebo bez trhací náplně
			1 (C)	V2		CV1 CV2 CV3	SI		0450	TORPÉDA, S KAPALNÝM PALIVEM, s inertní hlavicí
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0451	TORPÉDA, s trhací náplní
			2 (E)	V2		CV1 CV2 CV3	SI		0452	GRANÁTY, CVIČNÉ, ruční nebo puškové
			2 (E)	V2		CV1 CV2 CV3	SI		0453	RAKETY, TAHAČE LAN
			4 (E)			CV1 CV2 CV3	SI		0454	ZAŽEHOVAČE

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
0455	ROZBUŠKY, NEELEKTRICKÉ, pro trhací práce	1	1.4S		1.4	347	0	E0	P131	PP68	MP23		
0456	ROZBUŠKY, ELEKTRICKÉ, pro trhací práce	1	1.4S		1.4	347	0	E0	P131		MP23		
0457	NÁLOŽE, TRHACÍ, S PLASTICKÝM POJIVEM	1	1.1D		1		0	E0	P130		MP21		
0458	NÁLOŽE, TRHACÍ, S PLASTICKÝM POJIVEM	1	1.2D		1		0	E0	P130		MP21		
0459	NÁLOŽE, TRHACÍ, S PLASTICKÝM POJIVEM	1	1.4D		1.4		0	E0	P130		MP21		
0460	NÁLOŽE, TRHACÍ, S PLASTICKÝM POJIVEM	1	1.4S		1.4	347	0	E0	P130		MP23		
0461	SOUČÁSTI ROZNĚTNÝCH ŘETĚZCŮ, J.N.	1	1.1B		1	178 274	0	E0	P101		MP2		
0462	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.1C		1	178 274	0	E0	P101		MP2		
0463	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.1D		1	178 274	0	E0	P101		MP2		
0464	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.1E		1	178 274	0	E0	P101		MP2		
0465	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.1F		1	178 274	0	E0	P101		MP2		
0466	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.2C		1	178 274	0	E0	P101		MP2		
0467	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.2D		1	178 274	0	E0	P101		MP2		
0468	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.2E		1	178 274	0	E0	P101		MP2		
0469	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.2F		1	178 274	0	E0	P101		MP2		
0470	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.3C		1	178 274	0	E0	P101		MP2		
0471	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.4E		1.4	178 274	0	E0	P101		MP2		
0472	PŘEDMĚTY VÝBUŠNÉ, J.N.	1	1.4F		1.4	178 274	0	E0	P101		MP2		
0473	LÁTKY VÝBUŠNÉ, J.N.	1	1.1A		1	178 274	0	E0	P101		MP2		
0474	LÁTKY VÝBUŠNÉ, J.N.	1	1.1C		1	178 274	0	E0	P101		MP2		
0475	LÁTKY VÝBUŠNÉ, J.N.	1	1.1D		1	178 274	0	E0	P101		MP2		
0476	LÁTKY VÝBUŠNÉ, J.N.	1	1.1G		1	178 274	0	E0	P101		MP2		
0477	LÁTKY VÝBUŠNÉ, J.N.	1	1.3C		1	178 274	0	E0	P101		MP2		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
			4 (E)			CV1 CV2 CV3	SI		0455	ROZBUŠKY, NEELEKTRICKÉ, pro trhací práce
			4 (E)			CV1 CV2 CV3	SI		0456	ROZBUŠKY, ELEKTRICKÉ, pro trhací práce
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0457	NÁLOŽE, TRHACÍ, S PLASTICKÝM POJIVEM
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0458	NÁLOŽE, TRHACÍ, S PLASTICKÝM POJIVEM
			2 (E)	V2		CV1 CV2 CV3	SI		0459	NÁLOŽE, TRHACÍ, S PLASTICKÝM POJIVEM
			4 (E)			CV1 CV2 CV3	SI		0460	NÁLOŽE, TRHACÍ, S PLASTICKÝM POJIVEM
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0461	SOUČÁSTI ROZNĚTNÝCH ŘETĚZCŮ, J.N.
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0462	PŘEDMĚTY VÝBUŠNÉ, J.N.
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0463	PŘEDMĚTY VÝBUŠNÉ, J.N.
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0464	PŘEDMĚTY VÝBUŠNÉ, J.N.
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0465	PŘEDMĚTY VÝBUŠNÉ, J.N.
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0466	PŘEDMĚTY VÝBUŠNÉ, J.N.
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0467	PŘEDMĚTY VÝBUŠNÉ, J.N.
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0468	PŘEDMĚTY VÝBUŠNÉ, J.N.
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0469	PŘEDMĚTY VÝBUŠNÉ, J.N.
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0470	PŘEDMĚTY VÝBUŠNÉ, J.N.
			2 (E)	V2		CV1 CV2 CV3	SI		0471	PŘEDMĚTY VÝBUŠNÉ, J.N.
			2 (E)	V2		CV1 CV2 CV3	SI		0472	PŘEDMĚTY VÝBUŠNÉ, J.N.
			0 (B)	V2		CV1 CV2 CV3	SI		0473	LÁTKY VÝBUŠNÉ, J.N.
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0474	LÁTKY VÝBUŠNÉ, J.N.
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0475	LÁTKY VÝBUŠNÉ, J.N.
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0476	LÁTKY VÝBUŠNÉ, J.N.
			1 (C5000D)	V2 V3		CV1 CV2 CV3	SI		0477	LÁTKY VÝBUŠNÉ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
0478	LÁTKY VÝBUŠNÉ, J.N.	1	1.3G		1	178 274	0	E0	P101		MP2		
0479	LÁTKY VÝBUŠNÉ, J.N.	1	1.4C		1.4	178 274	0	E0	P101		MP2		
0480	LÁTKY VÝBUŠNÉ, J.N.	1	1.4D		1.4	178 274	0	E0	P101		MP2		
0481	LÁTKY VÝBUŠNÉ, J.N.	1	1.4S		1.4	178 274	0	E0	P101		MP2		
0482	LÁTKY VÝBUŠNÉ, VELMI NECITLIVÉ (EVI), J.N.	1	1.5D		1.5	178 274	0	E0	P101		MP2		
0483	CYKLOTIMETHYLENTRINITRAMIN (CYKLONIT; HEXOGEN; RDX), ZNECITLIVĚNÝ	1	1.1D		1		0	E0	P112b P112c		MP20		
0484	CYKLOTETRAMETHYLENTRINITRAMIN (OKTOGEN; HMX), ZNECITLIVĚNÝ	1	1.1D		1		0	E0	P112b P112c		MP20		
0485	LÁTKY VÝBUŠNÉ, J.N.	1	1.4G		1.4	178 274	0	E0	P101		MP2		
0486	PŘEDMĚTY VÝBUŠNÉ, VELMI NECITLIVÉ (PŘEDMĚTY EEI)	1	1.6N		1.6		0	E0	P101		MP23		
0487	PROSTŘEDKY SIGNÁLNÍ, DÝMOVÉ	1	1.3G		1		0	E0	P135		MP23		
0488	MUNICE, CVIČNÁ	1	1.3G		1		0	E0	P130 LP101	PP67 L1	MP23		
0489	DINITROGLYKOLURIL (DINGU)	1	1.1D		1		0	E0	P112b P112c		MP20		
0490	OXYNITROTRIAZOL (ONTA)	1	1.1D		1		0	E0	P112b P112c		MP20		
0491	SLOŽE HNACÍ	1	1.4C		1.4		0	E0	P143	PP76	MP22		
0492	TŘASKAVKY, ŽELEZNIČNÍ	1	1.3G		1		0	E0	P135		MP23		
0493	TŘASKAVKY, ŽELEZNIČNÍ	1	1.4G		1.4		0	E0	P135		MP23		
0494	NÁLOŽE, KUMULATIVNÍ, PERFORAČNÍ, pro ropné vrty, bez rozbušky	1	1.4D		1.4		0	E0	P101		MP21		
0495	POHONNÁ HMOTA, KAPALNÁ	1	1.3C		1	224	0	E0	P115	PP53 PP54 PP57 PP58	MP20		
0496	OKTONAL	1	1.1D		1		0	E0	P112b P112c		MP20		
0497	POHONNÁ HMOTA, KAPALNÁ	1	1.1C		1	224	0	E0	P115	PP53 PP54 PP57 PP58	MP20		
0498	POHONNÁ HMOTA, TUHÁ	1	1.1C		1		0	E0	P114b		MP20		
0499	POHONNÁ HMOTA, TUHÁ	1	1.3C		1		0	E0	P114b		MP20		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
			1 (C5000D)	V2 V3		CV1 CV2 CV3	SI		0478	LÁTKY VÝBUŠNÉ, J.N.
			2 (E)	V2		CV1 CV2 CV3	SI		0479	LÁTKY VÝBUŠNÉ, J.N.
			2 (E)	V2		CV1 CV2 CV3	SI		0480	LÁTKY VÝBUŠNÉ, J.N.
			4 (E)			CV1 CV2 CV3	SI		0481	LÁTKY VÝBUŠNÉ, J.N.
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0482	LÁTKY VÝBUŠNÉ, VELMI NECITLIVÉ (EVI), J.N.
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0483	CYKLOTIMETHYLENTRINITRAMIN (CYKLONIT; HEXOGEN; RDX), ZNECITLIVĚNÝ
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0484	CYKLOTETRAMETHYLENTRINITRAMIN (OKTOGEN; HMX), ZNECITLIVĚNÝ
			2 (E)	V2 V3		CV1 CV2 CV3	SI		0485	LÁTKY VÝBUŠNÉ, J.N.
			2 (E)	V2		CV1 CV2 CV3	SI		0486	PŘEDMĚTY VÝBUŠNÉ, VELMI NECITLIVÉ (PŘEDMĚTY EEI)
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0487	PROSTŘEDKY SIGNALNÍ, DÝMOVÉ
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0488	MUNICE, CVIČNÁ
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0489	DINITROGLYKOLURIL (DINGU)
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0490	OXYNITROTRIAZOL (ONTA)
			2 (E)	V2		CV1 CV2 CV3	SI		0491	SLOŽE HNACÍ
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0492	TRÁSKAVKY, ŽELEZNIČNÍ
			2 (E)	V2		CV1 CV2 CV3	SI		0493	TRÁSKAVKY, ŽELEZNIČNÍ
			2 (E)	V2		CV1 CV2 CV3	SI		0494	NALOŽE, KUMULATIVNÍ, PERFORAČNÍ, pro ropné vrty, bez rozbušky
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0495	POHONNÁ HMOTA, KAPALNÁ
			1 (B1000C)	V2 V3		CV1 CV2 CV3	SI		0496	OKTONAL
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0497	POHONNÁ HMOTA, KAPALNÁ
			1 (B1000C)	V2		CV1 CV2 CV3	SI		0498	POHONNÁ HMOTA, TUHÁ
			1 (C5000D)	V2		CV1 CV2 CV3	SI		0499	POHONNÁ HMOTA, TUHÁ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
0500	ROZBUŠKOVÉ SESTAVY, NEELEKTRICKÉ, pro trhací práce	1	1.4S		1.4	347	0	E0	P131		MP23		
0501	POHONNÁ HMOTA, TUHÁ	1	1.4C		1.4		0	E0	P114b		MP20		
0502	RAKETY, s inertní hlavici	1	1.2C		1		0	E0	P130 LP101	PP67 L1	MP22		
0503	PLYNOVÉ GENERÁTORY AIRBAGŮ nebo MODULY AIRBAGŮ nebo PŘEDPÍNAČE BEZPEČNOSTNÍCH PÁSŮ	1	1.4G		1.4	235 289	0	E0	P135		MP23		
0504	1H-TETRAZOL	1	1.1D		1		0	E0	P112c	PP48	MP20		
0505	PROSTŘEDKY SIGNALNÍ, TÍSNOVÉ, lodní	1	1.4G		1.4		0	E0	P135		MP23 MP24		
0506	PROSTŘEDKY SIGNALNÍ, TÍSNOVÉ, lodní	1	1.4S		1.4		0	E0	P135		MP23 MP24		
0507	PROSTŘEDKY SIGNALNÍ, DÝMOVÉ	1	1.4S		1.4		0	E0	P135		MP23 MP24		
0508	1-HYDROXYBENZOTRIAZOL, BEZVODÝ, suchý nebo vlhčený méně než 20 % hm. vody	1	1.3C		1		0	E0	P114b	PP48 PP50	MP20		
0509	PRACH, BEZDÝMNÝ	1	1.4C		1.4		0	E0	P114b	PP48	MP20		
1001	ACETYLÉN, ROZPUŠTĚNÝ	2	4F		2.1		0	E0	P200		MP9		
1002	VZDUCH, STLAČENÝ	2	1A		2.2	655	120 ml	E1	P200		MP9	(M)	
1003	VZDUCH, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2	3O		2.2+5.1		0	E0	P203		MP9	T75	TP5 TP22
1005	AMONIAK (ČPAVEK), BEZVODÝ	2	2TC		2.3+8	23	0	E0	P200		MP9	(M) T50	
1006	ARGON, STLAČENÝ	2	1A		2.2	653	120 ml	E1	P200		MP9	(M)	
1008	FLUORID BORITÝ	2	2TC		2.3+8		0	E0	P200		MP9	(M)	
1009	BROMTRIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 13B1)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1010	BUTADIENY, STABILIZOVANÉ nebo BUTADIENY, SMĚS S UHLOVODÍKY, STABILIZOVANÁ, které mají při 70 °C tenzi par nepřesahující 1,1 MPa (11 bar) a jejichž hustota při 50 °C není nižší než 0,525 kg/l	2	2F		2.1	618	0	E0	P200		MP9	(M) T50	
1011	BUTAN	2	2F		2.1	652 657 660	0	E0	P200		MP9	(M) T50	
1012	BUTENY, SMĚS nebo 1-BUTEN nebo 2-BUTEN cis nebo 2-BUTEN trans	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1013	OXID UHLIČITÝ	2	2A		2.2	584 653	120 ml	E1	P200		MP9	(M)	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			4 (E)			CV1 CV2 CV3	S1		0500	ROZBUŠKOVÉ SESTAVY, NEELEKTRICKÉ, pro trhací práce
			2 (E)	V2		CV1 CV2 CV3	S1		0501	POHONNÁ HMOTA, TUHÁ
			1 (B1000C)	V2		CV1 CV2 CV3	S1		0502	RAKETY, s inertní hlavici
			2 (E)	V2		CV1 CV2 CV3	S1		0503	PLYNOVÉ GENERÁTORY AIRBAGŮ nebo MODULY AIRBAGŮ nebo PŘEDPÍNAČE BEZPEČNOSTNÍCH PÁSŮ
			1 (B1000C)	V2 V3		CV1 CV2 CV3	S1		0504	1H-TETRAZOL
			2 (E)	V2		CV1 CV2 CV3	S1		0505	PROSTŘEDKY SIGNALNÍ, TÍSNOVÉ, lodní
			4 (E)			CV1 CV2 CV3	S1		0506	PROSTŘEDKY SIGNALNÍ, TÍSNOVÉ, lodní
			4 (E)			CV1 CV2 CV3	S1		0507	PROSTŘEDKY SIGNALNÍ, DÝMOVÉ
			1 (C5000D)	V2 V3		CV1 CV2 CV3	S1		0508	1-HYDROXYBENZOTRIAZOL, BEZVODÝ, suchý nebo vlhčený méně než 20 % hm. vody
			2 (E)	V2		CV1 CV2 CV3	S1		0509	PRACH, BEZDÝMNÝ
PxBN(M)	TU17 TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2	239	1001	ACETYLÉN, ROZPUŠTĚNÝ
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10		20	1002	VZDUCH, STLAČENÝ
RxBN	TU7 TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	225	1003	VZDUCH, HLUBOCE ZCHLAZENÝ, KAPALNÝ
PxBH(M)	TA4 TT8 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	1005	AMONIAK (ČPAVEK), BEZVODÝ
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		20	1006	ARGON, STLAČENÝ
PxBH(M)	TA4 TT9 TT10	AT	1 (C/D)			CV9 CV10 CV36	S14	268	1008	FLUORID BORITÝ
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1009	BROMTRIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 13B1)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1010	BUTADIENY, STABILIZOVANÉ nebo BUTADIENY, SMĚS S UHLOVODÍKY, STABILIZOVANÁ, které mají při 70 °C tenzi par nepřesahující 1,1 MPa (11 bar) a jejichž hustota při 50 °C není nižší než 0,525 kg/l
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1011	BUTAN
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1012	BUTENY, SMĚS nebo 1-BUTEN nebo 2-BUTEN cis nebo 2-BUTEN trans
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1013	OXID UHLIČITÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřátá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1016	OXID UHELNATÝ, STLAČENÝ	2	1TF		2.3+2.1		0	E0	P200		MP9	(M)	
1017	CHLÓR	2	2TOC		2.3+5.1+8		0	E0	P200		MP9	(M) T50	TP19
1018	CHLORDIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 22)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1020	CHLORPENTAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 115)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1021	1-CHLOR-1,2,2,2-TETRAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 124)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1022	CHLORTRIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 13)	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
1023	SVÍTIPLYN, STLAČENÝ	2	1TF		2.3+2.1		0	E0	P200		MP9	(M)	
1026	DIKYAN	2	2TF		2.3+2.1		0	E0	P200		MP9	(M)	
1027	CYKLOPROPAN	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1028	DICHLORDIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 12)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1029	DICHLORFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 21)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1030	1,1-DIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 152a)	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1032	DIMETHYLAMIN, BEZVODÝ	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1033	DIMETHYLETHER	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1035	ETHAN	2	2F		2.1		0	E0	P200		MP9	(M)	
1036	ETHYLAMIN	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1037	CHLORETHAN (ETHYLCHLORID)	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1038	ETHYLEN, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2	3F		2.1		0	E0	P203		MP9	T75	TP5
1039	ETHYLMETHYLETHER	2	2F		2.1		0	E0	P200		MP9	(M)	
1040	ETHYLENOXID	2	2TF		2.3+2.1	342	0	E0	P200		MP9	(M)	
1040	ETHYLENOXID S DUSÍKEM, až do nejvýše přípustného celkového tlaku 1 MPa (10 bar) při 50 °C	2	2TF		2.3+2.1	342	0	E0	P200		MP9	(M) T50	TP20
1041	ETHYLENOXID A OXID UHLIČITÝ, SMĚS, s více než 9 %, ale nejvýše 87 % ethylenoxidu	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1043	HNOJIVO V ROZTOKU s volným epavkem	2	4A		2.2	642							

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
CxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1016	OXID UHELNATÝ, STLAČENÝ
P22DH(M)	TA4 TT9 TT10	AT	1 (C/D)			CV9 CV10 CV36	S14	265	1017	CHLÓR
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1018	CHLORDIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 22)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1020	CHLORPENTAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 115)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1021	1-CHLOR-1,2,2,2-TETRAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 124)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1022	CHLORTRIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 13)
CxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1023	SVÍTIPLYN, STLAČENÝ
PxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1026	DIKYAN
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1027	CYKLOPROPAN
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1028	DICHLORDIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 12)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1029	DICHLORFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 21)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1030	1,1-DIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 152a)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1032	DIMETHYLAMIN, BEZVODÝ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1033	DIMETHYLETHER
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1035	ETHAN
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1036	ETHYLAMIN
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1037	CHLORETHAN (ETHYLCHLORID)
RxBN	TU18 TA4 TT9	FL	2 (B/D)	V5		CV9 CV11 CV36	S2 S17	223	1038	ETHYLEN, HLUBOCE ZCHLAZENÝ, KAPALNÝ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1039	ETHYLMETHYLETHER
		FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1040	ETHYLENOXID
PxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1040	ETHYLENOXID S DUSIKEM, až do nejvýše přípustného celkového tlaku 1 MPa (10 bar) při 50 °C
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1041	ETHYLENOXID A OXID UHLIČITÝ, SMĚS, s více než 9 %, ale nejvýše 87 % ethylenoxidu
			(E)						1043	HNOJIVO V ROZTOKU s volným ěpavkem

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1044	PŘÍSTROJE HASIČÍ se stlačeným nebo zkapalněným plynem	2	6A		2.2	225 594	120 ml	E0	P003		MP9		
1045	FLUOR, STLAČENÝ	2	1TOC		2.3+5.1+8		0	E0	P200		MP9		
1046	HELIUM, STLAČENÉ	2	1A		2.2	653	120 ml	E1	P200		MP9	(M)	
1048	BROMOVODÍK, BEZVODÝ	2	2TC		2.3+8		0	E0	P200		MP9	(M)	
1049	VODÍK, STLAČENÝ	2	1F		2.1	660	0	E0	P200		MP9	(M)	
1050	CHLOROVODÍK, BEZVODÝ	2	2TC		2.3+8		0	E0	P200		MP9	(M)	
1051	KYANOVOVODÍK, STABILIZOVANÝ, obsahující méně než 3 % vody	6.1	TF1	1	6.1+3	603	0	E5	P200		MP2		
1052	FLUOROVODÍK, BEZVODÝ	8	CT1	1	8+6.1		0		P200		MP2	T10	TP2
1053	SIROVODÍK	2	2TF		2.3+2.1		0	E0	P200		MP9	(M)	
1055	ISOBUTEN	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1056	KRYPTON, STLAČENÝ	2	1A		2.2		120 ml	E1	P200		MP9	(M)	
1057	ZAPALOVAČE s hořlavým plynem nebo NÁDOBKY S NÁPLNÍ DO ZAPALOVAČŮ s hořlavým plynem	2	6F		2.1	201 654 658	0	E0	P002	PP84 RR5	MP9		
1058	PLYNY ZKAPALNĚNÉ, nehořlavé, překryté dusíkem, oxidem uhličitým nebo vzduchem	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
1060	METHYLACETYLEN A PROPADIEN, SMĚS, STABILIZOVANÁ (směs P1 nebo směs P2)	2	2F		2.1	581	0	E0	P200		MP9	(M) T50	
1061	METHYLAMIN, BEZVODÝ	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1062	BROMMETHAN (METHYLBROMID), s nejvýše 2 % chlorpikrinu	2	2T		2.3	23	0	E0	P200		MP9	(M) T50	
1063	CHLORMETHAN (METHYLCHLORID) (PLYN JAKO CHLADICÍ PROSTŘEDEK R 40)	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1064	METHANTHIOL (METHYLMERKAPTAN)	2	2TF		2.3+2.1		0	E0	P200		MP9	(M) T50	
1065	NEON, STLAČENÝ	2	1A		2.2		120 ml	E1	P200		MP9	(M)	
1066	DUSÍK, STLAČENÝ	2	1A		2.2	653	120 ml	E1	P200		MP9	(M)	
1067	OXID DUSÍČITÝ	2	2TOC		2.3+5.1+8		0	E0	P200		MP9	T50	TP21

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			3 (E)			CV9			1044	PŘÍSTROJE HASIČI se stlačeným nebo zkapalněným plynem
			1 (D)			CV9 CV10 CV36	S14		1045	FLUOR, STLAČENÝ
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		20	1046	HELIUM, STLAČENÉ
PxBH(M)	TA4 TT9 TT10	AT	1 (C/D)			CV9 CV10 CV36	S14	268	1048	BROMOVODÍK, BEZVODÝ
CxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1049	VODÍK, STLAČENÝ
PxBH(M)	TA4 TT9 TT10	AT	1 (C/D)			CV9 CV10 CV36	S14	268	1050	CHLOROVODÍK, BEZVODÝ
			0 (D)			CV1 CV13 CV28	S2 S9 S10 S14		1051	KYANOVODÍK, STABILIZOVANÝ, obsahující méně než 3 % vody
L21DH(+)	TU14 TU34 TC1 TE21 TA4 TT9 TM3	AT	1 (C/D)			CV13 CV28 CV34	S17	886	1052	FLUOROVODÍK, BEZVODÝ
PxDH(M)	TA4 TT9 TT10	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1053	SIROVODÍK
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1055	ISOBUTEN
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		20	1056	KRYPTON, STLAČENÝ
			2 (D)			CV9	S2		1057	ZAPALOVAČE s hořlavým plynem nebo NÁDOBKY S NÁPLNÍ DO ZAPALOVAČŮ s hořlavým plynem
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1058	PLYNÝ ZKAPALNĚNÉ, nehořlavé, překryté dusíkem, oxidem uhličitým nebo vzduchem
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1060	METHYLACETYLEN A PROPADIEN, SMĚS, STABILIZOVANÁ (směs P1 nebo směs P2)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1061	METHYLAMIN, BEZVODÝ
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	1062	BROMMETHAN (METHYLBROMID), s nejvýše 2 % chlorkyprinu
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1063	CHLORMETHAN (METHYLCHLORID) (PLYN JAKO CHLADICÍ PROSTŘEDEK R 40)
PxDH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1064	METHANTHIOL (METHYLMERKAPTAN)
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		20	1065	NEON, STLAČENÝ
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		20	1066	DUSÍK, STLAČENÝ
PxBH(M)	TU17 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	1067	OXID DUSIČITÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1069	CHLORID NITROSYLU (NITROSYLCHLORID)	2	2TC		2.3+8		0	E0	P200		MP9		
1070	OXID DUSNÝ (RAJSKÝ PLYN)	2	2O		2.2+5.1	584	0	E0	P200		MP9	(M)	
1071	PLYN ROPNÝ, STLAČENÝ	2	1TF		2.3+2.1		0	E0	P200		MP9	(M)	
1072	KYSLÍK, STLAČENÝ	2	1O		2.2+5.1	355 655	0	E0	P200		MP9	(M)	
1073	KYSLÍK, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2	3O		2.2+5.1		0	E0	P203		MP9	T75	TP5 TP22
1075	PLYNY ROPNÉ, ZKAPALNĚNÉ	2	2F		2.1	274 583 639 660	0	E0	P200		MP9	(M) T50	
1076	FOSGEN	2	2TC		2.3+8		0	E0	P200		MP9		
1077	PROPEN	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1078	PLYN JAKO CHLADICÍ PROSTŘEDEK, J.N. (směs F1, směs F2 nebo směs F3)	2	2A		2.2	274 582	120 ml	E1	P200		MP9	(M) T50	
1079	OXID SIŘIČITÝ	2	2TC		2.3+8		0	E0	P200		MP9	(M) T50	TP19
1080	FLUORID SIŘOVÝ	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
1081	TETRAFLUORETHYLEN, STABILIZOVANÝ	2	2F		2.1		0	E0	P200		MP9	(M)	
1082	CHLORTRIFLUORETHYLEN, STABILIZOVANÝ	2	2TF		2.3+2.1		0	E0	P200		MP9	(M) T50	
1083	TRIMETHYLAMIN, BEZVODÝ	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1085	VINYLBROMID, STABILIZOVANÝ	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1086	VINYLCHLORID, STABILIZOVANÝ	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1087	VINYLMETHYLETER, STABILIZOVANÝ	2	2F		2.1		0	E0	P200		MP9	(M) T50	
1088	ACETAL	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1089	ACETALDEHYD	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2 TP7
1090	ACETON	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1091	ACETONOVÉ OLEJE	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1092	AKROLEIN, STABILIZOVANÝ	6.1	TF1	I	6.1+3	354	0	E0	P601		MP8 MP17	T22	TP2 TP7 TP35

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (D)			CV9 CV10 CV36	S14		1069	CHLORID NITROSYLU (NITROSYLCHLORID)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		25	1070	OXID DUSNÝ (RAJSKÝ PLYN)
CxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1071	PLYN ROPNÝ, STLAČENÝ
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		25	1072	KYSLÍK, STLAČENÝ
RxBN	TU7 TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	225	1073	KYSLÍK, HLUBOCE ZCHLAZENÝ, KAPALNÝ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1075	PLYNY ROPNÉ, ZKAPALNĚNÉ
P22DH(M)	TU17 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	1076	FOSGEN
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1077	PROPEN
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1078	PLYN JAKO CHLADICÍ PROSTŘEDEK, J.N. (směs F1, směs F2 nebo směs F3)
PxDH(M)	TA4 TT9 TT10	AT	1 (C/D)			CV9 CV10 CV36	S14	268	1079	OXID SIŘIČITÝ
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1080	FLUORID SÍROVÝ
PxBN(M)	TU40 TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1081	TETRAFLUORETHYLEN, STABILIZOVANÝ
PxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1082	CHLORTRIFLUORETHYLEN, STABILIZOVANÝ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1083	TRIMETHYLAMIN, BEZVODÝ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1085	VINYLBROMID, STABILIZOVANÝ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1086	VINYLCHLORID, STABILIZOVANÝ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1087	VINYLMETHYLETER, STABILIZOVANÝ
LGBF		FL	2 (D/E)				S2 S20	33	1088	ACETAL
L4BN	TU8	FL	1 (D/E)				S2 S20	33	1089	ACETALDEHYD
LGBF		FL	2 (D/E)				S2 S20	33	1090	ACETON
LGBF		FL	2 (D/E)				S2 S20	33	1091	ACETONOVÉ OLEJE
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1092	AKROLEIN, STABILIZOVANÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1093	AKRYLONITRIL, STABILIZOVANÝ	3	FT1	I	3+6.1		0	E0	P001		MP7 MP17	T14	TP2
1098	ALLYLALKOHOL	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
1099	ALLYLBROMID	3	FT1	I	3+6.1		0	E0	P001		MP7 MP17	T14	TP2
1100	ALLYLCHLORID	3	FT1	I	3+6.1		0	E0	P001		MP7 MP17	T14	TP2
1104	AMYLACETÁTY (AMYL-ACETÁTY)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1105	PENTANOLY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP29
1105	PENTANOLY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1106	AMYLAMIN	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
1106	AMYLAMIN	3	FC	III	3+8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
1107	AMYLCHLORID	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1108	1-PENTEN (n-AMYLEN)	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
1109	AMYLFORMIÁTY (AMYL-FORMIÁTY)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1110	n-AMYLMETHYLKETON	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1111	AMYLMERKAPTAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1112	AMYLNITRÁT (AMYL-NITRÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1113	AMYLNITRIT (AMYL-NITRIT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1114	BENZEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1120	BUTANOLY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP29
1120	BUTANOLY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1123	BUTYLACETÁTY (BUTYL-ACETÁTY)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1123	BUTYLACETÁTY (BUTYL-ACETÁTY)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1093	AKRYLONITRIL, STABILIZOVANÝ
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1098	ALLYLALKOHOL
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1099	ALLYLBROMID
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1100	ALLYLCHLORID
LGBF		FL	3 (D/E)	V12			S2	30	1104	AMYLACETÁTY (AMYL-ACETÁTY)
LGBF		FL	2 (D/E)				S2 S20	33	1105	PENTANOLY
LGBF		FL	3 (D/E)	V12			S2	30	1105	PENTANOLY
L4BH		FL	2 (D/E)				S2 S20	338	1106	AMYLAMIN
L4BN		FL	3 (D/E)	V12			S2	38	1106	AMYLAMIN
LGBF		FL	2 (D/E)				S2 S20	33	1107	AMYLCHLORID
L4BN		FL	1 (D/E)				S2 S20	33	1108	1-PENTEN (n-AMYLEN)
LGBF		FL	3 (D/E)	V12			S2	30	1109	AMYLFORMIÁTY (AMYL-FORMIÁTY)
LGBF		FL	3 (D/E)	V12			S2	30	1110	n-AMYLMETHYLKETON
LGBF		FL	2 (D/E)				S2 S20	33	1111	AMYLMERKAPTAN
LGBF		FL	3 (D/E)	V12			S2	30	1112	AMYLNITRÁT (AMYL-NITRÁT)
LGBF		FL	2 (D/E)				S2 S20	33	1113	AMYLNITRIT (AMYL-NITRIT)
LGBF		FL	2 (D/E)				S2 S20	33	1114	BENZEN
LGBF		FL	2 (D/E)				S2 S20	33	1120	BUTANOLY
LGBF		FL	3 (D/E)	V12			S2	30	1120	BUTANOLY
LGBF		FL	2 (D/E)				S2 S20	33	1123	BUTYLACETÁTY (BUTYL-ACETÁTY)
LGBF		FL	3 (D/E)	V12			S2	30	1123	BUTYLACETÁTY (BUTYL-ACETÁTY)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1125	n-BUTYLAMIN	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
1126	1-BROMBUTAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1127	CHLORBUTANY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1128	n-BUTYLFORMIÁT (n-BUTYL-FORMIÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1129	BUTYRALDEHYD	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1130	OLEJ KAFROVÝ	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1131	SIROUHLÍK	3	FT1	I	3+6.1		0	E0	P001	PP31	MP7 MP17	T14	TP2 TP7
1133	LEPIDLA s hoflavou kapalnou látkou	3	F1	I	3		500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP27
1133	LEPIDLA s hoflavou kapalnou látkou (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	640C	5 L	E2	P001	PP1	MP19	T4	TP1 TP8
1133	LEPIDLA s hoflavou kapalnou látkou (tenze par při 50 °C nepřevyšuje 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001	PP1	MP19	T4	TP1 TP8
1133	LEPIDLA s hoflavou kapalnou látkou	3	F1	III	3	640E	5 L	E1	P001 IBC03 LP01 R001	PP1	MP19	T2	TP1
1133	LEPIDLA s hoflavou kapalnou látkou (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	3	F1	III	3	640F	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1
1133	LEPIDLA s hoflavou kapalnou látkou (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	3	F1	III	3	640G	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1
1133	LEPIDLA s hoflavou kapalnou látkou (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	III	3	640H	5 L	E1	P001 IBC02 LP01 R001	PP1	MP19	T2	TP1
1134	CHLORBENZEN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1135	ETHYLENCHLORHYDRIN	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
1136	OLEJE DEHTOVÉ, HOŘLAVÉ	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1136	OLEJE DEHTOVÉ, HOŘLAVÉ	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
1139	OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karosérii vozidel nebo vnitřní nátěry sudů)	3	F1	I	3		500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP27

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH		FL	2 (D/E)				S2 S20	338	1125	n-BUTYLAMIN
LGBF		FL	2 (D/E)				S2 S20	33	1126	1-BROMBUTAN
LGBF		FL	2 (D/E)				S2 S20	33	1127	CHLORBUTANY
LGBF		FL	2 (D/E)				S2 S20	33	1128	n-BUTYLFORMIÁT (n-BUTYL-FORMIÁT)
LGBF		FL	2 (D/E)				S2 S20	33	1129	BUTYRALDEHYD
LGBF		FL	3 (D/E)	V12			S2	30	1130	OLEJ KAFROVÝ
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1131	SIROUHLÍK
L4BN		FL	1 (D/E)				S2 S20	33	1133	LEPIDLA s hořlavou kapalnou látkou
L1,5BN		FL	2 (D/E)				S2 S20	33	1133	LEPIDLA s hořlavou kapalnou látkou (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1133	LEPIDLA s hořlavou kapalnou látkou (tenze par při 50 °C nepřevyšuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1133	LEPIDLA s hořlavou kapalnou látkou
L4BN		FL	3 (D/E)				S2	33	1133	LEPIDLA s hořlavou kapalnou látkou (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)
L1,5BN		FL	3 (D/E)				S2	33	1133	LEPIDLA s hořlavou kapalnou látkou (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)
LGBF		FL	3 (D/E)				S2	33	1133	LEPIDLA s hořlavou kapalnou látkou (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1134	CHLORBENZEN
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1135	ETHYLENCHLORHYDRIN
LGBF		FL	2 (D/E)				S2 S20	33	1136	OLEJE DEHTOVÉ, HOŘLAVÉ
LGBF		FL	3 (D/E)	V12			S2	30	1136	OLEJE DEHTOVÉ, HOŘLAVÉ
L4BN		FL	1 (D/E)				S2 S20	33	1139	OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karosérií vozidel nebo vnitřní nátěry sudů)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1139	OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserií vozidel nebo vnitřní nátěry sudů) (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	640C	5 L	E2	P001		MP19	T4	TP1 TP8
1139	OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserií vozidel nebo vnitřní nátěry sudů) (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1139	OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserií vozidel nebo vnitřní nátěry sudů)	3	F1	III	3	640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1139	OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserií vozidel nebo vnitřní nátěry sudů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	3	F1	III	3	640F	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1139	OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserií vozidel nebo vnitřní nátěry sudů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	3	F1	III	3	640G	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1139	OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserií vozidel nebo vnitřní nátěry sudů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	III	3	640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T2	TP1
1143	KROTONALDEHYD nebo KROTONALDEHYD, STABILIZOVANÝ	6.1	TF1	I	6.1+3	324 354	0	E0	P602		MP8 MP17	T20	TP2 TP35
1144	KROTONYLEN	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
1145	CYKLOHEXAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1146	CYKLOPENTAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1
1147	DEKAHYDRONAFTALEN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1148	DIACETONALKOHOL	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1148	DIACETONALKOHOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
L1,5BN		FL	2 (D/E)				S2 S20	33	1139	OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserii vozidel nebo vnitřní nátěry sudů) (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1139	OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserii vozidel nebo vnitřní nátěry sudů) (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1139	OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserii vozidel nebo vnitřní nátěry sudů)
L4BN		FL	3 (D/E)				S2	33	1139	OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserii vozidel nebo vnitřní nátěry sudů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)
L1,5BN		FL	3 (D/E)				S2	33	1139	OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserii vozidel nebo vnitřní nátěry sudů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)
LGBF		FL	3 (D/E)				S2	33	1139	OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserii vozidel nebo vnitřní nátěry sudů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1143	KROTONALDEHYD nebo KROTONALDEHYD, STABILIZOVANÝ
L4BN		FL	1 (D/E)				S2 S20	339	1144	KROTONYLEN
LGBF		FL	2 (D/E)				S2 S20	33	1145	CYKLOHEXAN
LGBF		FL	2 (D/E)				S2 S20	33	1146	CYKLOPENTAN
LGBF		FL	3 (D/E)	V12			S2	30	1147	DEKAHYDRONAFTALEN
LGBF		FL	2 (D/E)				S2 S20	33	1148	DIACETONALKOHOL
LGBF		FL	3 (D/E)	V12			S2	30	1148	DIACETONALKOHOL

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1149	DIBUTYLETHERY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1150	1,2-DICHLORETHYLEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP2
1152	DICHLORPENTANY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1153	ETHYLENGLYKOLDIETHYLETHER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1153	ETHYLENGLYKOLDIETHYLETHER	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1154	DIETHYLAMIN	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
1155	DIETHYLETHER (ETHYLETHER)	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
1156	DIETHYLKETON	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1157	DIISOBUTYLKETON	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1158	DIISOPROPYLAMIN	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
1159	DIISOPROPYLETHER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1160	DIMETHYLAMIN, VODNÝ ROZTOK	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
1161	DIMETHYLKARBONÁT (DIMETHYLKARBONÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1162	DIMETHYLDICHLORSILAN	3	FC	II	3+8		0	E0	P010		MP19	T10	TP2 TP7
1163	DIMETHYLHYDRAZIN, ASYMETRICKÝ	6.1	TFC	I	6.1+3+8	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
1164	DIMETHYLSULFID	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T7	TP2
1165	DIOXAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1166	DIOXOLAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1167	DIVINYLETHER, STABILIZOVANÝ	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
1169	EXTRAKTY AROMATICKÉ, KAPALNÉ (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	601 640C	5 L	E2	P001		MP19	T4	TP1 TP8
1169	EXTRAKTY AROMATICKÉ, KAPALNÉ (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	601 640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1169	EXTRAKTY AROMATICKÉ, KAPALNÉ	3	F1	III	3	601 640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1169	EXTRAKTY AROMATICKÉ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	3	F1	III	3	601 640F	5 L	E1	P001 LP01 R001		MP19	T2	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	(4.3.5, 6.8.4)	(9.1.1.2)	(1.1.3.6 (8.6))	(7.2.4)	(7.3.3)	(7.5.11)	(8.5)	(5.3.2.3)		(3.1.2)
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	3 (D/E)	V12			S2	30	1149	DIBUTYLETERY
LGBF		FL	2 (D/E)				S2 S20	33	1150	1,2-DICHCLORETHYLEN
LGBF		FL	3 (D/E)	V12			S2	30	1152	DICHLORPENTANY
LGBF		FL	2 (D/E)				S2 S20	33	1153	ETHYLENGLYKOLDIETHYLETER
LGBF		FL	3 (D/E)	V12			S2	30	1153	ETHYLENGLYKOLDIETHYLETER
L4BH		FL	2 (D/E)				S2 S20	338	1154	DIETHYLAMIN
L4BN		FL	1 (D/E)				S2 S20	33	1155	DIETHYLETER (ETHYLETER)
LGBF		FL	2 (D/E)				S2 S20	33	1156	DIETHYLKETON
LGBF		FL	3 (D/E)	V12			S2	30	1157	DIISOBUTYLKETON
L4BH		FL	2 (D/E)				S2 S20	338	1158	DIISOPROPYLAMIN
LGBF		FL	2 (D/E)				S2 S20	33	1159	DIISOPROPYLETER
L4BH		FL	2 (D/E)				S2 S20	338	1160	DIMETHYLAMIN, VODNÝ ROZTOK
LGBF		FL	2 (D/E)				S2 S20	33	1161	DIMETHYLKARBONÁT (DIMETHYLKARBONÁT)
L4BH		FL	2 (D/E)				S2 S20	X338	1162	DIMETHYLDICHLORSILAN
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1163	DIMETHYLHYDRAZIN, ASYMETRICKÝ
L1,5BN		FL	2 (D/E)				S2 S20	33	1164	DIMETHYLSULFID
LGBF		FL	2 (D/E)				S2 S20	33	1165	DIOXAN
LGBF		FL	2 (D/E)				S2 S20	33	1166	DIOXOLAN
L4BN		FL	1 (D/E)				S2 S20	339	1167	DIVINYLETER, STABILIZOVANÝ
L1,5BN		FL	2 (D/E)				S2 S20	33	1169	EXTRAKTY AROMATICKÉ, KAPALNÉ (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1169	EXTRAKTY AROMATICKÉ, KAPALNÉ (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1169	EXTRAKTY AROMATICKÉ, KAPALNÉ
L4BN		FL	3 (D/E)				S2	33	1169	EXTRAKTY AROMATICKÉ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1169	EXTRAKTY AROMATICKÉ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	3	F1	III	3	601 640G	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1169	EXTRAKTY AROMATICKÉ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	III	3	601 640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T2	TP1
1170	ETHANOL (ETHYLALKOHOL) nebo ETHANOL, ROZTOK (ETHYLALKOHOL, ROZTOK)	3	F1	II	3	144 601	1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1170	ETHANOL, ROZTOK (ETHYLALKOHOL, ROZTOK)	3	F1	III	3	144 601	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1171	ETHYLENGLYKOLMONOETHYLETER	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1172	ETHYLENGLYKOLMONOETHYLETERACETÁT (ETHYLENGLYKOLMONOETHYLETER-ACETÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1173	ETHYLACETÁT (ETHYL-ACETÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1175	ETHYLBENZEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1176	TRIETHYLBORÁT (TRIETHYLBORÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1177	2-ETHYLBUTYLACETÁT (2-ETHYLBUTYL-ACETÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1178	2-ETHYLBUTYRALDEHYD	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1179	ETHYLBUTYLETER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1180	ETHYLBUTYRÁT (ETHYLBUTYRÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1181	ETHYLCHLORACETÁT (ETHYLCHLORACETÁT)	6.1	TF1	II	6.1+3		100 ml	E4	P001 IBC02		MP15	T7	TP2
1182	ETHYLCHLORFORMIÁT (ETHYLCHLORFORMIÁT)	6.1	TFC	I	6.1+3+8	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
1183	ETHYLDICHLORSILAN	4.3	WFC	I	4.3+3+8		0	E0	P401	RR7	MP2	T14	TP2 TP7
1184	ETHYLENDICHLORID	3	FT1	II	3+6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
1185	ETHYLENIMIN, STABILIZOVANÝ	6.1	TF1	I	6.1+3	354	0	E0	P601		MP2	T22	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
L1,5BN		FL	3 (D/E)				S2	33	1169	EXTRAKTY AROMATICKÉ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)
LGBF		FL	3 (D/E)				S2	33	1169	EXTRAKTY AROMATICKÉ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1170	ETHANOL (ETHYLALKOHOL) nebo ETHANOL, ROZTOK (ETHYLALKOHOL, ROZTOK)
LGBF		FL	3 (D/E)	V12			S2	30	1170	ETHANOL, ROZTOK (ETHYLALKOHOL, ROZTOK)
LGBF		FL	3 (D/E)	V12			S2	30	1171	ETHYLENGLYKOLMONOETHYLETER
LGBF		FL	3 (D/E)	V12			S2	30	1172	ETHYLENGLYKOLMONOETHYLETERACETÁT (ETHYLENGLYKOLMONOETHYLETER-ACETÁT)
LGBF		FL	2 (D/E)				S2 S20	33	1173	ETHYLACETÁT (ETHYL-ACETÁT)
LGBF		FL	2 (D/E)				S2 S20	33	1175	ETHYLBENZEN
LGBF		FL	2 (D/E)				S2 S20	33	1176	TRIETHYLBORÁT (TRIETHYL-BORÁT)
LGBF		FL	3 (D/E)	V12			S2	30	1177	2-ETHYLBUTYLACETÁT (2-ETHYLBUTYL-ACETÁT)
LGBF		FL	2 (D/E)				S2 S20	33	1178	2-ETHYLBUTYRALDEHYD
LGBF		FL	2 (D/E)				S2 S20	33	1179	ETHYLBUTYLETER
LGBF		FL	3 (D/E)	V12			S2	30	1180	ETHYLBUTYRÁT (ETHYL-BUTYRÁT)
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	1181	ETHYLCHLORACETÁT (ETHYL-CHLORACETÁT)
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1182	ETHYLCHLORFORMIÁT (ETHYL-CHLORFORMIÁT)
L10DH	TU14 TU23 TE21 TM2 TM3	FL	0 (B/E)	V1		CV23	S2 S20	X338	1183	ETHYLDICHLORSILAN
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	1184	ETHYLENDICHLORID
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1185	ETHYLENIMIN, STABILIZOVANÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1188	ETHYLENGLYKOLMONOMETHYLETHER	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1189	ETHYLENGLYKOLMONOMETHYLETHERACETÁT (ETHYLENGLYKOLMONOMETHYLETHER-ACETÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1190	ETHYLFORMIÁT (ETHYL-FORMIÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1191	OKTYLALDEHYDY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1192	ETHYLLAKTÁT (ETHYL-LAKTÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1193	ETHYLMETHYLKETON (METHYLETHYLKETON)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1194	ETHYLNITRIT, ROZTOK (ETHYLNITRIT, ROZTOK)	3	FT1	I	3+6.1		0	E0	P001		MP7 MP17		
1195	ETHYLPROPIONÁT (ETHYLPROPIONÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1196	ETHYLTRICHLORSILAN	3	FC	II	3+8		0	E0	P010		MP19	T10	TP2 TP7
1197	EXTRAKTY OCHUCOVACÍ, KAPALNÉ (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	601 640C	5 L	E2	P001		MP19	T4	TP1 TP8
1197	EXTRAKTY OCHUCOVACÍ, KAPALNÉ (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	601 640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1197	EXTRAKTY OCHUCOVACÍ, KAPALNÉ	3	F1	III	3	601 640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1197	EXTRAKTY OCHUCOVACÍ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	3	F1	III	3	601 640F	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1197	EXTRAKTY OCHUCOVACÍ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	3	F1	III	3	601 640G	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1197	EXTRAKTY OCHUCOVACÍ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	III	3	601 640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T2	TP1
1198	FORMALDEHYD, ROZTOK, HOŘLAVÝ	3	FC	III	3+8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
1199	FURALDEHYDY	6.1	TF1	II	6.1+3		100 ml	E4	P001 IBC02		MP15	T7	TP2
1201	PŘIBOUDLINA	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1201	PŘIBOUDLINA	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis	
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz				
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)	
LGBF		FL	3 (D/E)	V12				S2	30	1188	ETHYLENGLYKOLMONOMETHYLETER
LGBF		FL	3 (D/E)	V12				S2	30	1189	ETHYLENGLYKOLMONOMETHYLETERACETÁT (ETHYLENGLYKOLMONOMETHYLETERACETÁT)
LGBF		FL	2 (D/E)					S2 S20	33	1190	ETHYLFORMIÁT (ETHYL-FORMIÁT)
LGBF		FL	3 (D/E)	V12				S2	30	1191	OKTYLALDEHYDY
LGBF		FL	3 (D/E)	V12				S2	30	1192	ETHYLLAKTÁT (ETHYL-LAKTÁT)
LGBF		FL	2 (D/E)					S2 S20	33	1193	ETHYLMETHYLKETON (METHYLETHYLKETON)
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28		S2 S22	336	1194	ETHYLNITRIT, ROZTOK (ETHYL-NITRIT, ROZTOK)
LGBF		FL	2 (D/E)					S2 S20	33	1195	ETHYLPROPIONÁT (ETHYL-PROPIONÁT)
L4BH		FL	2 (D/E)					S2 S20	X338	1196	ETHYLTRICHLORSILAN
L1,5BN		FL	2 (D/E)					S2 S20	33	1197	EXTRAKTY OCHUCOVACÍ, KAPALNÉ (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)					S2 S20	33	1197	EXTRAKTY OCHUCOVACÍ, KAPALNÉ (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12				S2	30	1197	EXTRAKTY OCHUCOVACÍ, KAPALNÉ
L4BN		FL	3 (D/E)					S2	33	1197	EXTRAKTY OCHUCOVACÍ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)
L1,5BN		FL	3 (D/E)					S2	33	1197	EXTRAKTY OCHUCOVACÍ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)
LGBF		FL	3 (D/E)					S2	33	1197	EXTRAKTY OCHUCOVACÍ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)
L4BN		FL	3 (D/E)	V12				S2	38	1198	FORMALDEHYD, ROZTOK, HOŘLAVÝ
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28		S2 S9 S19	63	1199	FURALDEHYDY
LGBF		FL	2 (D/E)					S2 S20	33	1201	PŘIBOUDLINA
LGBF		FL	3 (D/E)	V12				S2	30	1201	PŘIBOUDLINA

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1202	PALIVO PRO VZNETOVÉ MOTORY nebo OLEJ PLYNOVÝ nebo OLEJ TOPNÝ, LEHKÝ, s bodem vzplanutí nižším než 60 °C	3	F1	III	3	363 640K	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1202	PALIVO PRO VZNETOVÉ MOTORY nebo NAFTA MOTOROVÁ, vyhovující normě EN 590:2004 nebo OLEJ PLYNOVÝ nebo OLEJ TOPNÝ, LEHKÝ, s bodem vzplanutí, specifikovaným v normě EN 590:2004	3	F1	III	3	363 640L	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1202	PALIVO PRO VZNETOVÉ MOTORY nebo OLEJ PLYNOVÝ nebo OLEJ TOPNÝ, LEHKÝ, s bodem vzplanutí více než 60 °C ale méně než 100 °C	3	F1	III	3	363 640M	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1203	BENZÍN nebo PALIVO PRO ZÁŽEHOVÉ MOTORY	3	F1	II	3	243 363 534	1 L	E2	P001 IBC02 R001	BB2	MP19	T4	TP1
1204	NITROGLYCERIN, ROZTOK V ALKOHOLU, s nejvýše 1 % nitroglycerinu	3	D	II	3	601	1 L	E0	P001 IBC02	PP5	MP2		
1206	HEPTANY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1207	HEXALDEHYD	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1208	HEXANY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1210	BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOČNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel nebo rozpouštědel tiskařských barev), hořlavé	3	F1	I	3	163	500 ml	E3	P001		MP7 MP17	T11	TP1 TP8
1210	BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOČNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel nebo rozpouštědel tiskařských barev), hořlavé (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	163 640C	5 L	E2	P001	PP1	MP19	T4	TP1 TP8
1210	BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOČNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel a rozpouštědel tiskařských barev), hořlavé (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	163 640D	5 L	E2	P001 IBC02 R001	PP1	MP19	T4	TP1 TP8
1210	BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOČNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel a rozpouštědel tiskařských barev), hořlavé	3	F1	III	3	163 640E	5 L	E1	P001 IBC03 LP01 R001	PP1	MP19	T2	TP1
1210	BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOČNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel a rozpouštědel tiskařských barev), hořlavé (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	3	F1	III	3	163 640F	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis	
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz				
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)	
LGBF		FL	3 (D/E)	V12				S2	30	1202	PALIVO PRO VZNĚTOVÉ MOTORY nebo OLEJ PLYNOVÝ nebo OLEJ TOPNÝ, LEHKÝ, s bodem vzplanutí nižším než 60 °C
LGBF		AT	3 (D/E)	V12				S2	30	1202	PALIVO PRO VZNĚTOVÉ MOTORY nebo NAFTA MOTOROVÁ, vyhovující normě EN 590:2004 nebo OLEJ PLYNOVÝ nebo OLEJ TOPNÝ, LEHKÝ, s bodem vzplanutí, specifikovaným v normě EN 590:2004
LGBV		AT	3 (D/E)	V12					30	1202	PALIVO PRO VZNĚTOVÉ MOTORY nebo OLEJ PLYNOVÝ nebo OLEJ TOPNÝ, LEHKÝ, s bodem vzplanutí více než 60 °C ale méně než 100 °C
LGBF	TU9	FL	2 (D/E)					S2 S20	33	1203	BENZÍN nebo PALIVO PRO ZÁŽEHOVÉ MOTORY
			2 (B)					S2 S14		1204	NITROGLYCERIN, ROZTOK V ALKOHOLU, s nejvýše 1 % nitroglycerinu
LGBF		FL	2 (D/E)					S2 S20	33	1206	HEPTANY
LGBF		FL	3 (D/E)	V12				S2	30	1207	HEXALDEHYD
LGBF		FL	2 (D/E)					S2 S20	33	1208	HEXANY
L4BN		FL	1 (D/E)					S2 S20	33	1210	BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOCNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel nebo rozpouštědel tiskařských barev), hořlavé
L1,5BN		FL	2 (D/E)					S2 S20	33	1210	BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOCNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel nebo rozpouštědel tiskařských barev), hořlavé (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)					S2 S20	33	1210	BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOCNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel a rozpouštědel tiskařských barev), hořlavé (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12				S2	30	1210	BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOCNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel a rozpouštědel tiskařských barev), hořlavé
L4BN		FL	3 (D/E)					S2	33	1210	BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOCNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel a rozpouštědel tiskařských barev), hořlavé (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1210	BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOCNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel nebo rozpouštědel tiskařských barev), hořlavé (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	3	F1	III	3	163 640G	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1
1210	BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOCNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel nebo rozpouštědel tiskařských barev), hořlavé (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	III	3	163 640H	5 L	E1	P001 IBC02 LP01 R001	PP1	MP19	T2	TP1
1212	ISOBUTANOL (ISOBUTYLALKOHOL)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1213	ISOBUTYLACETÁT (ISOBUTYL-ACETÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1214	ISOBUTYLAMIN	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
1216	ISOOKTENY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1218	ISOPREN, STABILIZOVANÝ	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
1219	ISOPROPANOL (ISOPROPYLALKOHOL)	3	F1	II	3	601	1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1220	ISOPROPYLACETÁT (ISOPROPYL-ACETÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1221	ISOPROPYLAMIN	3	FC	I	3+8		0	E0	P001		MP7 MP17	T11	TP2
1222	ISOPROPYLNITRÁT (ISOPROPYL-NITRÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001	B7	MP19		
1223	PETROLEJ	3	F1	III	3	363	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP2
1224	KETONY, KAPALNÉ, J.N. (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	274 640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28
1224	KETONY, KAPALNÉ, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	274 640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28
1224	KETONY, KAPALNÉ, J.N.	3	F1	III	3	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
1228	THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, TOXICKÉ, J.N. nebo SMĚSI THIOLŮ (směsi merkaptanů), KAPALNÉ, HOŘLAVÉ, TOXICKÉ, J.N.	3	FT1	II	3+6.1	274	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27
1228	THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, TOXICKÉ, J.N. nebo SMĚSI THIOLŮ (směsi merkaptanů), KAPALNÉ, HOŘLAVÉ, TOXICKÉ, J.N.	3	FT1	III	3+6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
L1,5BN		FL	3 (D/E)				S2	33	1210	BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOČNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (většně ředidel nebo rozpouštědel tiskařských barev), hořlavé (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)
LGBF		FL	3 (D/E)				S2	33	1210	BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOČNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (většně ředidel nebo rozpouštědel tiskařských barev), hořlavé (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1212	ISOBUTANOL (ISOBUTYLALKOHOL)
LGBF		FL	2 (D/E)				S2 S20	33	1213	ISOBUTYLACETÁT (ISOBUTYL-ACETÁT)
L4BH		FL	2 (D/E)				S2 S20	338	1214	ISOBUTYLAMIN
LGBF		FL	2 (D/E)				S2 S20	33	1216	ISOOKTENY
L4BN		FL	1 (D/E)				S2 S20	339	1218	ISOPREN, STABILIZOVANÝ
LGBF		FL	2 (D/E)				S2 S20	33	1219	ISOPROPANOL (ISOPROPYLALKOHOL)
LGBF		FL	2 (D/E)				S2 S20	33	1220	ISOPROPYLACETÁT (ISOPROPYL-ACETÁT)
L10CH	TU14 TE21	FL	1 (C/E)				S2 S20	338	1221	ISOPROPYLAMIN
			2 (E)				S2 S20		1222	ISOPROPYLNITRÁT (ISOPROPYL-NITRÁT)
LGBF		FL	3 (D/E)	V12			S2	30	1223	PETROLEJ
L1,5BN		FL	2 (D/E)				S2 S20	33	1224	KETONY, KAPALNÉ, J.N. (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1224	KETONY, KAPALNÉ, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1224	KETONY, KAPALNÉ, J.N.
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	1228	THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, TOXICKÉ, J.N. nebo SMĚSI THIOLŮ (směsi merkaptanů), KAPALNÉ, HOŘLAVÉ, TOXICKÉ, J.N.
L4BH	TU15	FL	3 (D/E)	V12		CV13 CV28	S2	36	1228	THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, TOXICKÉ, J.N. nebo SMĚSI THIOLŮ (směsi merkaptanů), KAPALNÉ, HOŘLAVÉ, TOXICKÉ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1229	MESITYLOXID	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1230	METHANOL	3	FT1	II	3+6.1	279	1 L	E2	P001 IBC02		MP19	T7	TP2
1231	METHYLACETÁT (METHYL-ACETÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1233	METHYLAMYLACETÁT (METHYLAMYL-ACETÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1234	METHYLAL	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T7	TP2
1235	METHYLAMIN, VODNÝ ROZTOK	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
1237	METHYLBUTYRÁT (METHYL-BUTYRÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1238	METHYLCHLORFORMIÁT (METHYL-CHLORFORMIÁT)	6.1	TFC	I	6.1+3+8	354	0	E0	P602		MP8 MP17	T22	TP2 TP35
1239	METHYLCHLORMETHYLETHER	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T22	TP2 TP35
1242	METHYLDICHLORSILAN	4.3	WFC	I	4.3+3+8		0	E0	P401	RR7	MP2	T14	TP2 TP7
1243	METHYLFORMIÁT (METHYL-FORMIÁT)	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
1244	METHYLHYDRAZIN	6.1	TFC	I	6.1+3+8	354	0	E0	P602		MP8 MP17	T22	TP2 TP35
1245	METHYLISOBUTYLKETON	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1246	METHYLISOPROPENYLKETON, STABILIZOVANÝ	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1247	METHYLMETHAKRYLÁT, MONOMERNÍ, STABILIZOVANÝ (METHYL-METHAKRYLÁT, MONOMERNÍ, STABILIZOVANÝ)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1248	METHYLPROPIONÁT (METHYL-PROPIONÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1249	METHYLPROPYLKETON	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1250	METHYLTRICHLORSILAN	3	FC	II	3+8		0	E0	P010		MP19	T10	TP2 TP7
1251	METHYLVINYLKETON, STABILIZOVANÝ	6.1	TFC	I	6.1+3+8	354	0	E0	P601	RR7	MP8 MP17	T22	TP2 TP37
1259	TETRAKARBONYL NIKLU	6.1	TF1	I	6.1+3		0	E5	P601		MP2		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	3 (D/E)	V12			S2	30	1229	MESITYLOXID
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	1230	METHANOL
LGBF		FL	2 (D/E)				S2 S20	33	1231	METHYLACETÁT (METHYL-ACETÁT)
LGBF		FL	3 (D/E)	V12			S2	30	1233	METHYLAMYLACETÁT (METHYLAMYL-ACETÁT)
L1,5BN		FL	2 (D/E)				S2 S20	33	1234	METHYLAL
L4BH		FL	2 (D/E)				S2 S20	338	1235	METHYLAMIN, VODNÝ ROZTOK
LGBF		FL	2 (D/E)				S2 S20	33	1237	METHYLBUTYRÁT (METHYL-BUTYRÁT)
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1238	METHYLCHLORFORMIÁT (METHYL-CHLORFORMIÁT)
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1239	METHYLCHLORMETHYLETER
L10DH	TU14 TU24 TE21 TM2 TM3	FL	0 (B/E)	V1		CV23	S2 S20	X338	1242	METHYLDICHLORSILAN
L4BN		FL	1 (D/E)				S2 S20	33	1243	METHYLFORMIÁT (METHYL-FORMIÁT)
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1244	METHYLHYDRAZIN
LGBF		FL	2 (D/E)				S2 S20	33	1245	METHYLISOBUTYLKETON
LGBF		FL	2 (D/E)				S2 S20	339	1246	METHYLISOPROPENYLKETON, STABILIZOVANÝ
LGBF		FL	2 (D/E)				S2 S20	339	1247	METHYLMETHAKRYLÁT, MONOMERNÍ, STABILIZOVANÝ (METHYL-METHAKRYLÁT, MONOMERNÍ, STABILIZOVANÝ)
LGBF		FL	2 (D/E)				S2 S20	33	1248	METHYLPROPIONÁT (METHYL-PROPIONÁT)
LGBF		FL	2 (D/E)				S2 S20	33	1249	METHYLPROPYLKETON
L4BH		FL	2 (D/E)				S2 S20	X338	1250	METHYLTRICHLORSILAN
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	639	1251	METHYLVINYLKETON, STABILIZOVANÝ
L15CH	TU14 TU15 TU31 TE19 TE21 TM3	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1259	TETRAKARBONYL NIKLU

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1261	NITROMETHAN	3	F1	II	3		1 L	E2	P001 R001	RR2	MP19		
1262	OKTANY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1263	BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů)	3	F1	I	3	163 650	500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP27
1263	BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů) (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	163 640C 650	5 L	E2	P001	PP1	MP19	T4	TP1 TP8 TP28
1263	BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů) (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	163 640D 650	5 L	E2	P001 IBC02 R001	PP1	MP19	T4	TP1 TP8 TP28
1263	BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů)	3	F1	III	3	163 640E 650	5 L	E1	P001 IBC03 LP01 R001	PP1	MP19	T2	TP1 TP29
1263	BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	3	F1	III	3	163 640F 650	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1 TP29
1263	BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	3	F1	III	3	163 640G 650	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1 TP29
1263	BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	III	3	163 640H 650	5 L	E1	P001 IBC02 LP01 R001	PP1	MP19	T2	TP1 TP29

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			2 (E)				S2 S20		1261	NITROMETHAN
LGBF		FL	2 (D/E)				S2 S20	33	1262	OKTANY
L4BN		FL	1 (D/E)				S2 S20	33	1263	BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOCNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů)
L1,5BN		FL	2 (D/E)				S2 S20	33	1263	BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOCNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů) (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1263	BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOCNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů) (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1263	BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOCNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů)
L4BN		FL	3 (D/E)				S2	33	1263	BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOCNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)
L1,5BN		FL	3 (D/E)				S2	33	1263	BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOCNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)
LGBF		FL	3 (D/E)				S2	33	1263	BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOCNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3
1264	PARALDEHYD	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1265	PENTANY, kapalné	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
1265	PENTANY, kapalné	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T4	TP1
1266	VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	163 640C	5 L	E2	P001		MP19	T4	TP1 TP8
1266	VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	163 640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1266	VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly	3	F1	III	3	163 640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1266	VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	3	F1	III	3	163 640F	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1266	VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	3	F1	III	3	163 640G	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1266	VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	III	3	163 640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T2	TP1
1267	ROPA SUROVÁ	3	F1	I	3	357	500 ml	E3	P001		MP7 MP17	T11	TP1 TP8
1267	ROPA SUROVÁ (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	357 640C	1 L	E2	P001		MP19	T4	TP1 TP8
1267	ROPA SUROVÁ (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	357 640D	1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1267	ROPA SUROVÁ	3	F1	III	3	357	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1268	DESTILÁTY ROPNÉ, J.N. nebo PRODUKTY ROPNÉ, J.N.	3	F1	I	3	363	500 ml	E3	P001		MP7 MP17	T11	TP1 TP8
1268	DESTILÁTY ROPNÉ, J.N. nebo PRODUKTY ROPNÉ, J.N. (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	363 640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28
1268	DESTILÁTY ROPNÉ, J.N. nebo PRODUKTY ROPNÉ, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	363 640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28
1268	DESTILÁTY ROPNÉ, J.N. nebo PRODUKTY ROPNÉ, J.N.	3	F1	III	3	363	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
1272	OLEJ BOROVÝ	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1274	n-PROPANOL (n-PROPYLALKOHOL)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1274	n-PROPANOL (n-PROPYLALKOHOL)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
LGBF		FL	3 (D/E)	V12			S2	30	1264	PARALDEHYD
L4BN		FL	1 (D/E)				S2 S20	33	1265	PENTANY, kapalné
L1,5BN		FL	2 (D/E)				S2 S20	33	1265	PENTANY, kapalné
L1,5BN		FL	2 (D/E)				S2 S20	33	1266	VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1266	VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1266	VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly
L4BN		FL	3 (D/E)				S2	33	1266	VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)
L1,5BN		FL	3 (D/E)				S2	33	1266	VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)
LGBF		FL	3 (D/E)				S2	33	1266	VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)
L4BN		FL	1 (D/E)				S2 S20	33	1267	ROPA SUROVÁ
L1,5BN		FL	2 (D/E)				S2 S20	33	1267	ROPA SUROVÁ (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1267	ROPA SUROVÁ (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1267	ROPA SUROVÁ
L4BN		FL	1 (D/E)				S2 S20	33	1268	DESTILÁTY ROPNÉ, J.N. nebo PRODUKTY ROPNÉ, J.N.
L1,5BN		FL	2 (D/E)				S2 S20	33	1268	DESTILÁTY ROPNÉ, J.N. nebo PRODUKTY ROPNÉ, J.N. (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1268	DESTILÁTY ROPNÉ, J.N. nebo PRODUKTY ROPNÉ, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1268	DESTILÁTY ROPNÉ, J.N. nebo PRODUKTY ROPNÉ, J.N.
LGBF		FL	3 (D/E)	V12			S2	30	1272	OLEJ BOROVÝ
LGBF		FL	2 (D/E)				S2 S20	33	1274	n-PROPANOL (n-PROPYLALKOHOL)
LGBF		FL	3 (D/E)	V12			S2	30	1274	n-PROPANOL (n-PROPYLALKOHOL)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3
1275	PROPIONALDEHYD	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1
1276	n-PROPYLACETÁT (n-PROPYL-ACETÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1277	PROPYLAMIN	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
1278	1-CHLORPROPAN (PROPYLCHLORID)	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T7	TP2
1279	1,2-DICHLORPROPAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1280	PROPYLENOXID	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2 TP7
1281	PROPYLFORMIÁTY (PROPYL-FORMIÁTY)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1282	PYRIDIN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP2
1286	OLEJ PRYSKYŘIČNÝ (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	640C	5 L	E2	P001		MP19	T4	TP1
1286	OLEJ PRYSKYŘIČNÝ (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1
1286	OLEJ PRYSKYŘIČNÝ	3	F1	III	3	640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1286	OLEJ PRYSKYŘIČNÝ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	3	F1	III	3	640F	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1286	OLEJ PRYSKYŘIČNÝ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	3	F1	III	3	640G	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1286	OLEJ PRYSKYŘIČNÝ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	III	3	640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T2	TP1
1287	KAUČUK, ROZTOK (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	640C	5 L	E2	P001		MP19	T4	TP1 TP8
1287	KAUČUK, ROZTOK (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1287	KAUČUK, ROZTOK	3	F1	III	3	640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1287	KAUČUK, ROZTOK (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	3	F1	III	3	640F	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1287	KAUČUK, ROZTOK (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	3	F1	III	3	640G	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1287	KAUČUK, ROZTOK (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	III	3	640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T2	TP1
1288	OLEJ BŘIDLÍČNÝ	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	2 (D/E)				S2 S20	33	1275	PROPIONALDEHYD
LGBF		FL	2 (D/E)				S2 S20	33	1276	n-PROPYLACETÁT (n-PROPYL-ACETÁT)
L4BH		FL	2 (D/E)				S2 S20	338	1277	PROPYLAMIN
L1,5BN		FL	2 (D/E)				S2 S20	33	1278	1-CHLORPROPAN (PROPYLCHLORID)
LGBF		FL	2 (D/E)				S2 S20	33	1279	1,2-DICHLORPROPAN
L4BN		FL	1 (D/E)				S2 S20	33	1280	PROPYLENOXID
LGBF		FL	2 (D/E)				S2 S20	33	1281	PROPYLFORMIÁTY (PROPYL-FORMIÁTY)
LGBF		FL	2 (D/E)				S2 S20	33	1282	PYRIDIN
L1,5BN		FL	2 (D/E)				S2 S20	33	1286	OLEJ PRYSKYŘIČNÝ (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1286	OLEJ PRYSKYŘIČNÝ (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1286	OLEJ PRYSKYŘIČNÝ
L4BN		FL	3 (D/E)				S2	33	1286	OLEJ PRYSKYŘIČNÝ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)
L1,5BN		FL	3 (D/E)				S2	33	1286	OLEJ PRYSKYŘIČNÝ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)
LGBF		FL	3 (D/E)				S2	33	1286	OLEJ PRYSKYŘIČNÝ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)
L1,5BN		FL	2 (D/E)				S2 S20	33	1287	KAUČUK, ROZTOK (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1287	KAUČUK, ROZTOK (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1287	KAUČUK, ROZTOK
L4BN		FL	3 (D/E)				S2	33	1287	KAUČUK, ROZTOK (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)
L1,5BN		FL	3 (D/E)				S2	33	1287	KAUČUK, ROZTOK (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)
LGBF		FL	3 (D/E)				S2	33	1287	KAUČUK, ROZTOK (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1288	OLEJ BRIDLÍČNÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1288	OLEJ BRÍDLIČNÝ	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1289	METHYLÁT SODNÝ, ROZTOK v alkoholu	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1 TP8
1289	METHYLÁT SODNÝ, ROZTOK v alkoholu	3	FC	III	3+8		5 L	E1	P001 IBC02 R001		MP19	T4	TP1
1292	TETRAETHYLSILIKÁT (TETRAETHYL-SILIKÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1293	TINKTURY, LÉKAŘSKÉ	3	F1	II	3	601	1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1293	TINKTURY, LÉKAŘSKÉ	3	F1	III	3	601	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1294	TOLUEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1295	TRICHLORSILAN	4.3	WFC	I	4.3+3+8		0	E0	P401	RR7	MP2	T14	TP2 TP7
1296	TRIETHYLAMIN	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
1297	TRIMETHYLAMIN, VODNÝ ROZTOK, s nejvýše 50 % hm. trimethylaminu	3	FC	I	3+8		0	E0	P001		MP7 MP17	T11	TP1
1297	TRIMETHYLAMIN, VODNÝ ROZTOK, s nejvýše 50 % hm. trimethylaminu	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
1297	TRIMETHYLAMIN, VODNÝ ROZTOK, s nejvýše 50 % hm. trimethylaminu	3	FC	III	3+8		5 L	E1	P001 IBC03 R001		MP19	T7	TP1
1298	TRIMETHYLCHLORSILAN	3	FC	II	3+8		0	E0	P010		MP19	T10	TP2 TP7
1299	TERPENTÝN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1300	BENZÍN LAKOVÝ	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1300	BENZÍN LAKOVÝ	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1301	VINYLACETÁT, STABILIZOVANÝ (VINYL-ACETÁT, STABILIZOVANÝ)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1302	VINYLETHYLETER, STABILIZOVANÝ	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
1303	VINYLDENCHLORID, STABILIZOVANÝ	3	F1	I	3		0	E3	P001		MP7 MP17	T12	TP2 TP7
1304	ISOBUTYL VINYLETER, STABILIZOVANÝ	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1305	VINYLTRICHLORSILAN	3	FC	II	3+8		0	E0	P010		MP9	T10	TP2 TP7
1306	PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	640C	5 L	E2	P001		MP19	T4	TP1 TP8

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	3 (D/E)	V12			S2	30	1288	OLEJ BŘIDLIČNÝ
L4BH		FL	2 (D/E)				S2 S20	338	1289	METHYLÁT SODNÝ, ROZTOK v alkoholu
L4BN		FL	3 (D/E)				S2	38	1289	METHYLÁT SODNÝ, ROZTOK v alkoholu
LGBF		FL	3 (D/E)	V12			S2	30	1292	TETRAETHYLSILIKÁT (TETRAETHYL-SILIKÁT)
LGBF		FL	2 (D/E)				S2 S20	33	1293	TINKTURY, LÉKAŘSKÉ
LGBF		FL	3 (D/E)	V12			S2	30	1293	TINKTURY, LÉKAŘSKÉ
LGBF		FL	2 (D/E)				S2 S20	33	1294	TOLUEN
L10DH	TU14 TU25 TE21 TM2 TM3	FL	0 (B/E)	V1		CV23	S2 S20	X338	1295	TRICHLORSILAN
L4BH		FL	2 (D/E)				S2 S20	338	1296	TRIETHYLAMIN
L10CH	TU14 TE21	FL	1 (C/E)				S2 S20	338	1297	TRIMETHYLAMIN, VODNÝ ROZTOK, s nejvýše 50 % hm. trimethylaminu
L4BH		FL	2 (D/E)				S2 S20	338	1297	TRIMETHYLAMIN, VODNÝ ROZTOK, s nejvýše 50 % hm. trimethylaminu
L4BN		FL	3 (D/E)	V12			S2	38	1297	TRIMETHYLAMIN, VODNÝ ROZTOK, s nejvýše 50 % hm. trimethylaminu
L4BH		FL	2 (D/E)				S2 S20	X338	1298	TRIMETHYLCHLORSILAN
LGBF		FL	3 (D/E)	V12			S2	30	1299	TERPENTÝN
LGBF		FL	2 (D/E)				S2 S20	33	1300	BENZÍN LAKOVÝ
LGBF		FL	3 (D/E)	V12			S2	30	1300	BENZÍN LAKOVÝ
LGBF		FL	2 (D/E)				S2 S20	339	1301	VINYLCETÁT, STABILIZOVANÝ (VINYL-ACETÁT, STABILIZOVANÝ)
L4BN		FL	1 (D/E)				S2 S20	339	1302	VINYLETHYLETER, STABILIZOVANÝ
L4BN		FL	1 (D/E)				S2 S20	339	1303	VINYLDENCHLORID, STABILIZOVANÝ
LGBF		FL	2 (D/E)				S2 S20	339	1304	ISOBUTYLVINYLETER, STABILIZOVANÝ
L4BH		FL	2 (D/E)				S2 S20	X338	1305	VINYLTRICHLORSILAN
L1,5BN		FL	2 (D/E)				S2 S20	33	1306	PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ (tenze par při 50 °C je vyšší než 110 kPa)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1306	PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1306	PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ	3	F1	III	3	640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1306	PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	3	F1	III	3	640F	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1306	PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	3	F1	III	3	640G	5 L	E1	P001 LP01 R001		MP19	T2	TP1
1306	PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	III	3	640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T2	TP1
1307	XYLENY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1307	XYLENY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1308	ZIRKONIUM, SUSPENDOVANÉ V HOŘLAVÉ KAPALNÉ LÁTCE	3	F1	I	3		0	E3	P001	PP33	MP7 MP17		
1308	ZIRKONIUM, SUSPENDOVANÉ V HOŘLAVÉ KAPALNÉ LÁTCE (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	640C	1 L	E2	P001 R001	PP33	MP19		
1308	ZIRKONIUM, SUSPENDOVANÉ V HOŘLAVÉ KAPALNÉ LÁTCE (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	640D	1 L	E2	P001 R001	PP33	MP19		
1308	ZIRKONIUM, SUSPENDOVANÉ V HOŘLAVÉ KAPALNÉ LÁTCE	3	F1	III	3		5 L	E1	P001 R001		MP19		
1309	HLINÍK, PRAŠEK, POTAŽENÝ	4.1	F3	II	4.1		1 kg	E2	P002 IBC08	PP38 B4	MP11	T3	TP33
1309	HLINÍK, PRAŠEK, POTAŽENÝ	4.1	F3	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	PP11 B3	MP11	T1	TP33
1310	PIKRÁT AMONNÝ, VLNĚNÝ nejméně 10 % hm. vody	4.1	D	I	4.1		0	E0	P406	PP26	MP2		
1312	BORNEOL	4.1	F1	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1313	RESINÁT (abietát) VÁPENATÝ	4.1	F3	III	4.1		5 kg	E1	P002 IBC06 R001		MP11	T1	TP33
1314	RESINÁT (abietát) VÁPENATÝ, ROZTAVENÝ a ztuhlý	4.1	F3	III	4.1		5 kg	E1	P002 IBC04 R001		MP11	T1	TP33
1318	RESINÁT (abietát) KOBALTNATÝ, SRAŽENÝ	4.1	F3	III	4.1		5 kg	E1	P002 IBC06 R001		MP11	T1	TP33
1320	DINITROFENOL, VLNĚNÝ nejméně 15 % hm. vody	4.1	DT	I	4.1+6.1		0	E0	P406	PP26	MP2		
1321	DINITROFENOLÁTY, VLNĚNÉ nejméně 15 % hm. vody	4.1	DT	I	4.1+6.1		0	E0	P406	PP26	MP2		
1322	DINITRORĚSORCINOL, VLNĚNÝ nejméně 15 % hm. vody	4.1	D	I	4.1		0	E0	P406	PP26	MP2		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	2 (D/E)				S2 S20	33	1306	PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1306	PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ
L4BN		FL	3 (D/E)				S2	33	1306	PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)
L1,5BN		FL	3 (D/E)				S2	33	1306	PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)
LGBF		FL	3 (D/E)				S2	33	1306	PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1307	XYLENY
LGBF		FL	3 (D/E)	V12			S2	30	1307	XYLENY
L4BN		FL	1 (D/E)				S2 S20	33	1308	ZIRKONIUM, SUSPENDOVANÉ V HOŘLAVÉ KAPALNÉ LÁTCE
L1,5BN		FL	2 (D/E)				S2 S20	33	1308	ZIRKONIUM, SUSPENDOVANÉ V HOŘLAVÉ KAPALNÉ LÁTCE (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1308	ZIRKONIUM, SUSPENDOVANÉ V HOŘLAVÉ KAPALNÉ LÁTCE (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)				S2	30	1308	ZIRKONIUM, SUSPENDOVANÉ V HOŘLAVÉ KAPALNÉ LÁTCE
SGAN		AT	2 (E)	V11				40	1309	HLINÍK, PRAŠEK, POTAŽENÝ
SGAV		AT	3 (E)		VV1			40	1309	HLINÍK, PRAŠEK, POTAŽENÝ
			1 (B)				S14		1310	PIKRÁT AMONNÝ, VLNĚNÝ nejméně 10 % hm. vody
SGAV		AT	3 (E)		VV1			40	1312	BORNEOL
SGAV		AT	3 (E)		VV1			40	1313	RESINÁT (abietát) VÁPENATÝ
SGAV		AT	3 (E)		VV1			40	1314	RESINÁT (abietát) VÁPENATÝ, ROZTAVENÝ a ztuhlý
SGAV		AT	3 (E)		VV1			40	1318	RESINÁT (abietát) KOBALTNATÝ, SRAŽENÝ
			1 (B)			CV28	S14		1320	DINITROFENOL, VLNĚNÝ nejméně 15 % hm. vody
			1 (B)			CV28	S14		1321	DINITROFENOLÁTY, VLNĚNÝ nejméně 15 % hm. vody
			1 (B)				S14		1322	DINITRORESORCINOL, VLNĚNÝ nejméně 15 % hm. vody

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1323	FERROCER	4.1	F3	II	4.1	249	1 kg	E2	P002 IBC08	B4	MP11	T3	TP33
1324	FILMY NA BÁZI NITROCELULÓZY, želatinované, kromě odpadů	4.1	F1	III	4.1		5 kg	E1	P002 R001	PP15	MP11		
1325	LÁTKA HOŘLAVÁ, TUHÁ, ORGANICKÁ, J.N.	4.1	F1	II	4.1	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1325	LÁTKA HOŘLAVÁ, TUHÁ, ORGANICKÁ, J.N.	4.1	F1	III	4.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1326	HAFNIUM, PRAŠEK, VLHČENÝ nejméně 25 % vody	4.1	F3	II	4.1	586	1 kg	E2	P410 IBC06	PP40	MP11	T3	TP33
1327	Seno nebo sláma nebo plevy	4.1	F1						NEJÍ PŘEDMĚTEM PRO ADR				
1328	HEXAMETHYLENTETRAMIN	4.1	F1	III	4.1		5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33
1330	RESINÁT (abietát) MANGANATÝ	4.1	F3	III	4.1		5 kg	E1	P002 IBC06 R001		MP11	T1	TP33
1331	ZÁPALKY, "ZÁPALNÉ KDEKOLI"	4.1	F1	III	4.1	293	5 kg	E1	P407	PP27	MP12		
1332	METALDEHYD	4.1	F1	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1333	CER, desky, ingoty, tyče	4.1	F3	II	4.1		1 kg	E2	P002 IBC08	B4	MP11		
1334	NAFTALEN, SUROVÝ nebo NAFTALEN, RAFINOVANÝ	4.1	F1	III	4.1	501	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
1336	NITROGUANIDIN (PIKRIT), VLHČENÝ nejméně 20 % hm. vody	4.1	D	I	4.1		0	E0	P406		MP2		
1337	NITROŠKROB, VLHČENÝ nejméně 20 % hm. vody	4.1	D	I	4.1		0	E0	P406		MP2		
1338	FOSFOR, AMORFNÍ	4.1	F3	III	4.1		5 kg	E1	P410 IBC08 R001	B3	MP11	T1	TP33
1339	TETRAFOSFORHEPTASULFID, neobsahující žlutý ani bílý fosfor	4.1	F3	II	4.1	602	1 kg	E2	P410 IBC04		MP11	T3	TP33
1340	SULFID FOSFOREČNÝ, neobsahující žlutý ani bílý fosfor	4.3	WF2	II	4.3+4.1	602	500 g	E2	P410 IBC04		MP14	T3	TP33
1341	TETRAFOSFORTRISULFID (FOSFORSEKVISULFID), neobsahující žlutý ani bílý fosfor	4.1	F3	II	4.1	602	1 kg	E2	P410 IBC04		MP11	T3	TP33
1343	FOSFORTRISULFID, neobsahující žlutý ani bílý fosfor	4.1	F3	II	4.1	602	1 kg	E2	P410 IBC04		MP11	T3	TP33
1344	TRINITROFENOL (Kyselina PIKROVÁ), VLHČENÝ(A) nejméně 30 % hm. vody	4.1	D	I	4.1		0	E0	P406	PP26	MP2		
1345	KAUČUK (guma), ODPAD, mletý nebo KAUČUK (guma), ZBYTKY, práškovitý nebo granulovaný	4.1	F1	II	4.1		1 kg	E2	P002 IBC08	B4	MP11	T3	TP33
1346	KŘEMÍK, PRAŠEK, AMORFNÍ	4.1	F3	III	4.1	32	5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33
1347	PIKRÁT STRÍBRNÝ, VLHČENÝ nejméně 30 % hm. vody	4.1	D	I	4.1		0	E0	P406	PP25 PP26	MP2		
1348	DINITRO- <i>o</i> -KRESOLÁT SODNÝ, VLHČENÝ nejméně 15 % hm. vody	4.1	DT	I	4.1+6.1		0	E0	P406	PP26	MP2		
1349	PIKRAMÁT SODNÝ, VLHČENÝ nejméně 20 % hm. vody	4.1	D	I	4.1		0	E0	P406	PP26	MP2		
1350	ŠIRA	4.1	F3	III	4.1	242	5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1 BK1 BK2	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN		AT	2 (E)	V11				40	1323	FERROCER
			3 (E)						1324	FILMY NA BÁZI NITROCELULÓZY, želatinované, kromě odpadů
SGAN		AT	2 (E)	V11				40	1325	LÁTKA HOŘLAVÁ, TUHÁ, ORGANICKÁ, J.N.
SGAV		AT	3 (E)		VV1			40	1325	LÁTKA HOŘLAVÁ, TUHÁ, ORGANICKÁ, J.N.
SGAN		AT	2 (E)	V11				40	1326	HAFNIUM, PRAŠEK, VLNĚNÝ nejméně 25 % vody
NENÍ PŘEDMĚTEM PRO ADR										
SGAV		AT	3 (E)		VV1			40	1327	Seno nebo sláma nebo plevy
									1328	HEXAMETHYLENTETRAMIN
SGAV		AT	3 (E)		VV1			40	1330	RESINÁT (abietát) MANGANATÝ
			4 (E)						1331	ZÁPALKY, "ZÁPALNÉ KDEKOLI"
SGAV		AT	3 (E)		VV1			40	1332	METALDEHYD
			2 (E)	V11					1333	CER, desky, ingoty, tyče
SGAV		AT	3 (E)		VV2			40	1334	NAFTALEN, SUROVÝ nebo NAFTALEN, RAFINOVANÝ
			1 (B)				S14		1336	NITROGUANIDIN (PIKRIT), VLNĚNÝ nejméně 20 % hm. vody
			1 (B)				S14		1337	NITROŠKROB, VLNĚNÝ nejméně 20 % hm. vody
SGAV		AT	3 (E)		VV1			40	1338	FOSFOR, AMORFNÍ
SGAN		AT	2 (E)					40	1339	TETRAFOSFORHEPTASULFID, neobsahující žlutý ani bílý fosfor
SGAN		AT	0 (D/E)	V1		CV23		423	1340	SULFID FOSFOREČNÝ, neobsahující žlutý ani bílý fosfor
SGAN		AT	2 (E)					40	1341	TETRAFOSFORTRISULFID (FOSFORSEKVISULFID), neobsahující žlutý ani bílý fosfor
SGAN		AT	2 (E)					40	1343	FOSFORTRISULFID, neobsahující žlutý ani bílý fosfor
			1 (B)				S14		1344	TRINITROFENOL (KYSELINA PIKROVÁ), VLNĚNÝ(A) nejméně 30 % hm. vody
SGAN		AT	4 (E)	V11				40	1345	KAUČUK (guma), ODPAD, mletý nebo KAUČUK (guma), ZBYTKY, práškovitý nebo granulovaný
SGAV		AT	3 (E)		VV1			40	1346	KŘEMÍK, PRAŠEK, AMORFNÍ
			1 (B)				S14		1347	PIKRÁT STRÍBRNÝ, VLNĚNÝ nejméně 30 % hm. vody
			1 (B)			CV28	S14		1348	DINITRO- <i>o</i> -KRESOLÁT SODNÝ, VLNĚNÝ nejméně 15 % hm. vody
			1 (B)				S14		1349	PIKRAMÁT SODNÝ, VLNĚNÝ nejméně 20 % hm. vody
SGAV		AT	3 (E)		VV1			40	1350	ŠÍRA

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1352	TITAN, PRAŠEK, VLNĚNÝ nejméně 25 % vody	4.1	F3	II	4.1	586	1 kg	E2	P410 IBC06	PP40	MP11	T3	TP33
1353	VLÁKNA nebo TKANINY, IMPREGNOVANÉ SLABĚ NITROVANOU CELULÓZOU, J.N.	4.1	F1	III	4.1	502	5 kg	E1	P410 IBC08 R001	B3	MP11		
1354	TRINITROBENZEN, VLNĚNÝ nejméně 30 % hm. vody	4.1	D	I	4.1		0	E0	P406		MP2		
1355	KYSELINA TRINITROBENZOOVÁ, VLNĚNÁ nejméně 30 % hm. vody	4.1	D	I	4.1		0	E0	P406		MP2		
1356	TRINITROTOLUEN, VLNĚNÝ nejméně 30 % hm. vody	4.1	D	I	4.1		0	E0	P406		MP2		
1357	DUSIČNAN MOČOVINÝ, VLNĚNÝ nejméně 20 % hm. vody	4.1	D	I	4.1	227	0	E0	P406		MP2		
1358	ZIRKONIUM, PRAŠEK, VLNĚNÝ nejméně 25 % vody	4.1	F3	II	4.1	586	1 kg	E2	P410 IBC06	PP40	MP11	T3	TP33
1360	FOSFID VÁPENATÝ	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2		
1361	UHLÍ, živočišného nebo rostlinného původu	4.2	S2	II	4.2		0	E2	P002 IBC06	PP12	MP14	T3	TP33
1361	UHLÍ, živočišného nebo rostlinného původu	4.2	S2	III	4.2		0	E1	P002 IBC08 LP02 R001	PP12 B3	MP14	T1	TP33
1362	UHLÍ, AKTIVOVANÉ	4.2	S2	III	4.2	646	0	E1	P002 IBC08 LP02 R001	PP11 B3	MP14	T1	TP33
1363	KOPRA	4.2	S2	III	4.2		0	E1	P003 IBC08 LP02 R001	PP20 B3 B6	MP14		
1364	ODPADY BAVLNĚNÉ, OBSAHUJÍCÍ OLEJ	4.2	S2	III	4.2		0	E1	P003 IBC08 LP02 R001	PP19 B3 B6	MP14		
1365	BAVLNA, VLNĚNÁ	4.2	S2	III	4.2		0	E1	P003 IBC08 LP02 R001	PP19 B3 B6	MP14		
1369	p-NITROSODIMETHYLANILÍN	4.2	S2	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33
1372	Vlákna, živočišného nebo rostlinného původu, spálená, mokrá nebo vlhká	4.2	S2						NEJÍ PŘEDMĚTEM PRO ADR				
1373	VLÁKNA nebo TKANINY, ŽIVOČIŠNÉHO, ROSTLINNÉHO NEBO SYNTETICKÉHO PŮVODU, J.N. impregnované olejem	4.2	S2	III	4.2		0	E1	P410 IBC08 R001	B3	MP14	T1	TP33
1374	MOUČKA RYBÍ (ODPAD RYBÍ), NESTABILIZOVANÁ (Ý)	4.2	S2	II	4.2	300	0	E2	P410 IBC08	B4	MP14	T3	TP33
1376	OXID ŽELEZNATÝ, POUŽITÝ nebo OXID ŽELEZNATÝ, HOUBA, POUŽITÝ, z čištění koksárenského plynu	4.2	S4	III	4.2	592	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1 BK2	TP33
1378	KATALYZÁTOR, KOVOVÝ, VLNĚNÝ, s viditelným přebytkem kapaliny	4.2	S4	II	4.2	274	0	E2	P410 IBC01	PP39	MP14	T3	TP33
1379	PAPÍR, OŠETŘENÝ NENASYCENÝMI OLEJI, neúplně vysušený (včetně uhlového papíru)	4.2	S2	III	4.2		0	E1	P410 IBC08 R001	B3	MP14		
1380	PENTABORAN	4.2	ST3	I	4.2+6.1		0	E0	P601		MP2		
1381	FOSFOR, BILÝ nebo ŽLUTÝ, POD VODOU nebo V ROZTOKU	4.2	ST3	I	4.2+6.1	503	0	E0	P405		MP2	T9	TP3 TP31

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN		AT	2 (E)	V11				40	1352	TITAN, PRAŠEK, VLNĚNÝ nejméně 25 % vody
			3 (E)						1353	VLÁKNA nebo TKANINY, IMPREGNOVANÉ SLABĚ NITROVANOU CELULÓZOU, J.N.
			1 (B)				S14		1354	TRINITROBENZEN, VLNĚNÝ nejméně 30 % hm. vody
			1 (B)				S14		1355	KYSELINA TRINITROBENZOOVÁ, VLNĚNÁ nejméně 30 % hm. vody
			1 (B)				S14		1356	TRINITROTOLUEN, VLNĚNÝ nejméně 30 % hm. vody
			1 (B)				S14		1357	DUSIČNAN MOČOVINY, VLNĚNÝ nejméně 20 % hm. vody
SGAN		AT	2 (E)	V11				40	1358	ZIRKONIUM, PRAŠEK, VLNĚNÝ nejméně 25 % vody
			1 (E)	V1		CV23 CV28	S20		1360	FOSFID VÁPENATÝ
SGAN	TU11	AT	2 (D/E)	V1 V13				40	1361	UHĹÍ, živočišného nebo rostlinného původu
SGAV		AT	4 (E)	V1 V13	VV4			40	1361	UHĹÍ, živočišného nebo rostlinného původu
SGAV		AT	4 (E)	V1	VV4			40	1362	UHĹÍ, AKTIVOVANÉ
			3 (E)	V1	VV4			40	1363	KOPRA
			3 (E)	V1	VV4			40	1364	ODPADY BAVLNĚNÉ, OBSAHUJÍCÍ OLEJ
			3 (E)	V1	VV4			40	1365	BAVLNA, VLHKÁ
SGAN		AT	2 (D/E)	V1				40	1369	p-NITROSODIMETHYLANILÍN
NENÍ PŘEDMĚTEM PRO ADR										
		AT	3 (E)	V1	VV4			40	1372	Vlákna, živočišného nebo rostlinného původu, spálená, mokrá nebo vlhká
		AT	2 (D/E)	V1				40	1373	VLÁKNA nebo TKANINY, ŽIVOČIŠNÉHO, ROSTLINNÉHO NEBO SYNTETICKÉHO PŮVODU, J.N. impregnované olejem
		AT	3 (E)	V1	VV4			40	1374	MOUČKA RYBÍ (ODPAD RYBÍ), NESTABILIZOVANÁ (Ý)
SGAV		AT	3 (E)	V1	VV4			40	1376	OXID ŽELEZNATÝ, POUŽITÝ nebo OXID ŽELEZNATÝ, HOUBA, POUŽITÝ, z čištění koksárenského plynu
SGAN		AT	2 (D/E)	V1				40	1378	KATALYZÁTOR, KOVOVÝ, VLNĚNÝ, s viditelným přebytkem kapaliny
			3 (E)	V1	VV4			40	1379	PAPÍR, OŠETŘENÝ NENASYCENÝMI OLEJI, neúplně vysušený (včetně uhlového papíru)
L21DH	TU14 TC1 TE21 TM1	AT	0 (B/E)	V1		CV28	S20	333	1380	PENTABORAN
L10DH(+)	TU14 TU16 TU21 TE3 TE21	AT	0 (B/E)	V1		CV28	S20	46	1381	FOSFOR, BILÝ nebo ŽLUTÝ, POD VODOU nebo V ROZTOKU

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky		
							(7a)	(7b)	(8)	(9a)	(9b)	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
1381	FOSFOR, BÍLÝ nebo ŽLUTÝ, SUCHÝ	4.2	ST4	I	4.2+6.1	503	0	E0	P405		MP2	T9	TP3 TP31	
1382	SULFID DRASELNÝ, BEZVODÝ nebo SULFID DRASELNÝ, s méně než 30 % krystalové vody	4.2	S4	II	4.2	504	0	E2	P410 IBC06		MP14	T3	TP33	
1383	KOV PYROFORNÍ, J.N. nebo SLITINA PYROFORNÍ, J.N.	4.2	S4	I	4.2	274	0	E0	P404		MP13	T21	TP7 TP33	
1384	DITHIONIČITAN SODNÝ	4.2	S4	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33	
1385	SULFID SODNÝ, BEZVODÝ nebo SULFID SODNÝ, s méně než 30 % krystalové vody	4.2	S4	II	4.2	504	0	E2	P410 IBC06		MP14	T3	TP33	
1386	ZBYTKY PO LISOVÁNÍ OLEJOVÝCH SEMEN, s více než 1,5 % oleje a nejvýše 11 % vlhkosti	4.2	S2	III	4.2		0	E1	P003 IBC08 LP02 R001	PP20 B3 B6	MP14			
1387	Vlna odpadní, vlhká	4.2	S2						NEJÍ PŘEDMĚTEM PRO ADR					
1389	AMALGAM ALKALICKÝCH KOVŮ, KAPALNÝ	4.3	W1	I	4.3	182	0	E0	P402	RR8	MP2			
1390	AMIDY ALKALICKÝCH KOVŮ	4.3	W2	II	4.3	182 505	500 g	E2	P410 IBC07		MP14	T3	TP33	
1391	DISPERZE ALKALICKÝCH KOVŮ nebo DISPERZE KOVŮ ALKALICKÝCH ZEMIN	4.3	W1	I	4.3	182 183 506	0	E0	P402	RR8	MP2			
1392	AMALGAM KOVŮ ALKALICKÝCH ZEMIN, KAPALNÝ	4.3	W1	I	4.3	183 506	0	E0	P402		MP2			
1393	SLITINA KOVŮ ALKALICKÝCH ZEMIN, J.N.	4.3	W2	II	4.3	183 506	500 g	E2	P410 IBC07		MP14	T3	TP33	
1394	KARBID HLINITÝ	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	
1395	SLITINA PRÁŠKOVÁ KŘEMÍK / ŽELEZO / HLINÍK	4.3	WT2	II	4.3+6.1		500 g	E2	P410 IBC05	PP40	MP14	T3	TP33	
1396	HLINÍK, PRÁŠEK, NEPOTAŽENÝ	4.3	W2	II	4.3		500 g	E2	P410 IBC07	PP40	MP14	T3	TP33	
1396	HLINÍK, PRÁŠEK, NEPOTAŽENÝ	4.3	W2	III	4.3		1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33	
1397	FOSFID HLINITÝ	4.3	WT2	I	4.3+6.1	507	0	E0	P403		MP2			
1398	SILICID HLINÍKU PRÁŠKOVÝ, NEPOTAŽENÝ	4.3	W2	III	4.3	37	1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33	
1400	BARYUM	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	
1401	VÁPŇÍK	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	
1402	KARBID VÁPENATÝ	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2	T9	TP7 TP33	
1402	KARBID VÁPENATÝ	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	
1403	KYANAMID VÁPENATÝ, s více než 0,1 % karbidu vápenatého	4.3	W2	III	4.3	38	1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33	
1404	HYDRID VÁPENATÝ	4.3	W2	I	4.3		0	E0	P403		MP2			
1405	SILICID VÁPŇÍKU	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10DH(+)	TU14 TU16 TU21 TE3 TE21	AT	0 (B/E)	V1		CV28	S20	46	1381	FOSFOR, BÍLÝ nebo ŽLUTÝ, SUCHÝ
SGAN		AT	2 (D/E)	V1				40	1382	SULFID DRASELNÝ, BEZVODÝ nebo SULFID DRASELNÝ, s méně než 30 % krystalové vody
		AT	0 (B/E)	V1			S20	43	1383	KOV PYROFORNÍ, J.N. nebo SLITINA PYROFORNÍ, J.N.
SGAN		AT	2 (D/E)	V1				40	1384	DITHIONIČITAN SODNÝ
SGAN		AT	2 (D/E)	V1				40	1385	SULFID SODNÝ, BEZVODÝ nebo SULFID SODNÝ, s méně než 30 % krystalové vody
			3 (E)	V1	VV4			40	1386	ZBYTKY PO LISOVÁNÍ OLEJOVÝCH SEMEN, s více než 1,5 % oleje a nejvýše 11 % vlhkosti
NENÍ PŘEDMĚTEM PRO ADR										
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X323	1387	Vlna odpadní, vlhká
									1389	AMALGAM ALKALICKÝCH KOVŮ, KAPALNÝ
SGAN		AT	0 (D/E)	V1		CV23		423	1390	AMIDY ALKALICKÝCH KOVŮ
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X323	1391	DISPERZE ALKALICKÝCH KOVŮ nebo DISPERZE KOVŮ ALKALICKÝCH ZEMIN
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X323	1392	AMALGAM KOVŮ ALKALICKÝCH ZEMIN, KAPALNÝ
SGAN		AT	2 (D/E)	V1		CV23		423	1393	SLITINA KOVŮ ALKALICKÝCH ZEMIN, J.N.
SGAN		AT	2 (D/E)	V1	VV5	CV23		423	1394	KARBID HLINITÝ
SGAN		AT	2 (D/E)	V1		CV23 CV28		462	1395	SLITINA PRAŠKOVÁ KŘEMÍK / ŽELEZO / HLINÍK
SGAN		AT	2 (D/E)	V1		CV23		423	1396	HLINÍK, PRAŠEK, NEPOTAŽENÝ
SGAN		AT	3 (E)	V1	VV5	CV23		423	1396	HLINÍK, PRAŠEK, NEPOTAŽENÝ
			1 (E)	V1		CV23 CV28	S20		1397	FOSFID HLINITÝ
SGAN		AT	3 (E)	V1	VV5	CV23		423	1398	SILICID HLINÍKU PRAŠKOVÝ, NEPOTAŽENÝ
SGAN		AT	2 (D/E)	V1		CV23		423	1400	BARYUM
SGAN		AT	2 (D/E)	V1		CV23		423	1401	VÁPŇÍK
S2.65AN(+)	TU4 TU22 TA5 TM2	AT	1 (B/E)	V1		CV23	S20	X423	1402	KARBID VÁPENATÝ
SGAN		AT	2 (D/E)	V1	VV5	CV23		423	1402	KARBID VÁPENATÝ
SGAN		AT	0 (E)	V1		CV23		423	1403	KYANAMID VÁPENATÝ, s více než 0,1 % karbidu vápenatého
			1 (E)	V1		CV23	S20		1404	HYDRID VÁPENATÝ
SGAN		AT	2 (D/E)	V1	VV7	CV23		423	1405	SILICID VÁPŇÍKU

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
1405	SILICID VÁPŇÍKU	4.3	W2	III	4.3		1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33
1407	CESIUM	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2		
1408	FERROSILICIUM, s nejméně 30 %, ale méně než 90 % křemíku	4.3	WT2	III	4.3+6.1	39	1 kg	E1	P003 IBC08 R001	PP20 B4 B6	MP14	T1 BK2	TP33
1409	HYDRIDY KOVŮ, REAGUJÍCÍ S VODOU, J.N.	4.3	W2	I	4.3	274 508	0	E0	P403		MP2		
1409	HYDRIDY KOVŮ, REAGUJÍCÍ S VODOU, J.N.	4.3	W2	II	4.3	274 508	500 g	E2	P410 IBC04		MP14	T3	TP33
1410	TETRAHYDRIDOHLINITAN LITHNÝ	4.3	W2	I	4.3		0	E0	P403		MP2		
1411	TETRAHYDRIDOHLINITAN LITHNÝ, V ETHERU	4.3	WF1	I	4.3+3		0	E0	P402	RR8	MP2		
1413	TETRAHYDRIDOBORITAN LITHNÝ	4.3	W2	I	4.3		0	E0	P403		MP2		
1414	HYDRID LITHNÝ	4.3	W2	I	4.3		0	E0	P403		MP2		
1415	LITHIUM	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2		
1417	SILICID LITHIA	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33
1418	HOŘČÍK, PRÁŠEK nebo SLITINY HOŘČÍKU, PRÁŠEK	4.3	WS	I	4.3+4.2		0	E0	P403		MP2		
1418	HOŘČÍK, PRÁŠEK nebo SLITINY HOŘČÍKU, PRÁŠEK	4.3	WS	II	4.3+4.2		0	E2	P410 IBC05		MP14	T3	TP33
1418	HOŘČÍK, PRÁŠEK nebo SLITINY HOŘČÍKU, PRÁŠEK	4.3	WS	III	4.3+4.2		0	E1	P410 IBC08 R001	B4	MP14	T1	TP33
1419	FOSFID HOŘEČNATO-HLINITÝ	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2		
1420	SLITINY DRASLÍKU, KOVOVÉ, KAPALNÉ	4.3	W1	I	4.3		0	E0	P402		MP2		
1421	SLITINA ALKALICKÝCH KOVŮ, KAPALNÁ, J.N.	4.3	W1	I	4.3	182	0	E0	P402	RR8	MP2		
1422	SLITINY DRASLÍKU A SODÍKU, KAPALNÉ	4.3	W1	I	4.3		0	E0	P402		MP2	T9	TP3 TP7 TP31
1423	RUBIDIUM	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2		
1426	TETRAHYDRIDOBORITAN SODNÝ	4.3	W2	I	4.3		0	E0	P403		MP2		
1427	HYDRID SODNÝ	4.3	W2	I	4.3		0	E0	P403		MP2		
1428	SODÍK	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2	T9	TP7 TP33
1431	METHYLÁT SODNÝ	4.2	SC4	II	4.2+8		0	E2	P410 IBC05		MP14	T3	TP33
1432	FOSFID SODNÝ	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN		AT	3 (E)	V1	VV5 VV7	CV23		423	1405	SILICID VÁPŇÍKU
L10CH(+)	TU2 TU14 TE5 TE21 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	1407	CESIUM
SGAN		AT	3 (E)	V1	VV1	CV23 CV28		462	1408	FERROSILICIUM, s nejméně 30 %, ale méně než 90 % křemíku
			1 (E)	V1		CV23	S20		1409	HYDRIDY KOVŮ, REAGUJÍCÍ S VODOU, J.N.
SGAN		AT	2 (D/E)	V1		CV23		423	1409	HYDRIDY KOVŮ, REAGUJÍCÍ S VODOU, J.N.
			1 (E)	V1		CV23	S20		1410	TETRAHYDRIDOHLINITAN LITHNÝ
			1 (E)	V1		CV23	S2 S20		1411	TETRAHYDRIDOHLINITAN LITHNÝ, V ETHERU
			1 (E)	V1		CV23	S20		1413	TETRAHYDRIDOBORITAN LITHNÝ
			1 (E)	V1		CV23	S20		1414	HYDRID LITHNÝ
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	1415	LITHIUM
SGAN		AT	2 (D/E)	V1		CV23		423	1417	SILICID LITHIA
			1 (E)	V1		CV23	S20		1418	HOŘČÍK, PRAŠEK nebo SLITINY HOŘČÍKU, PRAŠEK
SGAN		AT	2 (D/E)	V1		CV23		423	1418	HOŘČÍK, PRAŠEK nebo SLITINY HOŘČÍKU, PRAŠEK
SGAN		AT	3 (E)	V1	VV5	CV23		423	1418	HOŘČÍK, PRAŠEK nebo SLITINY HOŘČÍKU, PRAŠEK
			1 (E)	V1		CV23 CV28	S20		1419	FOSFID HOŘČNATO-HLINITÝ
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X323	1420	SLITINY DRASLÍKU, KOVOVÉ, KAPALNÉ
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X323	1421	SLITINA ALKALICKÝCH KOVŮ, KAPALNÁ, J.N.
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X323	1422	SLITINY DRASLÍKU A SODÍKU, KAPALNÉ
L10CH(+)	TU2 TU14 TE5 TE21 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	1423	RUBIDIUM
			1 (E)	V1		CV23	S20		1426	TETRAHYDRIDOBORITAN SODNÝ
			1 (E)	V1		CV23	S20		1427	HYDRID SODNÝ
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	1428	SODÍK
SGAN		AT	2 (D/E)	V1				48	1431	METHYLÁT SODNÝ
			1 (E)	V1		CV23 CV28	S20		1432	FOSFID SODNÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1433	FOSFIDY CINU	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2		
1435	POPEL ZINKOVÝ	4.3	W2	III	4.3		1 kg	E1	P002 IBC08 R001	B4	MP14	T1	TP33
1436	ZINEK, PRAŠEK nebo ZINEK, PRACH	4.3	WS	I	4.3+4.2		0	E0	P403		MP2		
1436	ZINEK, PRAŠEK nebo ZINEK, PRACH	4.3	WS	II	4.3+4.2		0	E2	P410 IBC07	PP40	MP14	T3	TP33
1436	ZINEK, PRAŠEK nebo ZINEK, PRACH	4.3	WS	III	4.3+4.2		0	E1	P410 IBC08 R001	B4	MP14	T1	TP33
1437	HYDRID ZIRKONIA	4.1	F3	II	4.1		1 kg	E2	P410 IBC04	PP40	MP11	T3	TP33
1438	DUSIČNAN HLINITÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
1439	DICHROMAN AMONNÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1442	CHLORISTAN AMONNÝ	5.1	O2	II	5.1	152	1 kg	E2	P002 IBC06		MP2	T3	TP33
1444	PERSÍRAN AMONNÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1445	CHLOREČNAN BARNATÝ, TUHÝ	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1446	DUSIČNAN BARNATÝ	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1447	CHLORISTAN BARNATÝ, TUHÝ	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1448	MANGANISTAN BARNATÝ	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1449	PEROXID BARYA	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1450	BROMIČNANY, ANORGANICKÉ, J.N.	5.1	O2	II	5.1	274 350	1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1451	DUSIČNAN CESNÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1452	CHLOREČNAN VÁPENATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1453	CHLORITAN VÁPENATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1454	DUSIČNAN VÁPENATÝ	5.1	O2	III	5.1	208	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
1455	CHLORISTAN VÁPENATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1456	MANGANISTAN VÁPENATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1457	PEROXID VÁPENATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1458	CHLOREČNANY A BORITANY, SMĚS	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1458	CHLOREČNANY A BORITANY, SMĚS	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33
1459	CHLOREČNANY A CHLORID HOŘEČNATÝ, SMĚS, TUHÁ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1459	CHLOREČNANY A CHLORID HOŘEČNATÝ, SMĚS, TUHÁ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (E)	V1		CV23 CV28	S20		1433	FOSFIDY CÍNU
SGAN		AT	3 (E)	V1	VV5	CV23		423	1435	POPEL ZINKOVÝ
			1 (E)	V1		CV23	S20		1436	ZINEK, PRAŠEK nebo ZINEK, PRACH
SGAN		AT	2 (D/E)	V1		CV23		423	1436	ZINEK, PRAŠEK nebo ZINEK, PRACH
SGAN		AT	3 (E)	V1	VV5	CV23		423	1436	ZINEK, PRAŠEK nebo ZINEK, PRACH
SGAN		AT	2 (E)					40	1437	HYDRID ZIRKONIA
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1438	DUSIČNAN HLINITÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	1439	DICHROMAN AMONNÝ
		AT	2 (E)	V11	VV8	CV24	S23	50	1442	CHLORISTAN AMONNÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1444	PERSÍRAN AMONNÝ
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	1445	CHLOREČNAN BARNATÝ, TUHÝ
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	1446	DUSIČNAN BARNATÝ
SGAN	TU3	AT	2 (E)	V11		CV24 CV28	S23	56	1447	CHLORISTAN BARNATÝ, TUHÝ
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	1448	MANGANISTAN BARNATÝ
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	1449	PEROXID BARYA
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1450	BROMIČNANY, ANORGANICKÉ, J.N.
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1451	DUSIČNAN CESNÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1452	CHLOREČNAN VÁPENATÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	1453	CHLORITAN VÁPENATÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1454	DUSIČNAN VÁPENATÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24	S23	50	1455	CHLORISTAN VÁPENATÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	1456	MANGANISTAN VÁPENATÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	1457	PEROXID VÁPENATÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1458	CHLOREČNANY A BORITANY, SMĚS
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1458	CHLOREČNANY A BORITANY, SMĚS
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1459	CHLOREČNANY A CHLORID HOŘEČNATÝ, SMĚS, TUHÁ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1459	CHLOREČNANY A CHLORID HOŘEČNATÝ, SMĚS, TUHÁ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1461	CHLORÉČNANY, ANORGANICKÉ, J.N.	5.1	O2	II	5.1	274 351	1 kg	E2	P002 IBC06		MP2	T3	TP33
1462	CHLORITANY, ANORGANICKÉ, J.N.	5.1	O2	II	5.1	274 352 509	1 kg	E2	P002 IBC06		MP2	T3	TP33
1463	OXID CHROMOVÝ, BEZVODÝ	5.1	OTC	II	5.1+6.1+ 8	510	1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1465	DUSIČNAN DIDYMIA	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1466	DUSIČNAN ŽELEZITÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1467	DUSIČNAN GUANIDINU	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1469	DUSIČNAN OLOVNATÝ	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1470	CHLORISTAN OLOVNATÝ, TUHÝ	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1471	CHLORNAN LITHNÝ, SUCHÝ nebo CHLORNAN LITHNÝ, SMĚS	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10		
1471	CHLORNAN LITHNÝ, SUCHÝ nebo CHLORNAN LITHNÝ, SMĚS	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1472	PEROXID LITHNÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1473	BROMIČNAN HOŘEČNATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1474	DUSIČNAN HOŘEČNATÝ	5.1	O2	III	5.1	332	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
1475	CHLORISTAN HOŘEČNATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1476	PEROXID HOŘEČNATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1477	DUSIČNANY, ANORGANICKÉ, J.N.	5.1	O2	II	5.1	511	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1477	DUSIČNANY, ANORGANICKÉ, J.N.	5.1	O2	III	5.1	511	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1479	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, J.N.	5.1	O2	I	5.1	274	0	E0	P503 IBC05		MP2		
1479	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, J.N.	5.1	O2	II	5.1	274	1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1479	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, J.N.	5.1	O2	III	5.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33
1481	CHLORISTANY, ANORGANICKÉ, J.N.	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1481	CHLORISTANY, ANORGANICKÉ, J.N.	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33
1482	MANGANISTANY, ANORGANICKÉ, J.N.	5.1	O2	II	5.1	274 353	1 kg	E2	P002 IBC06		MP2	T3	TP33
1482	MANGANISTANY, ANORGANICKÉ, J.N.	5.1	O2	III	5.1	274 353	5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33
1483	PEROXIDY, ANORGANICKÉ, J.N.	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1461	CHLOREČNANY, ANORGANICKÉ, J.N.
SGAN	TU3	AT	2 (E)	V11		CV24		50	1462	CHLORITANY, ANORGANICKÉ, J.N.
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		568	1463	OXID CHROMOVÝ, BEZVODÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1465	DUSIČNAN DIDYMA
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1466	DUSIČNAN ŽELEZITÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1467	DUSIČNAN GUANIDINU
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	1469	DUSIČNAN OLOVNATÝ
SGAN	TU3	AT	2 (E)	V11		CV24 CV28	S23	56	1470	CHLORISTAN OLOVNATÝ, TUHÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	1471	CHLORNAN LITHNÝ, SUCHÝ nebo CHLORNAN LITHNÝ, SMĚS
SGAV	TU3	AT	3 (E)			CV24		50	1471	CHLORNAN LITHNÝ, SUCHÝ nebo CHLORNAN LITHNÝ, SMĚS
SGAN	TU3	AT	2 (E)	V11		CV24		50	1472	PEROXID LITHNÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1473	BROMIČNAN HOŘEČNATÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1474	DUSIČNAN HOŘEČNATÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24	S23	50	1475	CHLORISTAN HOŘEČNATÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	1476	PEROXID HOŘEČNATÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	1477	DUSIČNANY, ANORGANICKÉ, J.N.
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1477	DUSIČNANY, ANORGANICKÉ, J.N.
			1 (E)	V10		CV24	S20		1479	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, J.N.
SGAN	TU3	AT	2 (E)	V11		CV24		50	1479	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, J.N.
SGAN	TU3	AT	3 (E)			CV24		50	1479	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, J.N.
SGAV	TU3	AT	2 (E)	V11	VV8	CV24	S23	50	1481	CHLORISTANY, ANORGANICKÉ, J.N.
SGAV	TU3	AT	3 (E)		VV8	CV24	S23	50	1481	CHLORISTANY, ANORGANICKÉ, J.N.
SGAN	TU3	AT	2 (E)	V11		CV24		50	1482	MANGANISTANY, ANORGANICKÉ, J.N.
SGAN	TU3	AT	3 (E)			CV24		50	1482	MANGANISTANY, ANORGANICKÉ, J.N.
SGAN	TU3	AT	2 (E)	V11		CV24		50	1483	PEROXIDY, ANORGANICKÉ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1483	PEROXIDY, ANORGANICKÉ, J.N.	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33
1484	BROMIČNAN DRASELNÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1485	CHLOREČNAN DRASELNÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1486	DUSIČNAN DRASELNÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
1487	DUSIČNAN DRASELNÝ A DUSITAN SODNÝ, SMĚS	5.1	O2	II	5.1	607	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1488	DUSITAN DRASELNÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1489	CHLORISTAN DRASELNÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1490	MANGANISTAN DRASELNÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1491	PEROXID DRASELNÝ	5.1	O2	I	5.1		0	E0	P503 IBC06		MP2		
1492	PERSÍRAN DRASELNÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1493	DUSIČNAN STRĚBRNÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1494	BROMIČNAN SODNÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1495	CHLOREČNAN SODNÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3 BK1 BK2	TP33
1496	CHLORITAN SODNÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1498	DUSIČNAN SODNÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
1499	DUSIČNAN SODNÝ A DUSIČNAN DRASELNÝ, SMĚS	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
1500	DUSITAN SODNÝ	5.1	OT2	III	5.1+6.1		5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33
1502	CHLORISTAN SODNÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1503	MANGANISTAN SODNÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1504	PEROXID SODNÝ	5.1	O2	I	5.1		0	E0	P503 IBC05		MP2		
1505	PERSÍRAN SODNÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1506	CHLOREČNAN STRONTNATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1507	DUSIČNAN STRONTNATÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1508	CHLORISTAN STRONTNATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1509	PEROXID STRONTNATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN	TU3	AT	3 (E)			CV24		50	1483	PEROXIDY, ANORGANICKÉ, J.N.
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1484	BROMIČNAN DRASELNÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1485	CHLOREČNAN DRASELNÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1486	DUSIČNAN DRASELNÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1487	DUSIČNAN DRASELNÝ A DUSITAN SODNÝ, SMĚS
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1488	DUSITAN DRASELNÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24	S23	50	1489	CHLORISTAN DRASELNÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	1490	MANGANISTAN DRASELNÝ
			1 (E)	V10		CV24	S20		1491	PEROXID DRASELNÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1492	PERSÍRAN DRASELNÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1493	DUSIČNAN STRÍBRNÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1494	BROMIČNAN SODNÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1495	CHLOREČNAN SODNÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	1496	CHLORITAN SODNÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1498	DUSIČNAN SODNÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1499	DUSIČNAN SODNÝ A DUSIČNAN DRASELNÝ, SMĚS
SGAN	TU3	AT	3 (E)			CV24 CV28		56	1500	DUSITAN SODNÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24	S23	50	1502	CHLORISTAN SODNÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	1503	MANGANISTAN SODNÝ
			1 (E)	V10		CV24	S20		1504	PEROXID SODNÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1505	PERSÍRAN SODNÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1506	CHLOREČNAN STRONTNATÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	1507	DUSIČNAN STRONTNATÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24	S23	50	1508	CHLORISTAN STRONTNATÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	1509	PEROXID STRONTNATÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
1510	TETRANITROMETHAN	6.1	TO1	I	6.1+5.1	354 609	0	E0	P602		MP8 MP17		
1511	SLOUČENINA MOČOVINY, S PEROXIDEM VODÍKU	5.1	OC2	III	5.1+8		5 kg	E1	P002 IBC08 R001	B3	MP2	T1	TP33
1512	DUSITAN ZINEČNATOAMONNÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1513	CHLOREČNAN ZINEČNATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
1514	DUSIČNAN ZINEČNATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1515	MANGANISTAN ZINEČNATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1516	PEROXID ZINEČNATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
1517	PIKRAMÁT ZIRKONIČITÝ, VLNĚNÝ nejméně 20 % hm. vody	4.1	D	I	4.1		0	E0	P406	PP26	MP2		
1541	ACETONKYANHYDRIN, STABILIZOVANÝ	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
1544	ALKALOIDY, TUHÉ, J.N. nebo SOLI ALKALOIDŮ, TUHÉ, J.N.	6.1	T2	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33
1544	ALKALOIDY, TUHÉ, J.N. nebo SOLI ALKALOIDŮ, TUHÉ, J.N.	6.1	T2	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1544	ALKALOIDY, TUHÉ, J.N. nebo SOLI ALKALOIDŮ, TUHÉ, J.N.	6.1	T2	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1545	ALLYLSIOTHIOKYANÁT, STABILIZOVANÝ	6.1	TF1	II	6.1+3		100 ml	E4	P001 IBC02		MP15	T7	TP2
1546	ARSENIČNAN AMONNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1547	ANILÍN	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2
1548	HYDROCHLORID ANILÍNU	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1549	SLOUČENINA ANTIMONU, ANORGANICKÁ, TUHÁ, J.N.	6.1	T5	III	6.1	45 274 512	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1550	LAKTÁT ANTIMONIČNÝ	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1551	VINAN ANTIMONYLODRASELNÝ	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1553	KYSELINA ARSENIČNÁ, KAPALNÁ	6.1	T4	I	6.1		0	E5	P001		MP8 MP17	T20	TP2 TP7
1554	KYSELINA ARSENIČNÁ, TUHÁ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1555	BROMID ARSENIČNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1556	SLOUČENINA ARSENU, KAPALNÁ, J.N., anorganická, zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.	6.1	T4	I	6.1	43 274	0	E5	P001		MP8 MP17	T14	TP2 TP27

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE19 TE21	AT	1 (B/D)			CV1 CV13 CV28	S9 S14	665	1510	TETRANITROMETHAN
SGAN	TU3	AT	3 (E)			CV24		58	1511	SLOUČENINA MOČOVINY, S PEROXIDEM VODÍKU
SGAN	TU3	AT	2 (E)	V11		CV24		50	1512	DUSITAN ZINEČNATOAMONNÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	1513	CHLOREČNAN ZINEČNATÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	1514	DUSIČNAN ZINEČNATÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	1515	MANGANISTAN ZINEČNATÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	1516	PEROXID ZINEČNATÝ
			1 (B)				S14		1517	PIKRAMÁT ZIRKONIČITÝ, VLNĚNÝ nejméně 20 % hm. vody
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	669	1541	ACETONKYANHYDRIN, STABILIZOVANÝ
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1544	ALKALOIDY, TUHÉ, J.N. nebo SOLI ALKALOIDŮ, TUHÉ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1544	ALKALOIDY, TUHÉ, J.N. nebo SOLI ALKALOIDŮ, TUHÉ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1544	ALKALOIDY, TUHÉ, J.N. nebo SOLI ALKALOIDŮ, TUHÉ, J.N.
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	639	1545	ALLYLSIOTHIOKYANÁT, STABILIZOVANÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1546	ARSENIČNAN AMONNÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1547	ANILÍN
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1548	HYDROCHLORID ANILÍNU
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1549	SLOUČENINA ANTIMONU, ANORGANICKÁ, TUHÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1550	LAKTÁT ANTIMONIČNÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1551	VINAN ANTIMONYLODRASELNÝ
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1553	KYSELINA ARSENIČNÁ, KAPALNÁ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1554	KYSELINA ARSENIČNÁ, TUHÁ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1555	BROMID ARSENIČNÝ
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1556	SLOUČENINA ARSENU, KAPALNÁ, J.N., anorganická, zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
							(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1556	SLOUČENINA ARSENU, KAPALNÁ, J.N., anorganická, zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.	6.1	T4	II	6.1	43 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
1556	SLOUČENINA ARSENU, KAPALNÁ, J.N., anorganická, zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.	6.1	T4	III	6.1	43 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
1557	SLOUČENINA ARSENU, TUHÁ, J.N., anorganická, zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.	6.1	T5	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33
1557	SLOUČENINA ARSENU, TUHÁ, J.N., anorganická, zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.	6.1	T5	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1557	SLOUČENINA ARSENU, TUHÁ, J.N., anorganická, zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.	6.1	T5	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1558	ARSEN	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1559	OXID ARSENIČNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1560	CHLORID ARSENIČNÝ	6.1	T4	I	6.1		0	E5	P602		MP8 MP17	T14	TP2
1561	OXID ARSENIČNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1562	ARSEN, PRACH	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1564	SLOUČENINA BARYA, J.N.	6.1	T5	II	6.1	177 274 513 587	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1564	SLOUČENINA BARYA, J.N.	6.1	T5	III	6.1	177 274 513 587	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1565	KYANID BARNATÝ	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
1566	SLOUČENINA BERYLLIA, J.N.	6.1	T5	II	6.1	274 514	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1566	SLOUČENINA BERYLLIA, J.N.	6.1	T5	III	6.1	274 514	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1567	BERYLLIUM, PRÁŠEK	6.1	TF3	II	6.1+4.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1569	BROMACETON	6.1	TF1	II	6.1+3		0	E4	P602		MP15	T20	TP2
1570	BRUCIN	6.1	T2	I	6.1	43	0	E5	P002 IBC07		MP18	T6	TP33
1571	AZID BARNATÝ, VLNĚNÝ nejméně 50 % hm. vody	4.1	DT	I	4.1+6.1	568	0	E0	P406		MP2		
1572	KYSELINA KAKODYLOVÁ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1573	ARSENIČNAN VÁPENATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1574	ARSENIČNAN VÁPENATÝ A ARSENITAN VÁPENATÝ, SMĚS, TUHÁ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	(4.3.5, 6.8.4)	(9.1.1.2)	(1.1.3.6 (8.6))	(7.2.4)	(7.3.3)	(7.5.11)	(8.5)	(5.3.2.3)	(1)	(2)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1556	SLOUČENINA ARSENU, KAPALNÁ, J.N., anorganická, zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1556	SLOUČENINA ARSENU, KAPALNÁ, J.N., anorganická, zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1557	SLOUČENINA ARSENU, TUHÁ, J.N., anorganická, zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1557	SLOUČENINA ARSENU, TUHÁ, J.N., anorganická, zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1557	SLOUČENINA ARSENU, TUHÁ, J.N., anorganická, zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1558	ARSEN
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1559	OXID ARSENIČNÝ
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1560	CHLORID ARSENITÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1561	OXID ARSENITÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1562	ARSEN, PRACH
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1564	SLOUČENINA BARYA, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1564	SLOUČENINA BARYA, J.N.
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1565	KYANID BARNATÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1566	SLOUČENINA BERYLLIA, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1566	SLOUČENINA BERYLLIA, J.N.
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	64	1567	BERYLLIUM, PRÁŠEK
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	1569	BROMACETON
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1570	BRUCIN
			1 (B)			CV28	S14		1571	AZID BARNATÝ, VLNĚNÝ nejméně 50 % hm. vody
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1572	KYSELINA KAKODYLOVÁ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1573	ARSENIČNAN VÁPENATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1574	ARSENIČNAN VÁPENATÝ A ARSENITAN VÁPENATÝ, SMĚS, TUHÁ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky		
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
1575	KYANID VÁPENATÝ	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33	
1577	CHLORDINITROBENZENY, KAPALNÉ	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2	
1578	CHLORNITROBENZENY, TUHÉ	6.1	T2	II	6.1	279	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1579	HYDROCHLORID 4-CHLOR-o-TOLUIDINU, TUHÝ	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1580	CHLORPIKRIN	6.1	T1	I	6.1	354	0	E0	P601		MP8 MP17	T22	TP2 TP37	
1581	CHLORPIKRIN A METHYLBROMID, SMĚS, s více než 2 % chlorpikrinu	2	2T		2.3		0	E0	P200		MP9	(M) T50		
1582	CHLORPIKRIN A METHYLCHLORID, SMĚS	2	2T		2.3		0	E0	P200		MP9	(M) T50		
1583	CHLORPIKRIN, SMĚS, J.N.	6.1	T1	I	6.1	274 315 515	0	E5	P602		MP8 MP17			
1583	CHLORPIKRIN, SMĚS, J.N.	6.1	T1	II	6.1	274 515	100 ml	E4	P001 IBC02		MP15			
1583	CHLORPIKRIN, SMĚS, J.N.	6.1	T1	III	6.1	274 515	5 L	E1	P001 IBC03 LP01 R001		MP19			
1585	ACETOARSENITAN MĚDNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1586	ARSENITAN MĚDNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1587	KYANID MĚDNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1588	KYANIDY, ANORGANICKÉ, TUHÉ, J.N.	6.1	T5	I	6.1	47 274	0	E5	P002 IBC07		MP18	T6	TP33	
1588	KYANIDY, ANORGANICKÉ, TUHÉ, J.N.	6.1	T5	II	6.1	47 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1588	KYANIDY, ANORGANICKÉ, TUHÉ, J.N.	6.1	T5	III	6.1	47 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1589	CHLORKYAN, STABILIZOVANÝ	2	2TC		2.3+8		0	E0	P200		MP9			
1590	DICHLORANILÍNÝ, KAPALNÉ	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2	
1591	o-DICHLORBENZEN (1,2-dichlorbenzen)	6.1	T1	III	6.1	279	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
1593	DICHLORMETHAN	6.1	T1	III	6.1	516	5 L	E1	P001 IBC03 LP01 R001	B8	MP19	T7	TP2	
1594	DIETHYLSULFÁT (DIETHYL-SULFÁT)	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	
1595	DIMETHYLSULFÁT (DIMETHYL-SULFÁT)	6.1	TC1	I	6.1+8	354	0	E0	P602		MP8 MP17	T20	TP2 TP35	
1596	DINITROANILÍNÝ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1597	DINITROBENZENY, KAPALNÉ	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1575	KYANID VÁPENATÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1577	CHLORDINITROBENZENY, KAPALNÉ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1578	CHLORNITROBENZENY, TUHÉ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1579	HYDROCHLORID 4-CHLOR-o-TOLUIDINU, TUHÝ
L15CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	1580	CHLORPIKRIN
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	1581	CHLORPIKRIN A METHYLBROMID, SMĚS, s více než 2 % chlorpikrinu
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	1582	CHLORPIKRIN A METHYLCHLORID, SMĚS
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1583	CHLORPIKRIN, SMĚS, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1583	CHLORPIKRIN, SMĚS, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1583	CHLORPIKRIN, SMĚS, J.N.
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1585	ACETOARSENITAN MĚDNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1586	ARSENITAN MĚDNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1587	KYANID MĚDNÝ
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1588	KYANIDY, ANORGANICKÉ, TUHÉ, J.N.
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1588	KYANIDY, ANORGANICKÉ, TUHÉ, J.N.
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1588	KYANIDY, ANORGANICKÉ, TUHÉ, J.N.
			1 (D)			CV9 CV10 CV36	S14		1589	CHLORKYAN, STABILIZOVANÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1590	DICHLORANILÍNY, KAPALNÉ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1591	o-DICHLORBENZEN (1,2-dichlorbenzen)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1593	DICHLORMETHAN
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1594	DIETHYLSULFÁT (DIETHYL-SULFÁT)
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	668	1595	DIMETHYLSULFÁT (DIMETHYL-SULFÁT)
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1596	DINITROANILÍNY
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1597	DINITROBENZENY, KAPALNÉ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3
1597	DINITROBENZENY, KAPALNÉ	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2
1598	DINITRO-o-KRESOL	6.1	T2	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1599	DINITROFENOL, ROZTOK	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1599	DINITROFENOL, ROZTOK	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1600	DINITROTOLUENY, ROZTAVENÉ	6.1	T1	II	6.1		0	E0				T7	TP3
1601	PROSTŘEDEK DEZINFEKČNÍ, TUHÝ, TOXICKÝ, J.N.	6.1	T2	I	6.1	274	0	E5	P002 IBC07		MP18	T6	TP33
1601	PROSTŘEDEK DEZINFEKČNÍ, TUHÝ, TOXICKÝ, J.N.	6.1	T2	II	6.1	274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1601	PROSTŘEDEK DEZINFEKČNÍ, TUHÝ, TOXICKÝ, J.N.	6.1	T2	III	6.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1602	BARVIVO, KAPALNÉ, TOXICKÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, TOXICKÝ, J.N.	6.1	T1	I	6.1	274	0	E5	P001		MP8 MP17		
1602	BARVIVO, KAPALNÉ, TOXICKÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, TOXICKÝ, J.N.	6.1	T1	II	6.1	274	100 ml	E4	P001 IBC02		MP15		
1602	BARVIVO, KAPALNÉ, TOXICKÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, TOXICKÝ, J.N.	6.1	T1	III	6.1	274	5 L	E1	P001 IBC03 LP01 R001		MP19		
1603	ETHYLBROMACETÁT (ETHYL-BROMACETÁT)	6.1	TF1	II	6.1+3		100 ml	E4	P001 IBC02		MP15	T7	TP2
1604	ETHYLENDIAMIN	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2
1605	ETHYLENDIBROMID	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
1606	ARSENIČNAN ŽELEZITÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1607	ARSENITAN ŽELEZITÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1608	ARSENIČNAN ŽELEZNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1611	HEXAETHYL-TETRAFOSFÁT (HEXAETHYL-TETRAFOSFÁT)	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1612	HEXAETHYL-TETRAFOSFÁT A STLAČENÝ PLYN, SMĚS (HEXAETHYL-TETRAFOSFÁT A STLAČENÝ PLYN, SMĚS)	2	1T		2.3		0	E0	P200		MP9	(M)	
1613	KYSELINA KYANOVOĐÍKOVÁ, VODNÝ ROZTOK (KYANOVOĐÍK, VODNÝ ROZTOK), obsahující nejvýše 20 % kyanovodíku	6.1	TF1	I	6.1+3	48	0	E5	P601		MP8 MP17	T14	TP2
1614	KYANOVOĐÍK, STABILIZOVANÝ, obsahující méně než 3 % vody a nasáklý v porézní inertní hmotě	6.1	TF1	I	6.1+3	603	0	E5	P099 P601	RR10	MP2		
1616	OCTAN OLOVNATÝ	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1597	DINITROBENZENY, KAPALNÉ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1598	DINITRO-o-KRESOL
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1599	DINITROFENOL, ROZTOK
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1599	DINITROFENOL, ROZTOK
L4BH	TU15 TE19	AT	0 (D/E)			CV13	S9 S19	60	1600	DINITROTOLUENY, ROZTAVENÉ
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1601	PROSTŘEDEK DEZINFEKČNÍ, TUHÝ, TOXICKÝ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1601	PROSTŘEDEK DEZINFEKČNÍ, TUHÝ, TOXICKÝ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1601	PROSTŘEDEK DEZINFEKČNÍ, TUHÝ, TOXICKÝ, J.N.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1602	BARVIVO, KAPALNÉ, TOXICKÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, TOXICKÝ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1602	BARVIVO, KAPALNÉ, TOXICKÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, TOXICKÝ, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1602	BARVIVO, KAPALNÉ, TOXICKÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, TOXICKÝ, J.N.
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	1603	ETHYLBROMACETÁT (ETHYL-BROMACETÁT)
L4BN		FL	2 (D/E)				S2	83	1604	ETHYLENDIAMIN
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	1605	ETHYLENDIBROMID
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1606	ARSENIČNAN ŽELEZITÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1607	ARSENITAN ŽELEZITÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1608	ARSENIČNAN ŽELEZNATÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1611	HEXAETHYL-TETRAFOSFÁT (HEXAETHYL-TETRAFOSFÁT)
CxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	1612	HEXAETHYL-TETRAFOSFÁT A STLAČENÝ PLYN, SMĚS (HEXAETHYL-TETRAFOSFÁT A STLAČENÝ PLYN, SMĚS)
L15DH(+)	TU14 TU15 TE19 TE21	FL	0 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1613	KYSELINA KYANOVODÍKOVÁ, VODNÝ ROZTOK (KYANOVODÍK, VODNÝ ROZTOK), obsahující nejvýše 20 % kyanovodíku
			0 (D)			CV1 CV13 CV28	S2 S9 S10 S14		1614	KYANOVODÍK, STABILIZOVANÝ, obsahující méně než 3 % vody a nasáklý v porézní inertní hmotě
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1616	OCTAN OLOVNATÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1617	ARSENIČNANY OLOVA	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1618	ARSENITANY OLOVA	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1620	KYANID OLOVNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1621	LONDON PURPLE	6.1	T5	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1622	ARSENIČNAN HOŘEČNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1623	ARSENIČNAN RTUŤNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1624	CHLORID RTUŤNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1625	DUSIČNAN RTUŤNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1626	KYANID DRASELNO-RTUŤNATÝ	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
1627	DUSIČNAN RTUŤNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1629	OCTAN RTUŤNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1630	CHLORID RTUŤNATO-AMONNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1631	BENZOÁT RTUŤNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1634	BROMIDY RTUTI	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1636	KYANID RTUŤNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1637	GLUKONÁT RTUŤNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1638	JODID RTUŤNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1639	NUKLEÁT RTUŤNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1640	OLEÁT RTUŤNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1641	OXID RTUŤNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1642	OXID-DIKYANID DIRTUŤNATÝ, FLEGMATIZOVANÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1643	JODID DRASELNO-RTUŤNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1644	SALICYLÁT RTUŤNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1645	SÍRAN RTUŤNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1646	THIOKYANÁT RTUŤNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1647	METHYLBROMID A ETHYLENDBROMID, SMĚS, KAPALNÁ	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2
1648	ACETONITRIL	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP2
1649	ANTIDETONAČNÍ SMĚS PRO MOTOROVÉ PALIVO	6.1	T3	I	6.1		0	E5	P602		MP8 MP17	T14	TP2
1650	2-NAFTYLAMIN (beta-naftylamin), TUHÝ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1651	NAFTYLTHIOMOČOVINA	6.1	T2	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1652	NAFTYLMOČOVINA	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1617	ARSENIČNANY OLOVA
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1618	ARSENITANY OLOVA
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1620	KYANID OLOVNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1621	LONDON PURPLE
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1622	ARSENIČNAN HOŘEČNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1623	ARSENIČNAN RTUŤNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1624	CHLORID RTUŤNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1625	DUSIČNAN RTUŤNATÝ
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1626	KYANID DRASELNO-RTUŤNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1627	DUSIČNAN RTUŤNÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1629	OCTAN RTUŤNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1630	CHLORID RTUŤNATO-AMONNÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1631	BENZOÁT RTUŤNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1634	BROMIDY RTUTI
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1636	KYANID RTUŤNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1637	GLUKONÁT RTUŤNÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1638	JODID RTUŤNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1639	NUKLEÁT RTUŤNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1640	OLEÁT RTUŤNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1641	OXID RTUŤNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1642	OXID-DIKYANID DIRTUŤNATÝ, FLEGMATIZOVANÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1643	JODID DRASELNO-RTUŤNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1644	SALICYLÁT RTUŤNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1645	SÍRAN RTUŤNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1646	THIOKYANÁT RTUŤNATÝ
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	1647	METHYLBROMID A ETHYLENDIBROMID, SMĚS, KAPALNÁ
LGBF		FL	2 (D/E)				S2 S20	33	1648	ACETONITRIL
L10CH	TU14 TU15 TE19 TE21 TT6	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1649	ANTIDETONAČNÍ SMĚS PRO MOTOROVÉ PALIVO
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1650	2-NAFTYLAMIN (beta-naftylamin), TUHÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1651	NAFTYLTHIOMOČOVINA
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1652	NAFTYLMOČOVINA

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1653	KYANID NIKELNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1654	NIKOTIN	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15		
1655	SLOUČENINA NIKOTINU, TUHÁ, J.N. nebo PŘÍPRAVKY NIKOTINOVÉ, TUHÉ, J.N.	6.1	T2	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33
1655	SLOUČENINA NIKOTINU, TUHÁ, J.N. nebo PŘÍPRAVKY NIKOTINOVÉ, TUHÉ, J.N.	6.1	T2	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1655	SLOUČENINA NIKOTINU, TUHÁ, J.N. nebo PŘÍPRAVKY NIKOTINOVÉ, TUHÉ, J.N.	6.1	T2	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1656	HYDROCHLORID NIKOTINU, KAPALNÝ nebo ROZTOK	6.1	T1	II	6.1	43	100 ml	E4	P001 IBC02		MP15		
1656	HYDROCHLORID NIKOTINU, KAPALNÝ nebo ROZTOK	6.1	T1	III	6.1	43	5 L	E1	P001 IBC03 LP01 R001		MP19		
1657	SALICYLÁT NIKOTINU	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1658	ŠIRAN NIKOTINU, ROZTOK	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1658	ŠIRAN NIKOTINU, ROZTOK	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2
1659	VINAN NIKOTINU	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1660	OXID DUSNATÝ, STLAČENÝ	2	1TOC		2.3+5.1+8		0	E0	P200		MP9		
1661	NITROANILÍNY (o-, m-, p-)	6.1	T2	II	6.1	279	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1662	NITROBENZEN	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2
1663	NITROFENOLY (o-, m-, p-)	6.1	T2	III	6.1	279	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1664	NITROTOLUENY, KAPALNÉ	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1665	NITROXYLENY, KAPALNÉ	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1669	PENTACHLORETHAN	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1670	PERCHLORMETHYLMERKAPTAN	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
1671	FENOL, TUHÝ	6.1	T2	II	6.1	279	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1672	FENYLKARBYLAMINCHLORID	6.1	T1	I	6.1		0	E5	P602		MP8 MP17	T14	TP2
1673	FENYLENDIAMINY (o-, m-, p-)	6.1	T2	III	6.1	279	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1674	FENYLMERKURIACETÁT	6.1	T3	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1677	ARSENĚČNAN DRASELNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1678	ARSENITAN DRASELNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1679	DIKYANOMĚDNAN DRASELNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1653	KYANID NIKELNATÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1654	NIKOTIN
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1655	SLOUČENINA NIKOTINU, TUHÁ, J.N. nebo PŘÍPRAVKY NIKOTINOVÉ, TUHÉ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1655	SLOUČENINA NIKOTINU, TUHÁ, J.N. nebo PŘÍPRAVKY NIKOTINOVÉ, TUHÉ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1655	SLOUČENINA NIKOTINU, TUHÁ, J.N. nebo PŘÍPRAVKY NIKOTINOVÉ, TUHÉ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1656	HYDROCHLORID NIKOTINU, KAPALNÝ nebo ROZTOK
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1656	HYDROCHLORID NIKOTINU, KAPALNÝ nebo ROZTOK
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1657	SALICYLÁT NIKOTINU
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1658	SÍRAN NIKOTINU, ROZTOK
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1658	SÍRAN NIKOTINU, ROZTOK
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1659	VINAN NIKOTINU
			1 (D)			CV9 CV10 CV36	S14		1660	OXID DUSNATÝ, STLAČENÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1661	NITROANILÍNY (o-, m-, p-)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1662	NITROBENZEN
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1663	NITROFENOLY (o-, m-, p-)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1664	NITROTOLUENY, KAPALNÉ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1665	NITROXYLENY, KAPALNÉ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1669	PENTACHLORETHAN
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	1670	PERCHLORMETHYLMERKAPTAN
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1671	FENOL, TUHÝ
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1672	FENYLKARBYLAMINCHLORID
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1673	FENYLENDIAMINY (o-, m-, p-)
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1674	FENYLMERKURIACETÁT
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1677	ARSENIČNAN DRASELNÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1678	ARSENITAN DRASELNÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1679	DIKYANOMĚDNAN DRASELNÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1680	KYANID DRASELNÝ, TUHÝ	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
1683	ARSENITAN STRÍBRNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1684	KYANID STRÍBRNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1685	ARSENIČNAN SODNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1686	ARSENITAN SODNÝ, VODNÝ ROZTOK	6.1	T4	II	6.1	43	100 ml	E4	P001 IBC02		MP15	T7	TP2
1686	ARSENITAN SODNÝ, VODNÝ ROZTOK	6.1	T4	III	6.1	43	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2
1687	AZID SODNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10		
1688	KAKODYLÁT SODNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1689	KYANID SODNÝ, TUHÝ	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
1690	FLUORID SODNÝ, TUHÝ	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1691	ARSENITAN STRONTNATÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1692	STRYCHNIN nebo SOLI STRYCHNINU	6.1	T2	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
1693	LÁTKA PRO PŘÍPRAVU SLZNÉHO PLYNU, KAPALNÁ, J.N.	6.1	T1	I	6.1	274	0	E5	P001		MP8 MP17		
1693	LÁTKA PRO PŘÍPRAVU SLZNÉHO PLYNU, KAPALNÁ, J.N.	6.1	T1	II	6.1	274	0	E4	P001 IBC02		MP15		
1694	BROMBENZYLKYANID, KAPALNÝ	6.1	T1	I	6.1	138	0	E5	P001		MP8 MP17	T14	TP2
1695	CHLORACETON, STABILIZOVANÝ	6.1	TFC	I	6.1+3+8	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
1697	CHLORACETOFENON, TUHÝ	6.1	T2	II	6.1		0	E4	P002 IBC08	B4	MP10	T3	TP33
1698	DIFENYLAMINOCHLORARSIN	6.1	T3	I	6.1		0	E5	P002		MP18	T6	TP33
1699	DIFENYLCHLORARSIN, KAPALNÝ	6.1	T3	I	6.1		0	E5	P001		MP8 MP17		
1700	SVÍČE SLZOTVORNÉ	6.1	TF3	II	6.1+4.1		0	E0	P600				
1701	XYLYLBROMID, KAPALNÝ	6.1	T1	II	6.1		0	E4	P001 IBC02		MP15	T7	TP2
1702	1,1,2,2-TETRACHLORETHAN	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1704	TETRAETHYLPENTAOXODITHIODIFOSFÁT (TETRAETHYL-PENTAOXODITHIODIFOSFÁT)	6.1	T1	II	6.1	43	100 ml	E4	P001 IBC02		MP15	T7	TP2
1707	SLOUČENINY THALLIA, J.N.	6.1	T5	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1708	TOLUIDINY, KAPALNÉ	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1680	KYANID DRASELNÝ, TUHÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1683	ARSENITAN STRĚBRNÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1684	KYANID STRĚBRNÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1685	ARSENIČNAN SODNÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1686	ARSENITAN SODNÝ, VODNÝ ROZTOK
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1686	ARSENITAN SODNÝ, VODNÝ ROZTOK
			2 (D/E)	V11		CV13 CV28	S9 S19		1687	AZID SODNÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1688	KAKODYLÁT SODNÝ
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1689	KYANID SODNÝ, TUHÝ
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1690	FLUORID SODNÝ, TUHÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1691	ARSENITAN STRONTNATÝ
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1692	STRYCHNIN nebo SOLI STRYCHNINU
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1693	LÁTKA PRO PŘÍPRAVU SLZNÉHO PLYNU, KAPALNÁ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1693	LÁTKA PRO PŘÍPRAVU SLZNÉHO PLYNU, KAPALNÁ, J.N.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1694	BROMBENZYLKYANID, KAPALNÝ
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1695	CHLORACETON, STABILIZOVANÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1697	CHLORACETOFENON, TUHÝ
S10AH	TU15 TE19	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1698	DIFENYLAMINOCHLORARSIN
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1699	DIFENYLCHLORARSIN, KAPALNÝ
			2 (D/E)			CV13 CV28	S9 S19		1700	SVÍČE SLZOTVORNÉ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1701	XYLYLBROMID, KAPALNÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1702	1,1,2,2-TETRACHLORETHAN
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1704	TETRAETHYLPENTAOXODITHIODIFOSFÁT (TETRAETHYL-PENTAOXODITHIODIFOSFÁT)
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1707	SLOUČENINY THALLIA, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1708	TOLUIDINY, KAPALNÉ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky		
							(7a)	(7b)	(8)	(9a)	(9b)	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
1709	2,4-TOLUYLENDIAMIN, TUHÝ	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1710	TRICHLORETHYLEN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
1711	XYLIDINY, KAPALNÉ	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	
1712	ARSENÍČNAN ZINEČNATÝ nebo ARSENITAN ZINEČNATÝ nebo ARSENÍČNAN ZINEČNATÝ A ARSENITAN ZINEČNATÝ, SMĚS	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1713	KYANID ZINEČNATÝ	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33	
1714	FOSFID ZINEČNATÝ	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2			
1715	ACETANHYDRID	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2	
1716	ACETYLBRÓMID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	
1717	ACETYLCHLORID	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T8	TP2	
1718	BUTYLFOSFÁT (BUTYL-FOSFÁT)	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
1719	LÁTKA ŽÍRAVÁ, ALKALICKÁ, KAPALNÁ, J.N.	8	C5	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27	
1719	LÁTKA ŽÍRAVÁ, ALKALICKÁ, KAPALNÁ, J.N.	8	C5	III	8	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28	
1722	ALLYLCHLORFORMIÁT (ALLYL-CHLORFORMIÁT) (allyl-chlorokarbonát)	6.1	TFC	I	6.1+3+8		0	E5	P001		MP8 MP17	T14	TP2	
1723	ALLYLJODID	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP2	
1724	ALLYLTRICHLORSILAN, STABILIZOVANÝ	8	CF1	II	8+3		0	E0	P010		MP15	T10	TP2 TP7	
1725	BRÓMID HLINITÝ, BEZVODÝ	8	C2	II	8	588	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
1726	CHLORID HLINITÝ, BEZVODÝ	8	C2	II	8	588	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
1727	HYDROGENFLUORID AMONNÝ, TUHÝ	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
1728	AMYLTRICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	
1729	ANISOYLCHLORID	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
1730	CHLORID ANTIMONIČNÝ, KAPALNÝ	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	
1731	CHLORID ANTIMONIČNÝ, ROZTOK	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	
1731	CHLORID ANTIMONIČNÝ, ROZTOK	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
1732	FLUORID ANTIMONIČNÝ	8	CT1	II	8+6.1		1 L	E2	P001 IBC02		MP15	T7	TP2	
1733	CHLORID ANTIMONITÝ	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
1736	BENZOYLCHLORID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	
1737	BENZYLBRÓMID	6.1	TC1	II	6.1+8		0	E4	P001 IBC02		MP15	T8	TP2	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1709	2,4-TOLUYLENDIAMIN, TUHÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1710	TRICHLORETHYLEN
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1711	XYLIDINY, KAPALNÉ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1712	ARSENIČNAN ZINEČNATÝ nebo ARSENITAN ZINEČNATÝ nebo ARSENIČNAN ZINEČNATÝ A ARSENITAN ZINEČNATÝ, SMĚS
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	1713	KYANID ZINEČNATÝ
			1 (E)	V1		CV23 CV28	S14		1714	FOSFID ZINEČNATÝ
L4BN		FL	2 (D/E)				S2	83	1715	ACETANHYDRID
L4BN		AT	2 (E)					80	1716	ACETYLBROMID
L4BH		FL	2 (D/E)				S2 S20	X338	1717	ACETYLCHLORID
L4BN		AT	3 (E)	V12				80	1718	BUTYLFOSFÁT (BUTYL-FOSFÁT)
L4BN		AT	2 (E)					80	1719	LÁTKA ŽÍRAVÁ, ALKALICKÁ, KAPALNÁ, J.N.
L4BN		AT	3 (E)	V12				80	1719	LÁTKA ŽÍRAVÁ, ALKALICKÁ, KAPALNÁ, J.N.
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	668	1722	ALLYLCHLORFORMIÁT (ALLYL-CHLORFORMIÁT) (allyl-chlorcarbonát)
L4BH		FL	2 (D/E)				S2 S20	338	1723	ALLYLIODID
L4BN		FL	2 (D/E)				S2	X839	1724	ALLYLTRICHLORSILAN, STABILIZOVANÝ
SGAN		AT	2 (E)	V11				80	1725	BROMID HLINITÝ, BEZVODÝ
SGAN		AT	2 (E)	V11				80	1726	CHLORID HLINITÝ, BEZVODÝ
SGAN		AT	2 (E)	V11				80	1727	HYDROGENFLUORID AMONNÝ, TUHÝ
L4BN		AT	2 (E)					X80	1728	AMYLTRICHLORSILAN
SGAN L4BN		AT	2 (E)	V11				80	1729	ANISOYLCHLORID
L4BN		AT	2 (E)					X80	1730	CHLORID ANTIMONIČNÝ, KAPALNÝ
L4BN		AT	2 (E)					80	1731	CHLORID ANTIMONIČNÝ, ROZTOK
L4BN		AT	3 (E)	V12				80	1731	CHLORID ANTIMONIČNÝ, ROZTOK
L4BN		AT	2 (E)			CV13 CV28		86	1732	FLUORID ANTIMONIČNÝ
L4BN SGAN		AT	2 (E)	V11				80	1733	CHLORID ANTIMONITÝ
L4BN		AT	2 (E)					80	1736	BENZOYLCHLORID
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	1737	BENZYL-BROMID

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky		
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
1738	BENZYLCHLORID	6.1	TC1	II	6.1+8		0	E4	P001 IBC02		MP15	T8	TP2	
1739	BENZYLCHLORFORMIÁT (BENZYLCHLORFORMIÁT) (benzylchlorokarbonát)	8	C9	I	8		0	E0	P001		MP8 MP17	T10	TP2	
1740	HYDROGENFLUORIDY, TUHÉ, J.N.	8	C2	II	8	517	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
1740	HYDROGENFLUORIDY, TUHÉ, J.N.	8	C2	III	8	517	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
1741	CHLORID BORITÝ	2	2TC		2.3+8		0	E0	P200		MP9	(M)		
1742	FLUORID BORITÝ / KYSELINA OCTOVÁ, KOMPLEX, KAPALNÝ	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	
1743	FLUORID BORITÝ / KYSELINA PROPIONOVÁ, KOMPLEX, KAPALNÝ	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	
1744	BROM nebo BROM, ROZTOK	8	CT1	I	8+6.1		0	E0	P804		MP2	T22	TP2 TP10	
1745	FLUORID BROMIČNÝ	5.1	OTC	I	5.1+6.1+8		0	E0	P200		MP2	T22	TP2	
1746	FLUORID BROMITÝ	5.1	OTC	I	5.1+6.1+8		0	E0	P200		MP2	T22	TP2	
1747	BUTYLTRICHLORSILAN	8	CF1	II	8+3		0	E0	P010		MP15	T10	TP2 TP7	
1748	CHLORNAN VÁPENATÝ, SUCHÝ nebo CHLORNAN VÁPENATÝ, SMĚS, SUCHÁ, s více než 39 % aktivního chlóru (8,8 % aktivního kyslíku)	5.1	O2	II	5.1	314	1 kg	E2	P002 IBC08	B4 B13	MP10			
1748	CHLORNAN VÁPENATÝ, SUCHÝ nebo CHLORNAN VÁPENATÝ, SMĚS, SUCHÁ, s více než 39 % aktivního chlóru (8,8 % aktivního kyslíku)	5.1	O2	III	5.1	316	5 kg	E1	P002 IBC08 R001	B4 B13	MP10			
1749	FLUORID CHLORITÝ (CHLORTRIFLUORID)	2	2TOC		2.3+5.1+8		0	E0	P200		MP9	(M)		
1750	KYSELINA CHLOROCTOVÁ, ROZTOK	6.1	TC1	II	6.1+8		100 ml	E4	P001 IBC02		MP15	T7	TP2	
1751	KYSELINA CHLOROCTOVÁ, TUHÁ	6.1	TC2	II	6.1+8		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
1752	CHLORACETYLCHLORID	6.1	TC1	I	6.1+8	354	0	E0	P602		MP8 MP17	T20	TP2 TP35	
1753	CHLORFENYLTRICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7	
1754	KYSELINA CHLORSULFONOVÁ (s oxidem sírovým nebo bez)	8	C1	I	8		0	E0	P001		MP8 MP17	T20	TP2	
1755	KYSELINA CHROMOVÁ, ROZTOK	8	C1	II	8	518	1 L	E2	P001 IBC02		MP15	T8	TP2	
1755	KYSELINA CHROMOVÁ, ROZTOK	8	C1	III	8	518	5 L	E1	P001 IBC02 LP01 R001		MP19	T4	TP1	
1756	FLUORID CHROMITÝ, TUHÝ	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
1757	FLUORID CHROMITÝ, ROZTOK	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	1738	BENZYLCHLORID
L10BH		AT	1 (E)				S20	88	1739	BENZYLCHLORFORMIÁT (BENZYL- CHLORFORMIÁT) (benzyl-chlorkarbonát)
SGAN		AT	2 (E)	V11				80	1740	HYDROGENFLUORIDY, TUHÉ, J.N.
SGAV		AT	3 (E)		VV9			80	1740	HYDROGENFLUORIDY, TUHÉ, J.N.
		AT	1 (C/D)			CV9 CV10 CV36	S14	268	1741	CHLORID BORITÝ
L4BN		AT	2 (E)					80	1742	FLUORID BORITÝ / KYSELINA OCTOVÁ, KOMPLEX, KAPALNÝ
L4BN		AT	2 (E)					80	1743	FLUORID BORITÝ / KYSELINA PROPIONOVÁ, KOMPLEX, KAPALNÝ
L21DH(+)	TU14 TU33 TC5 TE21 TT2 TM3 TM5	AT	1 (C/D)			CV13 CV28	S14	886	1744	BROM nebo BROM, ROZTOK
L10DH	TU3	AT	1 (B/E)			CV24 CV28	S14	568	1745	FLUORID BROMIČNÝ
L10DH	TU3	AT	1 (B/E)			CV24 CV28	S14	568	1746	FLUORID BROMITÝ
L4BN		FL	2 (D/E)				S2	X83	1747	BUTYLTRICHLORSILAN
SGAN	TU3	AT	2 (E)	V11		CV24 CV35		50	1748	CHLORNAN VÁPENATÝ, SUCHÝ nebo CHLORNAN VÁPENATÝ, SMĚS, SUCHÁ, s více než 39 % aktivního chlóru (8,8 % aktivního kyslíku)
SGAV	TU3	AT	3 (E)			CV24 CV35		50	1748	CHLORNAN VÁPENATÝ, SUCHÝ nebo CHLORNAN VÁPENATÝ, SMĚS, SUCHÁ, s více než 39 % aktivního chlóru (8,8 % aktivního kyslíku)
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	1749	FLUORID CHLORITÝ (CHLORTRIFLUORID)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	1750	KYSELINA CHLOROCTOVÁ, ROZTOK
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	68	1751	KYSELINA CHLOROCTOVÁ, TUHA
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	668	1752	CHLORACETYLCHLORID
L4BN		AT	2 (E)					X80	1753	CHLORFENYLTRICHLORSILAN
L10BH		AT	1 (E)				S20	X88	1754	KYSELINA CHLORSULFONOVÁ (s oxidem sírovým nebo bez)
L4BN		AT	2 (E)					80	1755	KYSELINA CHROMOVÁ, ROZTOK
L4BN		AT	3 (E)					80	1755	KYSELINA CHROMOVÁ, ROZTOK
SGAN		AT	2 (E)	V11				80	1756	FLUORID CHROMITÝ, TUHÝ
L4BN		AT	2 (E)					80	1757	FLUORID CHROMITÝ, ROZTOK

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1757	FLUORID CHROMITÝ, ROZTOK	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1758	CHLORID CHROMYLU (OXYCHLORID CHROMOVÝ)	8	C1	I	8		0	E0	P001		MP8 MP17	T10	TP2
1759	LÁTKA ŽÍRAVÁ, TUHÁ, J.N.	8	C10	I	8	274	0	E0	P002 IBC07		MP18	T6	TP33
1759	LÁTKA ŽÍRAVÁ, TUHÁ, J.N.	8	C10	II	8	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1759	LÁTKA ŽÍRAVÁ, TUHÁ, J.N.	8	C10	III	8	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1760	LÁTKA ŽÍRAVÁ, KAPALNÁ, J.N.	8	C9	I	8	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
1760	LÁTKA ŽÍRAVÁ, KAPALNÁ, J.N.	8	C9	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
1760	LÁTKA ŽÍRAVÁ, KAPALNÁ, J.N.	8	C9	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
1761	MĚD / ETHYLENDIAMIN, KOMPLEX, ROZTOK	8	CT1	II	8+6.1		1 L	E2	P001 IBC02		MP15	T7	TP2
1761	MĚD / ETHYLENDIAMIN, KOMPLEX, ROZTOK	8	CT1	III	8+6.1		5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
1762	CYKLOHEXYLTRICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
1763	CYKLOHEXYLTRICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
1764	KYSELINA DICHLOROCTOVÁ	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
1765	DICHLORACETYLCHLORID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1766	DICHLORFENYLTRICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
1767	DIETHYLDICHLORSILAN	8	CF1	II	8+3		0	E0	P010		MP15	T10	TP2 TP7
1768	KYSELINA DIFLUOROSFOREČNÁ, BEZVODÁ	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
1769	DIFENYLDICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
1770	DIFENYLMETHYLBROMID	8	C10	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1771	DODECYLTRICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
1773	CHLORID ŽELEZITÝ, BEZVODÝ	8	C2	III	8	590	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1774	NÁPLNĚ HASIČÍCH PŘÍSTROJŮ, žíravá kapalná látka	8	C11	II	8		1 L	E0	P001	PP4			
1775	KYSELINA FLUOROBORITÁ	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1776	KYSELINA FLUOROSFOREČNÁ, BEZVODÁ	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
1777	KYSELINA FLUOROSULFONOVÁ	8	C1	I	8		0	E0	P001		MP8 MP17	T10	TP2
1778	KYSELINA FLUOROKŘEMIČITÁ	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
1779	KYSELINA MRAVENČÍ, s více než 85 % hm. kyseliny	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2
1780	FUMARYLCHLORID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1781	HEXADECYLTRICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	3 (E)	V12				80	1757	FLUORID CHROMITÝ, ROZTOK
L10BH		AT	1 (E)				S20	X88	1758	CHLORID CHROMYLU (OXYCHLORID CHROMOVÝ)
S10AN L10BH		AT	1 (E)	V10			S20	88	1759	LÁTKA ŽÍRAVÁ, TUHÁ, J.N.
SGAN L4BN		AT	2 (E)	V11				80	1759	LÁTKA ŽÍRAVÁ, TUHÁ, J.N.
SGAV L4BN		AT	3 (E)		VV9			80	1759	LÁTKA ŽÍRAVÁ, TUHÁ, J.N.
L10BH		AT	1 (E)				S20	88	1760	LÁTKA ŽÍRAVÁ, KAPALNÁ, J.N.
L4BN		AT	2 (E)					80	1760	LÁTKA ŽÍRAVÁ, KAPALNÁ, J.N.
L4BN		AT	3 (E)	V12				80	1760	LÁTKA ŽÍRAVÁ, KAPALNÁ, J.N.
L4BN		AT	2 (E)			CV13 CV28		86	1761	MĚĎ / ETHYLENDIAMIN, KOMPLEX, ROZTOK
L4BN		AT	3 (E)	V12		CV13 CV28		86	1761	MĚĎ / ETHYLENDIAMIN, KOMPLEX, ROZTOK
L4BN		AT	2 (E)					X80	1762	CYKLOHEXENYLTRICHLORSILAN
L4BN		AT	2 (E)					X80	1763	CYKLOHEXYLTRICHLORSILAN
L4BN		AT	2 (E)					80	1764	KYSELINA DICHLOROCTOVÁ
L4BN		AT	2 (E)					X80	1765	DICHLORACETYLCHLORID
L4BN		AT	2 (E)					X80	1766	DICHLORFENYLTRICHLORSILAN
L4BN		FL	2 (D/E)				S2	X83	1767	DIETHYLDICHLORSILAN
L4BN		AT	2 (E)					80	1768	KYSELINA DIFLUOROSFOREČNÁ, BEZVODÁ
L4BN		AT	2 (E)					X80	1769	DIFENYLDICHLORSILAN
SGAN L4BN		AT	2 (E)	V11				80	1770	DIFENYLMETHYLBROMID
L4BN		AT	2 (E)					X80	1771	DODECYLTRICHLORSILAN
SGAV		AT	3 (E)		VV9			80	1773	CHLORID ŽELEZITÝ, BEZVODÝ
			2 (E)						1774	NÁPLNĚ HASICÍCH PŘÍSTROJŮ, žíravá kapalná látka
L4BN		AT	2 (E)					80	1775	KYSELINA FLUOROBORITÁ
L4BN		AT	2 (E)					80	1776	KYSELINA FLUOROFOSFOREČNÁ, BEZVODÁ
L10BH		AT	1 (E)				S20	88	1777	KYSELINA FLUOROSULFONOVÁ
L4BN		AT	2 (E)					80	1778	KYSELINA FLUOROKŘEMIČITÁ
L4BN		FL	2 (D/E)				S2	83	1779	KYSELINA MRAVENČÍ, s více než 85 % hm. kyseliny
L4BN		AT	2 (E)					80	1780	FUMARYLCHLORID
L4BN		AT	2 (E)					X80	1781	HEXADECYLTRICHLORSILAN

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1782	KYSELINA HEXAFLUOROFOSFOREČNÁ	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
1783	HEXAMETHYLENDIAMIN, ROZTOK	8	C7	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1783	HEXAMETHYLENDIAMIN, ROZTOK	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1784	HEXYLTRICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
1786	KYSELINA FLUOROVODÍKOVÁ A KYSELINA SÍROVÁ, SMĚS	8	CT1	I	8+6.1		0	E0	P001		MP8 MP17	T10	TP2
1787	KYSELINA JODOVODÍKOVÁ	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1787	KYSELINA JODOVODÍKOVÁ	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1788	KYSELINA BROMOVODÍKOVÁ	8	C1	II	8	519	1 L	E2	P001 IBC02		MP15	T7	TP2
1788	KYSELINA BROMOVODÍKOVÁ	8	C1	III	8	519	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1789	KYSELINA CHLOROVODÍKOVÁ (kyselina solná)	8	C1	II	8	520	1 L	E2	P001 IBC02		MP15	T8	TP2
1789	KYSELINA CHLOROVODÍKOVÁ (kyselina solná)	8	C1	III	8	520	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1790	KYSELINA FLUOROVODÍKOVÁ, roztok, obsahující více než 85 % fluorovodíku	8	CT1	I	8+6.1	640I	0	E0	P802		MP2	T10	TP2
1790	KYSELINA FLUOROVODÍKOVÁ, roztok, obsahující více než 60 %, nejvýše však 85 % fluorovodíku	8	CT1	I	8+6.1	640J	0	E0	P001	PP81	MP8 MP17	T10	TP2
1790	KYSELINA FLUOROVODÍKOVÁ, roztok, obsahující nejvýše 60 % fluorovodíku	8	CT1	II	8+6.1		1 L	E2	P001 IBC02		MP15	T8	TP2
1791	CHLORNAN, ROZTOK	8	C9	II	8	521	1 L	E2	P001 IBC02	PP10 B5	MP15	T7	TP2 TP24
1791	CHLORNAN, ROZTOK	8	C9	III	8	521	5 L	E1	P001 IBC02 LP01 R001	B5	MP19	T4	TP2 TP24
1792	MONOCHLORID JÓDU, TUHÝ	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T7	TP2
1793	ISOPROPYLFOSFÁT (ISOPROPYLFOSFÁT)	8	C3	III	8		5 L	E1	P001 IBC02 LP01 R001		MP19	T4	TP1
1794	SÍRAN OLOVNATÝ, obsahující více než 3 % volné kyseliny	8	C2	II	8	591	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1796	SMĚS NITRAČNÍ, obsahující více než 50 % kyseliny dusičné	8	CO1	I	8+5.1		0	E0	P001		MP8 MP17	T10	TP2
1796	SMĚS NITRAČNÍ, obsahující nejvýše 50 % kyseliny dusičné	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
1798	KYSELINA DUSIČNÁ A CHLOROVODÍKOVÁ (solná), SMĚS	8	COT				PŘEPRAVA ZAKÁZÁNA						
1799	NONYLTRICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
1800	OKTADECYLTRICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	2 (E)					80	1782	KYSELINA HEXAFLUOROFOSFOREČNÁ
L4BN		AT	2 (E)					80	1783	HEXAMETHYLENDIAMIN, ROZTOK
L4BN		AT	3 (E)	V12				80	1783	HEXAMETHYLENDIAMIN, ROZTOK
L4BN		AT	2 (E)					X80	1784	HEXYLTRICHLORSILAN
L10DH	TU14 TE21	AT	1 (C/D)			CV13 CV28	S14	886	1786	KYSELINA FLUOROVODÍKOVÁ A KYSELINA SÍROVÁ, SMĚS
L4BN		AT	2 (E)					80	1787	KYSELINA JODOVODÍKOVÁ
L4BN		AT	3 (E)	V12				80	1787	KYSELINA JODOVODÍKOVÁ
L4BN		AT	2 (E)					80	1788	KYSELINA BROMOVODÍKOVÁ
L4BN		AT	3 (E)	V12				80	1788	KYSELINA BROMOVODÍKOVÁ
L4BN		AT	2 (E)					80	1789	KYSELINA CHLOROVODÍKOVÁ (kyselina solná)
L4BN		AT	3 (E)	V12				80	1789	KYSELINA CHLOROVODÍKOVÁ (kyselina solná)
L21DH(+)	TU14 TU34 TC1 TE21 TA4 TT9 TM3	AT	1 (C/D)			CV13 CV28	S14	886	1790	KYSELINA FLUOROVODÍKOVÁ, roztok, obsahující více než 85 % fluorovodíku
L10DH	TU14 TE21	AT	1 (C/D)			CV13 CV28	S14	886	1790	KYSELINA FLUOROVODÍKOVÁ, roztok, obsahující více než 60 %, nejvýše však 85 % fluorovodíku
L4DH	TU14 TE21	AT	2 (E)			CV13 CV28		86	1790	KYSELINA FLUOROVODÍKOVÁ, roztok, obsahující nejvýše 60 % fluorovodíku
L4BV(+)	TE11	AT	2 (E)					80	1791	CHLORNAN, ROZTOK
L4BV(+)	TE11	AT	3 (E)					80	1791	CHLORNAN, ROZTOK
L4BN SGAN		AT	2 (E)	V11				80	1792	MONOCHLORID JÓDU, TUHÝ
L4BN		AT	3 (E)					80	1793	ISOPROPYLFOSFÁT (ISOPROPYL-FOSFÁT)
SGAN		AT	2 (E)	V11	VV9			80	1794	SÍRAN OLOVNATÝ, obsahující více než 3 % volné kyseliny
L10BH	TC6 TT1	AT	1 (E)			CV24	S14	885	1796	SMĚS NITRAČNÍ, obsahující více než 50 % kyseliny dusičné
L4BN		AT	2 (E)					80	1796	SMĚS NITRAČNÍ, obsahující nejvýše 50 % kyseliny dusičné
PŘEPRAVA ZAKÁZÁNA									1798	KYSELINA DUSIČNÁ A CHLOROVODÍKOVÁ (solná), SMĚS
L4BN		AT	2 (E)					X80	1799	NONYLTRICHLORSILAN
L4BN		AT	2 (E)					X80	1800	OKTADECYLTRICHLORSILAN

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1801	OKTYLTRICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
1802	KYSELINA CHLORISTÁ, s nejvýše 50 % hm. kyseliny	8	CO1	II	8+5.1	522	1 L	E2	P001 IBC02		MP3	T7	TP2
1803	KYSELINA FENOLSULFONOVÁ, KAPALNÁ	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1804	FENYLTRICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
1805	KYSELINA FOSFOREČNÁ, ROZTOK	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1806	CHLORID FOSFOREČNÝ	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1807	OXID FOSFOREČNÝ	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1808	BROMID FOSFORITÝ	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1809	CHLORID FOSFORITÝ	6.1	TC3	I	6.1+8	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
1810	CHLORID FOSFORYLU (OXYCHLORID FOSFOREČNÝ)	6.1	TC3	I	6.1+8	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
1811	HYDROGENFLUORID DRASELNÝ, TUHÝ	8	CT2	II	8+6.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1812	FLUORID DRASELNÝ, TUHÝ	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1813	HYDROXID DRASELNÝ, TUHÝ	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1814	HYDROXID DRASELNÝ, ROZTOK	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1814	HYDROXID DRASELNÝ, ROZTOK	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1815	PROPIONYLCHLORID	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
1816	PROPYLTRICHLORSILAN	8	CF1	II	8+3		0	E0	P010		MP15	T10	TP2 TP7
1817	PYROSULFURYLCHLORID	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
1818	TETRACHLORSILAN (chlorid křemičitý)	8	C1	II	8		0	E0	P010		MP15	T10	TP2 TP7
1819	HLINITAN SODNÝ, ROZTOK	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1819	HLINITAN SODNÝ, ROZTOK	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1823	HYDROXID SODNÝ, TUHÝ	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1824	HYDROXID SODNÝ, ROZTOK	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1824	HYDROXID SODNÝ, ROZTOK	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1825	OXID SODNÝ	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1826	SMĚS NITRAČNÍ, ODPADNÍ, obsahující více než 50 % kyseliny dusičné	8	CO1	I	8+5.1	113	0	E0	P001		MP8 MP17	T10	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	2 (E)					X80	1801	OKTYLTRICHLORSILAN
L4BN		AT	2 (E)			CV24		85	1802	KYSELINA CHLORISTÁ, s nejvýše 50 % hm. kyseliny
L4BN		AT	2 (E)					80	1803	KYSELINA FENOLSULFONOVÁ, KAPALNÁ
L4BN		AT	2 (E)					X80	1804	FENYLTRICHLORSILAN
L4BN		AT	3 (E)	V12				80	1805	KYSELINA FOSFOREČNÁ, ROZTOK
SGAN		AT	2 (E)	V11				80	1806	CHLORID FOSFOREČNÝ
SGAN		AT	2 (E)	V11				80	1807	OXID FOSFOREČNÝ
L4BN		AT	2 (E)					X80	1808	BROMID FOSFORITÝ
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	668	1809	CHLORID FOSFORITÝ
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	X668	1810	CHLORID FOSFORYLU (OXYCHLORID FOSFOREČNÝ)
SGAN		AT	2 (E)	V11		CV13 CV28		86	1811	HYDROGENFLUORID DRASELNÝ, TUHÝ
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1812	FLUORID DRASELNÝ, TUHÝ
SGAN		AT	2 (E)	V11				80	1813	HYDROXID DRASELNÝ, TUHÝ
L4BN		AT	2 (E)					80	1814	HYDROXID DRASELNÝ, ROZTOK
L4BN		AT	3 (E)	V12				80	1814	HYDROXID DRASELNÝ, ROZTOK
L4BH		FL	2 (D/E)				S2 S20	338	1815	PROPIONYLCHLORID
L4BN		FL	2 (D/E)				S2	X83	1816	PROPYLTRICHLORSILAN
L4BN		AT	2 (E)					X80	1817	PYROSULFURYLCHLORID
L4BN		AT	2 (E)					X80	1818	TETRACHLORSILAN (chlorid křemičitý)
L4BN		AT	2 (E)					80	1819	HLINITAN SODNÝ, ROZTOK
L4BN		AT	3 (E)	V12				80	1819	HLINITAN SODNÝ, ROZTOK
SGAN		AT	2 (E)	V11				80	1823	HYDROXID SODNÝ, TUHÝ
L4BN		AT	2 (E)					80	1824	HYDROXID SODNÝ, ROZTOK
L4BN		AT	3 (E)	V12				80	1824	HYDROXID SODNÝ, ROZTOK
SGAN		AT	2 (E)	V11				80	1825	OXID SODNÝ
L10BH		AT	1 (E)			CV24	S14	885	1826	SMĚS NITRAČNÍ, ODPADNÍ, obsahující více než 50 % kyseliny dusičné

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1826	SMĚS NITRAČNÍ, ODPADNÍ, obsahující nejvýše 50 % kyseliny dusičné	8	C1	II	8	113	1 L	E2	P001 IBC02		MP15	T8	TP2
1827	CHLORID ČINIČITÝ, BEZVODÝ	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1828	CHLORIDY SÍRY	8	C1	I	8		0	E0	P602		MP8 MP17	T20	TP2
1829	OXID SÍROVÝ, STABILIZOVANÝ	8	C1	I	8	623	0	E0	P001		MP8 MP17	T20	TP4 TP25 TP26
1830	KYSELINA SÍROVÁ, obsahující více než 51 % kyseliny	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
1831	KYSELINA SÍROVÁ, DÝMAVÁ	8	CT1	I	8+6.1		0	E0	P602		MP8 MP17	T20	TP2
1832	KYSELINA SÍROVÁ, POUŽITÁ	8	C1	II	8	113	1 L	E2	P001 IBC02		MP15	T8	TP2
1833	KYSELINA SÍRČITÁ	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1834	CHLORID SULFURYLU	6.1	TC3	I	6.1+8	354	0	E0	P602		MP8 MP17	T20	TP2
1835	TETRAMETHYLAMONIUMHYDROXID, ROZTOK	8	C7	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1835	TETRAMETHYLAMONIUMHYDROXID, ROZTOK	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2
1836	CHLORID THIONIYLU	8	C1	I	8		0	E0	P802		MP8 MP17	T10	TP2
1837	CHLORID THIOFOSFORYLU	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1838	CHLORID TITANIČITÝ	6.1	TC3	I	6.1+8	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
1839	KYSELINA TRICHLOROCTOVÁ	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1840	CHLORID ZINEČNATÝ, ROZTOK	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1841	1-AMINOETHANOL (ACETALDEHYD AMONIAK)	9	M11	III	9		5 kg	E1	P002 IBC08 LP02 R001	B3 B6	MP10	T1	TP33
1843	AMMONIUMDINITRO-o-KRESOLÁT, TUHÝ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1845	Oxid uhličitý, tuhý (suchý led)	9	M11	NENÍ PŘEDMĚTEM PRO ADR - při použití jako chladicí médium, viz 5.5.3									
1846	TETRACHLORMETHAN	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1847	SULFID DRASELNÝ, HYDRATOVANÝ, obsahující nejméně 30 % krystalové vody	8	C6	II	8	523	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1848	KYSELINA PROPIONOVÁ, s více než 10 % hm., ale nejvýše 90 % hm. kyseliny	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1849	SULFID SODNÝ, HYDRATOVANÝ, obsahující nejméně 30 % vody	8	C6	II	8	523	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1851	LÉČIVA, KAPALNÁ, TOXICKÁ, J.N.	6.1	T1	II	6.1	221 601	100 ml	E4	P001		MP15		
1851	LÉČIVA, KAPALNÁ, TOXICKÁ, J.N.	6.1	T1	III	6.1	221 601	5 L	E1	P001 LP01 R001		MP19		
1854	SLITINY BARYA, PYROFORNÍ	4.2	S4	I	4.2		0	E0	P404		MP13	T21	TP7 TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	(4.3.5, 6.8.4)	(9.1.1.2)	(1.1.3.6 (8.6))	(7.2.4)	(7.3.3)	(7.5.11)	(8.5)	(5.3.2.3)	(1)	(2)
L4BN		AT	2 (E)					80	1826	SMĚS NITRAČNÍ, ODPADNÍ, obsahující nejvýše 50 % kyseliny dusičné
L4BN		AT	2 (E)					X80	1827	CHLORID ČIŇÍČITÝ, BEZVODÝ
L10BH		AT	1 (E)				S20	X88	1828	CHLORIDY SÍRY
L10BH	TU32 TE13 TT5 TM3	AT	1 (E)				S20	X88	1829	OXID SÍROVÝ, STABILIZOVANÝ
L4BN		AT	2 (E)					80	1830	KYSELINA SÍROVÁ, obsahující více než 51 % kyseliny
L10BH		AT	1 (C/D)			CV13 CV28	S14	X886	1831	KYSELINA SÍROVÁ, DÝMAVÁ
L4BN		AT	2 (E)					80	1832	KYSELINA SÍROVÁ, POUŽITÁ
L4BN		AT	2 (E)					80	1833	KYSELINA SÍRČITÁ
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	X668	1834	CHLORID SULFURYLU
L4BN		AT	2 (E)					80	1835	TETRAMETHYLAMONIUMHYDROXID, ROZTOK
L4BN		AT	3 (E)	V12				80	1835	TETRAMETHYLAMONIUMHYDROXID, ROZTOK
L10BH		AT	1 (E)				S20	X88	1836	CHLORID THIONYLU
L4BN		AT	2 (E)					X80	1837	CHLORID THIOFOSFORYLU
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	X668	1838	CHLORID TITANIČITÝ
SGAN L4BN		AT	2 (E)	V11				80	1839	KYSELINA TRICHLOROCTOVÁ
L4BN		AT	3 (E)	V12				80	1840	CHLORID ZINEČNATÝ, ROZTOK
SGAV		AT	3 (E)		VV3			90	1841	1-AMINOETHANOL (ACETALDEHYD AMONIAK)
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1843	AMMONIUMDINITRO- <i>o</i> -KRESOLÁT, TUHÝ
NENÍ PŘEDMĚTEM PRO ADR - při použití jako chladicí médium, viz 5.5.3									1845	Oxid uhličitý, tuhý (suchý led)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1846	TETRACHLORMETHAN
L4BN SGAN		AT	2 (E)	V11				80	1847	SULFID DRASELNÝ, HYDRATOVANÝ, obsahující nejméně 30 % krystalové vody
L4BN		AT	3 (E)	V12				80	1848	KYSELINA PROPIONOVÁ, s více než 10 % hm., ale nejvýše 90 % hm. kyseliny
L4BN SGAN		AT	2 (E)	V11				80	1849	SULFID SODNÝ, HYDRATOVANÝ, obsahující nejméně 30 % vody
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1851	LÉČIVA, KAPALNÁ, TOXICKÁ, J.N.
L4BH	TU15 TE19	AT	2 (E)			CV13 CV28	S9	60	1851	LÉČIVA, KAPALNÁ, TOXICKÁ, J.N.
		AT	0 (B/E)	V1			S20	43	1854	SLITINY BARYA, PYROFORNÍ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1855	VÁPŇÍK, PYROFORNÍ nebo SLITINY VÁPŇÍKU, PYROFORNÍ	4.2	S4	I	4.2		0	E0	P404		MP13		
1856	Hadry znečištěné olejem	4.2	S2			NENÍ PŘEDMĚTEM PRO ADR							
1857	Odpady textilní, vlhké	4.2	S2			NENÍ PŘEDMĚTEM PRO ADR							
1858	HEXAFLUOROPROPYLEN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 1216)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1859	FLUORID KŘEMIČITÝ	2	2TC		2.3+8		0	E0	P200		MP9	(M)	
1860	VINYLFUORID, STABILIZOVANÝ	2	2F		2.1		0	E0	P200		MP9	(M)	
1862	ETHYLKROTONÁT (ETHYLKROTONÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP2
1863	PALIVO PRO TRYSKOVÉ MOTORY	3	F1	I	3	363	500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP28
1863	PALIVO PRO TRYSKOVÉ MOTORY (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	363 640C	1 L	E2	P001		MP19	T4	TP1 TP8
1863	PALIVO PRO TRYSKOVÉ MOTORY (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	363 640D	1 L	E2	P001 IBC02 R001		MP19	T4	TP1 TP8
1863	PALIVO PRO TRYSKOVÉ MOTORY	3	F1	III	3	363	5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1865	n-PROPYLNITRÁT (n-PROPYLNITRÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001	B7	MP19		
1866	PRYSKYŘICE, ROZTOK, hořlavý	3	F1	I	3		500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP28
1866	PRYSKYŘICE, ROZTOK, hořlavý (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	640C	5 L	E2	P001	PP1	MP19	T4	TP1 TP8
1866	PRYSKYŘICE, ROZTOK, hořlavý (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001	PP1	MP19	T4	TP1 TP8
1866	PRYSKYŘICE, ROZTOK, hořlavý	3	F1	III	3	640E	5 L	E1	P001 IBC03 LP01 R001	PP1	MP19	T2	TP1
1866	PRYSKYŘICE, ROZTOK, hořlavý (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	3	F1	III	3	640F	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1
1866	PRYSKYŘICE, ROZTOK, hořlavý (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	3	F1	III	3	640G	5 L	E1	P001 LP01 R001	PP1	MP19	T2	TP1
1866	PRYSKYŘICE, ROZTOK, hořlavý (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	III	3	640H	5 L	E1	P001 IBC02 LP01 R001	PP1	MP19	T2	TP1
1868	DEKABORAN	4.1	FT2	II	4.1+6.1		1 kg	E2	P002 IBC06		MP10	T3	TP33
1869	HOŘČÍK nebo SLITINY HOŘČÍKU, s více než 50 % hořčíku jako hrudky, třísky nebo pásy	4.1	F3	III	4.1	59	5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33
1870	TETRAHYDRIDOBORITAN DRASELNÝ	4.3	W2	I	4.3		0	E0	P403		MP2		
1871	DIHYDRID TITANU	4.1	F3	II	4.1		1 kg	E2	P410 IBC04	PP40	MP11	T3	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			0 (E)	V1			S20		1855	VÁPŇÍK, PYROFORNÍ nebo SLITINY VÁPŇÍKU, PYROFORNÍ
NEJÍ PŘEDMĚTEM PRO ADR									1856	Hadry znečištěné olejem
NEJÍ PŘEDMĚTEM PRO ADR									1857	Odpady textilní, vlhké
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1858	HEXAFLUOROPROPYLEN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 1216)
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	1859	FLUORID KŘEMIČITÝ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1860	VINYLFUORID, STABILIZOVANÝ
LGBF		FL	2 (D/E)				S2 S20	33	1862	ETHYLKROTONÁT (ETHYL-KROTONÁT)
L4BN		FL	1 (D/E)				S2 S20	33	1863	PALIVO PRO TRYSKOVÉ MOTORY
L1,5BN		FL	2 (D/E)				S2 S20	33	1863	PALIVO PRO TRYSKOVÉ MOTORY (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1863	PALIVO PRO TRYSKOVÉ MOTORY (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1863	PALIVO PRO TRYSKOVÉ MOTORY
			2 (E)				S2 S20		1865	n-PROPYLNITRÁT (n-PROPYL-NITRÁT)
L4BN		FL	1 (D/E)				S2 S20	33	1866	PRYSKYŘICE, ROZTOK, hořlavý
L1,5BN		FL	2 (D/E)				S2 S20	33	1866	PRYSKYŘICE, ROZTOK, hořlavý (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1866	PRYSKYŘICE, ROZTOK, hořlavý (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1866	PRYSKYŘICE, ROZTOK, hořlavý
L4BN		FL	3 (D/E)				S2	33	1866	PRYSKYŘICE, ROZTOK, hořlavý (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)
L1,5BN		FL	3 (D/E)				S2	33	1866	PRYSKYŘICE, ROZTOK, hořlavý (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)
LGBF		FL	3 (D/E)				S2	33	1866	PRYSKYŘICE, ROZTOK, hořlavý (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)
SGAN		AT	2 (E)	V11		CV28		46	1868	DEKABORAN
SGAV		AT	3 (E)		VV1			40	1869	HOŘČÍK nebo SLITINY HOŘČÍKU, s více než 50 % hořčíku jako hrudky, třísky nebo pásy
			1 (E)	V1		CV23	S20		1870	TETRAHYDRIDOBORITAN DRASELNÝ
SGAN		AT	2 (E)					40	1871	DIHYDRID TITANU

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
1872	OXID OLOVIČITÝ	5.1	OT2	III	5.1+6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP2	T1	TP33
1873	KYSELINA CHLORISTÁ, s více než 50 % hm., ale nejvýše 72 % hm. kyseliny	5.1	OC1	I	5.1+8	60	0	E0	P502	PP28	MP3	T10	TP1
1884	OXID BARNATÝ	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1885	BENZIDIN	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1886	BENZYLIDENCHLORID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
1887	BROMCHLORMETHAN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1888	CHLOROFORM	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2
1889	BROMKYAN	6.1	TC2	I	6.1+8		0	E5	P002		MP18	T6	TP33
1891	ETHYLBROMID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02	B8	MP15	T7	TP2
1892	ETHYLDICHLORARSIN	6.1	T3	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
1894	FENYLMERKURIHYDROXID	6.1	T3	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1895	FENYLMERKURINITRÁT	6.1	T3	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
1897	TETRACHLORETHYLEN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1898	ACETYLJODID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1902	DIISOOKTYLFOSFÁT (DIISOOKTYLFOSFÁT)	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
1903	PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, ŽÍRAVÝ, J.N.	8	C9	I	8	274	0	E0	P001		MP8 MP17		
1903	PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, ŽÍRAVÝ, J.N.	8	C9	II	8	274	1 L	E2	P001 IBC02		MP15		
1903	PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, ŽÍRAVÝ, J.N.	8	C9	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19		
1905	KYSELINA SELENOVÁ	8	C2	I	8		0	E0	P002 IBC07		MP18	T6	TP33
1906	KYSELINA SÍROVÁ, ODPADNÍ	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2 TP28
1907	VÁPNO NATRONOVÉ, s více než 4 % hydroxidu sodného	8	C6	III	8	62	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1908	CHLORITAN, ROZTOK	8	C9	II	8	521	1 L	E2	P001 IBC02		MP15	T7	TP2 TP24
1908	CHLORITAN, ROZTOK	8	C9	III	8	521	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2 TP24

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN	TU3	AT	3 (E)			CV24 CV28		56	1872	OXID OLOVIČITÝ
L4DN(+)	TU3 TU28	AT	1 (B/E)			CV24	S20	558	1873	KYSELINA CHLORISTÁ, s více než 50 % hm., ale nejvýše 72 % hm. kyseliny
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	1884	OXID BARNATÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1885	BENZIDIN
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1886	BENZYLIDENCHLORID
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1887	BROMCHLORMETHAN
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1888	CHLOROFORM
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	668	1889	BROMKYAN
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1891	ETHYLBROMID
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	1892	ETHYLDICHLORARSIN
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1894	FENYLMERKURIHYDROXID
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	1895	FENYLMERKURINITRÁT
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1897	TETRACHLORETHYLEN
L4BN		AT	2 (E)					80	1898	ACETYLJODID
L4BN		AT	3 (E)	V12				80	1902	DIISOOKTYLFOSFÁT (DIISOOKTYL-FOSFÁT)
L10BH		AT	1 (E)				S20	88	1903	PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, ŽÍRAVÝ, J.N.
L4BN		AT	2 (E)					80	1903	PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, ŽÍRAVÝ, J.N.
L4BN		AT	3 (E)	V12				80	1903	PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, ŽÍRAVÝ, J.N.
S10AN		AT	1 (E)	V10			S20	88	1905	KYSELINA SELENOVÁ
L4BN		AT	2 (E)					80	1906	KYSELINA SÍROVÁ, ODPADNÍ
SGAV		AT	3 (E)		VV9			80	1907	VÁPNO NATRONOVÉ, s více než 4 % hydroxidu sodného
L4BV(+)	TE11	AT	2 (E)					80	1908	CHLORITAN, ROZTOK
L4BV(+)	TE11	AT	3 (E)	V12				80	1908	CHLORITAN, ROZTOK

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
							(7a)	(7b)	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
NENÍ PŘEDMĚTEM PRO ADR													
1910	Oxid vápenatý	8	C6										
1911	DIBORAN	2	2TF		2.3+2.1		0	E0	P200		MP9		
1912	CHLORMETHAN (METHYLCHLORID) A DICHLORMETHAN, SMĚS	2	2F		2.1	228	0	E0	P200		MP9	(M) T50	
1913	NEON, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2	3A		2.2	593	120 ml	E1	P203		MP9	T75	TP5
1914	BUTYLPROPIONÁTÝ (BUTYL-PROPIONÁTÝ)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1915	CYKLOHEXANON	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1916	2,2'-DICHLORDIETHYLETER	6.1	TF1	II	6.1+3		100 ml	E4	P001 IBC02		MP15	T7	TP2
1917	ETHYLAKRYLÁT, STABILIZOVANÝ (ETHYL-AKRYLÁT, STABILIZOVANÝ)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1918	ISOPROPYLBENZEN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1919	METHYLAKRYLÁT, STABILIZOVANÝ (METHYL-AKRYLÁT, STABILIZOVANÝ)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
1920	NONANY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
1921	PROPYLENIMIN, STABILIZOVANÝ	3	FT1	I	3+6.1		0	E0	P001		MP2	T14	TP2
1922	PYRROLIDIN	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
1923	DITHIONIČITAN VÁPENATÝ	4.2	S4	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33
1928	METHYLMAGNESIUMBROMID V ETHYLETERU	4.3	WF1	I	4.3+3		0	E0	P402	RR8	MP2		
1929	DITHIONIČITAN DRASELNÝ	4.2	S4	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33
1931	DITHIONIČITAN ZINEČNATÝ	9	M11	III	9		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
1932	ZIRKONIUM, ODPAD	4.2	S4	III	4.2	524 592	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
1935	KYANID, ROZTOK, J.N.	6.1	T4	I	6.1	274 525	0	E5	P001		MP8 MP17	T14	TP2 TP27
1935	KYANID, ROZTOK, J.N.	6.1	T4	II	6.1	274 525	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
1935	KYANID, ROZTOK, J.N.	6.1	T4	III	6.1	274 525	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
1938	KYSELINA BROMOCTOVÁ, ROZTOK	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
NENÍ PŘEDMĚTEM PRO ADR									1910	Oxid vápenatý
			1 (D)			CV9 CV10 CV36	S2 S14		1911	DIBORAN
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1912	CHLORMETHAN (METHYLCHLORID) A DICHLORMETHAN, SMĚS
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	1913	NEON, HLUBOCE ZCHLAZENÝ, KAPALNÝ
LGBF		FL	3 (D/E)	V12			S2	30	1914	BUTYLPROPIONÁTY (BUTYL-PROPIONÁTY)
LGBF		FL	3 (D/E)	V12			S2	30	1915	CYKLOHEXANON
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	1916	2,2'-DICHLORDIETHYLETHER
LGBF		FL	2 (D/E)				S2 S20	339	1917	ETHYLAKRYLÁT, STABILIZOVANÝ (ETHYLAKRYLÁT, STABILIZOVANÝ)
LGBF		FL	3 (D/E)	V12			S2	30	1918	ISOPROPYLBENZEN
LGBF		FL	2 (D/E)				S2 S20	339	1919	METHYLAKRYLÁT, STABILIZOVANÝ (METHYLAKRYLÁT, STABILIZOVANÝ)
LGBF		FL	3 (D/E)	V12			S2	30	1920	NONANY
L15CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1921	PROPYLENIMIN, STABILIZOVANÝ
L4BH		FL	2 (D/E)				S2 S20	338	1922	PYRROLIDIN
SGAN		AT	2 (D/E)	V1				40	1923	DITHIONIČITAN VÁPENATÝ
L10DH	TU4 TU14 TU22 TE21 TM2	FL	0 (B/E)	V1		CV23	S2 S20	X323	1928	METHYLMAGNESIUMBROMID V ETHYLETHERU
SGAN		AT	2 (D/E)	V1				40	1929	DITHIONIČITAN DRASELNÝ
SGAV		AT	3 (E)		VV3			90	1931	DITHIONIČITAN ZINEČNATÝ
SGAN		AT	3 (E)	V1	VV4			40	1932	ZIRKONIUM, ODPAD
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	1935	KYANID, ROZTOK, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	1935	KYANID, ROZTOK, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	1935	KYANID, ROZTOK, J.N.
L4BN		AT	2 (E)					80	1938	KYSELINA BROMOCTOVÁ, ROZTOK

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1938	KYSELINA BROMOCTOVÁ, ROZTOK	8	C3	III	8		5 L	E1	P001 IBC02 LP01 R001		MP19	T7	TP2
1939	BROMID FOSFORYLŮ (OXYBROMID FOSFOREČNÝ)	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
1940	KYSELINA THIOGLYKOLOVÁ	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
1941	DIBROMDIFLUORMETHAN	9	M11	III	9		5 L	E1	P001 LP01 R001		MP15	T11	TP2
1942	DUSÍČNAN AMONNÝ, s nejvýše 0,2 % celkového množství hořlavých látek, včetně organických látek počítaných jako ekvivalentní uhlík a prostý ostatních přísad	5.1	O2	III	5.1	306 611	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
1944	ZÁPALKY BEZPEČNOSTNÍ (knižky, složky nebo krabičky)	4.1	F1	III	4.1	293	5 kg	E1	P407 R001		MP11		
1945	ZÁPALKY VOSKOVÉ	4.1	F1	III	4.1	293	5 kg	E1	P407 R001		MP11		
1950	AEROSOLY, dusivé	2	5A		2.2	190 327 344 625	1 L	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLY, žíravé	2	5C		2.2+8	190 327 344 625	1 L	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLY, žíravé, podporující hoření	2	5CO		2.2+5.1+ 8	190 327 344 625	1 L	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLY, hořlavé	2	5F		2.1	190 327 344 625	1 L	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLY, hořlavé, žíravé	2	5FC		2.1+8	190 327 344 625	1 L	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLY, podporující hoření	2	5O		2.2+5.1	190 327 344 625	1 L	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLY, toxické	2	5T		2.2+6.1	190 327 344 625	120 ml	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLY, toxické, žíravé	2	5TC		2.2+6.1+ 8	190 327 344 625	120 ml	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLY, toxické, hořlavé	2	5TF		2.1+6.1	190 327 344 625	120 ml	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLY, toxické, hořlavé, žíravé	2	5TFC		2.1+6.1+ 8	190 327 344 625	120 ml	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLY, toxické, podporující hoření	2	5TO		2.2+5.1+ 6.1	190 327 344 625	120 ml	E0	P207 LP02	PP87 RR6 L2	MP9		
1950	AEROSOLY, toxické, podporující hoření, žíravé	2	5TOC		2.2+5.1+ 6.1+8	190 327 344 625	120 ml	E0	P207 LP02	PP87 RR6 L2	MP9		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	3 (E)					80	1938	KYSELINA BROMOCTOVÁ, ROZTOK
SGAN		AT	2 (E)	V11				80	1939	BROMID FOSFORYLŮ (OXYBROMID FOSFOREČNÝ)
L4BN		AT	2 (E)					80	1940	KYSELINA THIOGLYKOLOVÁ
L4BN		AT	3 (E)					90	1941	DIBROMDIFLUORMETHAN
SGAV	TU3	AT	3 (E)		VV8	CV24	S23	50	1942	DUSIČNAN AMONNÝ, s nejvýše 0,2 % celkového množství hořlavých látek, včetně organických látek počítaných jako ekvivalentní uhlík a prostý ostatních přísad
			4 (E)						1944	ZÁPALKY BEZPEČNOSTNÍ (knižečky, složky nebo krabičky)
			4 (E)						1945	ZÁPALKY VOSKOVÉ
			3 (E)	V14		CV9 CV12			1950	AEROSOLY, dusivé
			1 (E)	V14		CV9 CV12			1950	AEROSOLY, žíravé
			1 (E)	V14		CV9 CV12			1950	AEROSOLY, žíravé, podporující hoření
			2 (D)	V14		CV9 CV12	S2		1950	AEROSOLY, hořlavé
			1 (D)	V14		CV9 CV12	S2		1950	AEROSOLY, hořlavé, žíravé
			3 (E)	V14		CV9 CV12			1950	AEROSOLY, podporující hoření
			1 (D)	V14		CV9 CV12 CV28			1950	AEROSOLY, toxické
			1 (D)	V14		CV9 CV12 CV28			1950	AEROSOLY, toxické, žíravé
			1 (D)	V14		CV9 CV12 CV28	S2		1950	AEROSOLY, toxické, hořlavé
			1 (D)	V14		CV9 CV12 CV28	S2		1950	AEROSOLY, toxické, hořlavé, žíravé
			1 (D)	V14		CV9 CV12 CV28			1950	AEROSOLY, toxické, podporující hoření
			1 (D)	V14		CV9 CV12 CV28			1950	AEROSOLY, toxické, podporující hoření, žíravé

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství			Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
										Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
1951	ARGON, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2	3A		2.2	593	120 ml	E1	P203		MP9	T75	TP5	
1952	ETHYLENOXID A OXID UHLÍČITÝ, SMĚS, obsahující nejvýše 9 % ethylenoxidu	2	2A		2.2		120 ml	E1	P200		MP9	(M)		
1953	PLYN STLAČENÝ, TOXICKÝ, HOŘLAVÝ, J.N.	2	1TF		2.3+2.1	274	0	E0	P200		MP9	(M)		
1954	PLYN STLAČENÝ, HOŘLAVÝ, J.N.	2	1F		2.1	274 660	0	E0	P200		MP9	(M)		
1955	PLYN STLAČENÝ, TOXICKÝ, J.N.	2	1T		2.3	274	0	E0	P200		MP9	(M)		
1956	PLYN STLAČENÝ, J.N.	2	1A		2.2	274 655	120 ml	E1	P200		MP9	(M)		
1957	DEUTERIUM, STLAČENÉ	2	1F		2.1		0	E0	P200		MP9	(M)		
1958	1,2-DICHLOR-1,1,2,2-TETRAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 114)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50		
1959	1,1-DIFLUORETHYLEN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 1132a)	2	2F		2.1		0	E0	P200		MP9	(M)		
1961	ETHAN, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2	3F		2.1		0	E0	P203		MP9	T75	TP5	
1962	ETHYLEN	2	2F		2.1		0	E0	P200		MP9	(M)		
1963	HELIUM, HLUBOCE ZCHLAZENÉ, KAPALNÉ	2	3A		2.2	593	120 ml	E1	P203		MP9	T75	TP5 TP34	
1964	UHLOVODÍKY, PLYNNÉ, SMĚS, STLAČENÁ, J.N.	2	1F		2.1	274	0	E0	P200		MP9	(M)		
1965	UHLOVODÍKY, PLYNNÉ, SMĚS, ZKAPALNĚNÁ, J.N. (směs A, A01, A02, A0, A1, B1, B2, B nebo C)	2	2F		2.1	274 583 652 660	0	E0	P200		MP9	(M) T50		
1966	VODÍK, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2	3F		2.1		0	E0	P203		MP9	T75	TP5 TP23 TP34	
1967	INSEKTICID, PLYNNÝ, TOXICKÝ, J.N.	2	2T		2.3	274	0	E0	P200		MP9	(M)		
1968	INSEKTICID, PLYNNÝ, J.N.	2	2A		2.2	274	120 ml	E1	P200		MP9	(M)		
1969	ISOBUTAN	2	2F		2.1	657 660	0	E0	P200		MP9	(M) T50		
1970	KRYPTON, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2	3A		2.2	593	120 ml	E1	P203		MP9	T75	TP5	
1971	METHAN, STLAČENÝ nebo PLYN ZEMNÍ, STLAČENÝ, s vysokým obsahem methanu	2	1F		2.1	660	0	E0	P200		MP9	(M)		
1972	METHAN, HLUBOCE ZCHLAZENÝ, KAPALNÝ nebo PLYN ZEMNÍ, HLUBOCE ZCHLAZENÝ, KAPALNÝ, s vysokým obsahem methanu	2	3F		2.1		0	E0	P203		MP9	T75	TP5	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	1951	ARGON, HLUBOCE ZCHLAZENÝ, KAPALNÝ
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1952	ETHYLENOXID A OXID UHLIČITÝ, SMĚS, obsahující nejvýše 9 % ethylenoxidu
CxBH(M)	TU6 TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	1953	PLYN STLAČENÝ, TOXICKÝ, HOŘLAVÝ, J.N.
CxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1954	PLYN STLAČENÝ, HOŘLAVÝ, J.N.
CxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	1955	PLYN STLAČENÝ, TOXICKÝ, J.N.
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		20	1956	PLYN STLAČENÝ, J.N.
CxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1957	DEUTERIUM, STLAČENÉ
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1958	1,2-DICHLOR-1,1,2,2-TETRAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 114)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	1959	1,1-DIFLUORETHYLEN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 1132a)
RxBN	TU18 TA4 TT9	FL	2 (B/D)	V5		CV9 CV11 CV36	S2 S17	223	1961	ETHAN, HLUBOCE ZCHLAZENÝ, KAPALNÝ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1962	ETHYLEN
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	1963	HELIUM, HLUBOCE ZCHLAZENÉ, KAPALNÉ
CxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1964	UHLOVODÍKY, PLYNNÉ, SMĚS, STLAČENÁ, J.N.
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1965	UHLOVODÍKY, PLYNNÉ, SMĚS, ZKAPALNĚNÁ, J.N. (směs A, A01, A02, A0, A1, B1, B2, B nebo C)
RxBN	TU18 TA4 TT9	FL	2 (B/D)	V5		CV9 CV11 CV36	S2 S17	223	1966	VODÍK, HLUBOCE ZCHLAZENÝ, KAPALNÝ
PxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	1967	INSEKTICID, PLYNNÝ, TOXICKÝ, J.N.
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1968	INSEKTICID, PLYNNÝ, J.N.
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1969	ISOBUTAN
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	1970	KRYPTON, HLUBOCE ZCHLAZENÝ, KAPALNÝ
CxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1971	METHAN, STLAČENÝ nebo PLYN ZEMNÍ, STLAČENÝ, s vysokým obsahem methanu
RxBN	TU18 TA4 TT9	FL	2 (B/D)	V5		CV9 CV11 CV36	S2 S17	223	1972	METHAN, HLUBOCE ZCHLAZENÝ, KAPALNÝ nebo PLYN ZEMNÍ, HLUBOCE ZCHLAZENÝ, KAPALNÝ, s vysokým obsahem methanu

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
1973	CHLORDIFLUORMETHAN A CHLORPENTAFLUORETHAN, SMĚS s konstantním bodem varu s cca 49 % chlordifluormethanu (PLYN JAKO CHLADICÍ PROSTŘEDEK R 502)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1974	BROMCHLORDIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 12B1)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1975	OXID DUSNATÝ A OXID DUSIČITÝ, SMĚS	2	2TOC		2.3+5.1+8		0	E0	P200		MP9		
1976	OKTAFLUORCYKLOBUTAN (PLYN JAKO CHLADICÍ PROSTŘEDEK RC 318)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1977	DUSÍK, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2	3A		2.2	345 346 593	120 ml	E1	P203		MP9	T75	TP5
1978	PROPAN	2	2F		2.1	652 657 660	0	E0	P200		MP9	(M) T50	
1982	TETRAFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 14)	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
1983	1-CHLOR-2,2,2-TRIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 133a)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
1984	TRIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 23)	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
1986	ALKOHOLY, HOŘLAVÉ, TOXICKÉ, J.N.	3	FT1	I	3+6.1	274	0	E0	P001		MP7 MP17	T14	TP2 TP27
1986	ALKOHOLY, HOŘLAVÉ, TOXICKÉ, J.N.	3	FT1	II	3+6.1	274	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27
1986	ALKOHOLY, HOŘLAVÉ, TOXICKÉ, J.N.	3	FT1	III	3+6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
1987	ALKOHOLY, J.N. (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	274 601 640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28
1987	ALKOHOLY, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	274 601 640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28
1987	ALKOHOLY, J.N.	3	F1	III	3	274 601	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
1988	ALDEHYDY, HOŘLAVÉ, TOXICKÉ, J.N.	3	FT1	I	3+6.1	274	0	E0	P001		MP7 MP17	T14	TP2 TP27
1988	ALDEHYDY, HOŘLAVÉ, TOXICKÉ, J.N.	3	FT1	II	3+6.1	274	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27
1988	ALDEHYDY, HOŘLAVÉ, TOXICKÉ, J.N.	3	FT1	III	3+6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
1989	ALDEHYDY, J.N.	3	F1	I	3	274	0	E3	P001		MP7 MP17	T11	TP1 TP27
1989	ALDEHYDY, J.N. (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	274 640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28
1989	ALDEHYDY, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	274 640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28
1989	ALDEHYDY, J.N.	3	F1	III	3	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1973	CHLORDIFLUORMETHAN A CHLORPENTAFLUORETHAN, SMĚS s konstantním bodem varu s cca 49 % chlordifluormethanu (PLYN JAKO CHLADICÍ PROSTŘEDEK R 502)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1974	BROMCHLORDIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 12B1)
			1 (D)			CV9 CV10 CV36	S14		1975	OXID DUSNATÝ A OXID DUSIČITÝ, SMĚS
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1976	OKTAFLUORCYKLOBUTAN (PLYN JAKO CHLADICÍ PROSTŘEDEK RC 318)
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	1977	DUSÍK, HLUBOCE ZCHLAZENÝ, KAPALNÝ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	1978	PROPAN
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1982	TETRAFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 14)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1983	1-CHLOR-2,2,2-TRIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 133a)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	1984	TRIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 23)
L10CH	TU14 TU15 TE21	FL	1 (D/E)			CV13 CV28	S2 S22	336	1986	ALKOHOLY, HOŘLAVÉ, TOXICKÉ, J.N.
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	1986	ALKOHOLY, HOŘLAVÉ, TOXICKÉ, J.N.
L4BH	TU15	FL	3 (D/E)	V12		CV13 CV28	S2	36	1986	ALKOHOLY, HOŘLAVÉ, TOXICKÉ, J.N.
L1,5BN		FL	2 (D/E)				S2 S20	33	1987	ALKOHOLY, J.N. (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1987	ALKOHOLY, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1987	ALKOHOLY, J.N.
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1988	ALDEHYDY, HOŘLAVÉ, TOXICKÉ, J.N.
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	1988	ALDEHYDY, HOŘLAVÉ, TOXICKÉ, J.N.
L4BH	TU15	FL	3 (D/E)	V12		CV13 CV28	S2	36	1988	ALDEHYDY, HOŘLAVÉ, TOXICKÉ, J.N.
L4BN		FL	1 (D/E)				S2 S20	33	1989	ALDEHYDY, J.N.
L1,5BN		FL	2 (D/E)				S2 S20	33	1989	ALDEHYDY, J.N. (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1989	ALDEHYDY, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1989	ALDEHYDY, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1990	BENZALDEHYD	9	M11	III	9		5 L	E1	P001 IBC03 LP01 R001		MP15	T2	TP1
1991	CHLOROPREN, STABILIZOVANÝ	3	FT1	I	3+6.1		0	E0	P001		MP7 MP17	T14	TP2 TP6
1992	LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, J.N.	3	FT1	I	3+6.1	274	0	E0	P001		MP7 MP17	T14	TP2 TP27
1992	LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, J.N.	3	FT1	II	3+6.1	274	1 L	E2	P001 IBC02		MP19	T7	TP2
1992	LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, J.N.	3	FT1	III	3+6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N.	3	F1	I	3	274	0	E3	P001		MP7 MP17	T11	TP1 TP27
1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	274 601 640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28
1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	274 601 640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28
1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N.	3	F1	III	3	274 601 640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	3	F1	III	3	274 601 640F	5 L	E1	P001 LP01 R001		MP19	T4	TP1 TP29
1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	3	F1	III	3	274 601 640G	5 L	E1	P001 LP01 R001		MP19	T4	TP1 TP29
1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	III	3	274 601 640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T4	TP1 TP29
1994	PENTAKARBONYL ŽELEZA	6.1	TF1	I	6.1+3	354	0	E0	P601		MP2	T22	TP2
1999	DEHTY, KAPALNÉ, včetně silničních olejů a feděné živice (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	640C	5 L	E2	P001		MP19	T3	TP3 TP29
1999	DEHTY, KAPALNÉ, včetně silničních olejů a feděné živice (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	640D	5 L	E2	P001 IBC02 R001		MP19	T3	TP3 TP29
1999	DEHTY, KAPALNÉ, včetně silničních olejů a feděné živice	3	F1	III	3	640E	5 L	E1	P001 IBC03 LP01 R001		MP19	T1	TP3
1999	DEHTY, KAPALNÉ, včetně silničních olejů a feděné živice (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	3	F1	III	3	640F	5 L	E1	P001 LP01 R001		MP19	T1	TP3
1999	DEHTY, KAPALNÉ, včetně silničních olejů a feděné živice (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	3	F1	III	3	640G	5 L	E1	P001 LP01 R001		MP19	T1	TP3

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBV		AT	3 (E)	V12				90	1990	BENZALDEHYD
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1991	CHLOROPREN, STABILIZOVANÝ
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	1992	LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, J.N.
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	1992	LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, J.N.
L4BH	TU15	FL	3 (D/E)	V12		CV13 CV28	S2	36	1992	LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, J.N.
L4BN		FL	1 (D/E)				S2 S20	33	1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N.
L1,5BN		FL	2 (D/E)				S2 S20	33	1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N.
L4BN		FL	3 (D/E)				S2	33	1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)
L1,5BN		FL	3 (D/E)				S2	33	1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)
LGBF		FL	3 (D/E)				S2	33	1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)
L15CH	TU14 TU15 TU31 TE19 TE21 TM3	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	1994	PENTAKARBONYL ŽELEZA
L1,5BN		FL	2 (D/E)				S2 S20	33	1999	DEHTY, KAPALNÉ, včetně silničních olejů a ředěné živice (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	1999	DEHTY, KAPALNÉ, včetně silničních olejů a ředěné živice (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	1999	DEHTY, KAPALNÉ, včetně silničních olejů a ředěné živice
L4BN		FL	3 (D/E)				S2	33	1999	DEHTY, KAPALNÉ, včetně silničních olejů a ředěné živice (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)
L1,5BN		FL	3 (D/E)				S2	33	1999	DEHTY, KAPALNÉ, včetně silničních olejů a ředěné živice (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
1999	DEHTY, KAPALNÉ, včetně silničních olejů a ředěné živice (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	III	3	640H	5 L	E1	P001 IBC02 LP01 R001		MP19	T1	TP3
2000	CELULOID, v blocích, tyčích, deskách, trubkách atd., vyjma odpadu	4.1	F1	III	4.1	502	5 kg	E1	P002 LP02 R001	PP7	MP11		
2001	NAFTENATÝ KOBALTNATĚ, PRÁŠEK	4.1	F3	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33
2002	CELULOID, ODPAD	4.2	S2	III	4.2	526 592	0	E1	P002 IBC08 LP02 R001	PP8 B3	MP14		
2004	AMID HOŘEČNATÝ	4.2	S4	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33
2006	PLASTY NA BÁZI NITROCELULOZY, SCHOPNÉ SAMOOHŘEVU, J.N.	4.2	S2	III	4.2	274 528	0	E1	P002 R001		MP14		
2008	ZIRKONIUM, PRÁŠEK, SUCHÝ	4.2	S4	I	4.2	524 540	0	E0	P404		MP13	T21	TP7 TP33
2008	ZIRKONIUM, PRÁŠEK, SUCHÝ	4.2	S4	II	4.2	524 540	0	E2	P410 IBC06		MP14	T3	TP33
2008	ZIRKONIUM, PRÁŠEK, SUCHÝ	4.2	S4	III	4.2	524 540	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
2009	ZIRKONIUM, SUCHÉ, hotové plechy, pásy nebo stočený drát (tenčí než 18 mikrometrů)	4.2	S4	III	4.2	524 592	0	E1	P002 LP02 R001		MP14		
2010	HYDRID HOŘEČNATÝ	4.3	W2	I	4.3		0	E0	P403		MP2		
2011	FOSFID HOŘEČNATÝ	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2		
2012	FOSFID DRASELNÝ	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2		
2013	FOSFID STRONTNATÝ	4.3	WT2	I	4.3+6.1		0	E0	P403		MP2		
2014	PEROXID VODÍKU, VODNÝ ROZTOK, s nejméně 20 %, ale nejvýše 60 % peroxidu vodíku (stabilizovaný podle potřeby)	5.1	OC1	II	5.1+8		1 L	E2	P504 IBC02	PP10 B5	MP15	T7	TP2 TP6 TP24
2015	PEROXID VODÍKU, VODNÝ ROZTOK, STABILIZOVANÝ, s více než 70 % peroxidu vodíku	5.1	OC1	I	5.1+8	640N	0	E0	P501		MP2	T9	TP2 TP6 TP24
2015	PEROXID VODÍKU, VODNÝ ROZTOK, STABILIZOVANÝ, s více než 60 %, ale nejvýše 70 % peroxidu vodíku	5.1	OC1	I	5.1+8	640O	0	E0	P501		MP2	T9	TP2 TP6 TP24
2016	MUNICE, TOXICKÁ, NEVÝBUŠNÁ, bez redukované trhací náplně nebo výmetné náplně, slepé	6.1	T2	II	6.1		0	E0	P600		MP10		
2017	MUNICE, SLZOTVORNÁ, NEVÝBUŠNÁ, bez redukované trhací náplně nebo výmetné náplně, slepé	6.1	TC2	II	6.1+8		0	E0	P600				
2018	CHLORANILÍNÝ, TUHÉ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2019	CHLORANILÍNÝ, KAPALNÉ	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
LGBF		FL	3 (D/E)					S2	33	1999 DEHTY, KAPALNÉ, včetně silničních olejů a ředěné živice (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)
			3 (E)						2000	CELULOID, v blocích, tyčích, deskách, trubkách atd., vyjma odpadu
SGAV		AT	3 (E)		VV1				40	2001 NAFTENÁTÝ KOBALTNATÉ, PRÁŠEK
			3 (E)	V1					2002	CELULOID, ODPAD
SGAN		AT	2 (D/E)	V1					40	2004 AMID HOŘEČNATÝ
			3 (E)	V1					2006	PLASTY NA BÁZI NITROCELULÓZY, SCHOPNÉ SAMOOHŘEVU, J.N.
		AT	0 (B/E)	V1				S20	43	2008 ZIRKONIUM, PRÁŠEK, SUCHÝ
SGAN		AT	2 (D/E)	V1					40	2008 ZIRKONIUM, PRÁŠEK, SUCHÝ
SGAN		AT	3 (E)	V1	VV4				40	2008 ZIRKONIUM, PRÁŠEK, SUCHÝ
			3 (E)	V1	VV4				40	2009 ZIRKONIUM, SUCHÉ, hotové plechy, pásy nebo stočený drát (tenčí než 18 mikrometrů)
			1 (E)	V1		CV23	S20		2010	HYDRID HOŘEČNATÝ
			1 (E)	V1		CV23 CV28	S20		2011	FOSFID HOŘEČNATÝ
			1 (E)	V1		CV23 CV28	S20		2012	FOSFID DRASELNÝ
			1 (E)	V1		CV23 CV28	S20		2013	FOSFID STRONTNATÝ
L4BV(+)	TU3 TC2 TE8 TE11 TT1	AT	2 (E)			CV24			58	2014 PEROXID VODÍKU, VODNÝ ROZTOK, s nejméně 20 %, ale nejvýše 60 % peroxidu vodíku (stabilizovaný podle potřeby)
L4DV(+)	TU3 TU28 TC2 TE8 TE9 TT1	OX	1 (B/E)	V5		CV24	S20		559	2015 PEROXID VODÍKU, VODNÝ ROZTOK, STABILIZOVANÝ, s více než 70 % peroxidu vodíku
L4BV(+)	TU3 TU28 TC2 TE7 TE8 TE9 TT1	OX	1 (B/E)	V5		CV24	S20		559	2015 PEROXID VODÍKU, VODNÝ ROZTOK, STABILIZOVANÝ, s více než 60 %, ale nejvýše 70 % peroxidu vodíku
			2 (D/E)			CV13 CV28	S9 S19		2016	MUNICE, TOXICKÁ, NEVÝBUŠNÁ, bez redukované trhací náplně nebo výmetné náplně, slepé
			2 (D/E)			CV13 CV28	S9 S19		2017	MUNICE, SLZOTVORNÁ, NEVÝBUŠNÁ, bez redukované trhací náplně nebo výmetné náplně, slepé
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19		60	2018 CHLORANILINY, TUHÉ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19		60	2019 CHLORANILINY, KAPALNÉ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2020	CHLORFENOLY, TUHÉ	6.1	T2	III	6.1	205	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2021	CHLORFENOLY, KAPALNÉ	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2022	KYSELINA KRESOLOVÁ	6.1	TC1	II	6.1+8		100 ml	E4	P001 IBC02		MP15	T7	TP2
2023	EPICHLORHYDRIN	6.1	TF1	II	6.1+3	279	100 ml	E4	P001 IBC02		MP15	T7	TP2
2024	SLOUČENINA RTUTI, KAPALNÁ, J.N.	6.1	T4	I	6.1	43 274	0	E5	P001		MP8 MP17		
2024	SLOUČENINA RTUTI, KAPALNÁ, J.N.	6.1	T4	II	6.1	43 274	100 ml	E4	P001 IBC02		MP15		
2024	SLOUČENINA RTUTI, KAPALNÁ, J.N.	6.1	T4	III	6.1	43 274	5 L	E1	P001 IBC03 LP01 R001		MP19		
2025	SLOUČENINA RTUTI, TUHÁ, J.N.	6.1	T5	I	6.1	43 274 529 585	0	E5	P002 IBC07		MP18	T6	TP33
2025	SLOUČENINA RTUTI, TUHÁ, J.N.	6.1	T5	II	6.1	43 274 529 585	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2025	SLOUČENINA RTUTI, TUHÁ, J.N.	6.1	T5	III	6.1	43 274 529 585	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2026	SLOUČENINA FENYLRTUŤNATÁ, J.N.	6.1	T3	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33
2026	SLOUČENINA FENYLRTUŤNATÁ, J.N.	6.1	T3	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2026	SLOUČENINA FENYLRTUŤNATÁ, J.N.	6.1	T3	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2027	ARSENITAN SODNÝ, TUHÝ	6.1	T5	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2028	PUMY MLŽNÉ, DÝMOVNICE, NEVÝBUŠNÉ, obsahující žiravou kapalnou látku, bez zapalovačů	8	C11	II	8		0	E0	P803				
2029	HYDRAZIN, BEZVODÝ	8	CFT	I	8+3+6.1		0	E0	P001		MP8 MP17		
2030	HYDRAZIN, VODNÝ ROZTOK, obsahující více než 37 % hm. hydrazinu	8	CT1	I	8+6.1	530	0	E0	P001		MP8 MP17	T10	TP2
2030	HYDRAZIN, VODNÝ ROZTOK, obsahující více než 37 % hm. hydrazinu	8	CT1	II	8+6.1	530	1 L	E2	P001 IBC02		MP15	T7	TP2
2030	HYDRAZIN, VODNÝ ROZTOK, obsahující více než 37 % hm. hydrazinu	8	CT1	III	8+6.1	530	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2031	KYSELINA DUSIČNÁ, jiná než dýmavá, obsahující více než 70 % kyseliny	8	CO1	I	8+5.1		0	E0	P001	PP81	MP8 MP17	T10	TP2
2031	KYSELINA DUSIČNÁ, jiná než dýmavá, obsahující nejméně 65 %, ale nejvýše 70 % kyseliny	8	CO1	II	8+5.1		1 L	E2	P001 IBC02	PP81 B15	MP15	T8	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	(4.3.5, 6.8.4)	(9.1.1.2)	(1.1.3.6 (8.6))	(7.2.4)	(7.3.3)	(7.5.11)	(8.5)	(5.3.2.3)		(3.1.2)
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2020	CHLORFENOLY, TUHÉ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2021	CHLORFENOLY, KAPALNÉ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	2022	KYSELINA KRESOLOVÁ
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2023	EPICHLORHYDRIN
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2024	SLOUČENINA RTUTI, KAPALNÁ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2024	SLOUČENINA RTUTI, KAPALNÁ, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2024	SLOUČENINA RTUTI, KAPALNÁ, J.N.
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2025	SLOUČENINA RTUTI, TUHÁ, J.N.
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2025	SLOUČENINA RTUTI, TUHÁ, J.N.
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2025	SLOUČENINA RTUTI, TUHÁ, J.N.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2026	SLOUČENINA FENYLRTUŤNATÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2026	SLOUČENINA FENYLRTUŤNATÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2026	SLOUČENINA FENYLRTUŤNATÁ, J.N.
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2027	ARSENITAN SODNÝ, TUHÝ
			2 (E)						2028	PUMY MLŽNÉ, DÝMOVNICE, NEVÝBUŠNÉ, obsahující žravou kapalnou látku, bez zapalovačů
			1 (E)			CV13 CV28	S2 S20		2029	HYDRAZIN, BEZVODÝ
L10BH		AT	1 (C/D)			CV13 CV28	S14	886	2030	HYDRAZIN, VODNÝ ROZTOK, obsahující více než 37 % hm. hydrazinu
L4BN		AT	2 (E)			CV13 CV28		86	2030	HYDRAZIN, VODNÝ ROZTOK, obsahující více než 37 % hm. hydrazinu
L4BN		AT	3 (E)	V12		CV13 CV28		86	2030	HYDRAZIN, VODNÝ ROZTOK, obsahující více než 37 % hm. hydrazinu
L10BH	TC6 TT1	AT	1 (E)			CV24	S14	885	2031	KYSELINA DUSIČNÁ, jiná než dýmavá, obsahující více než 70 % kyseliny
L4BN		AT	2 (C/D)					85	2031	KYSELINA DUSIČNÁ, jiná než dýmavá, obsahující nejméně 65 %, ale nejvýše 70 % kyseliny

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2031	KYSELINA DUSIČNÁ, jiná než dýmavá, obsahující méně než 65 % kyseliny	8	C1	II	8		1 L	E2	P001 IBC02	PP81 B15	MP15	T8	TP2
2032	KYSELINA DUSIČNÁ, DÝMAVÁ	8	COT	I	8+5.1+6.1		0	E0	P602		MP8 MP17	T20	TP2
2033	OXID DRASELNÝ	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2034	VODÍK A METHAN, SMĚS, STLAČENÁ	2	1F		2.1		0	E0	P200		MP9	(M)	
2035	1,1,1-TRIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 143a)	2	2F		2.1		0	E0	P200		MP9	(M) T50	
2036	XENON	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit	2	5A		2.2	191 303 344	1 L	E0	P003	PP17 RR6	MP9		
2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit	2	5F		2.1	191 303 344	1 L	E0	P003	PP17 RR6	MP9		
2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit	2	5O		2.2+5.1	191 303 344	1 L	E0	P003	PP17 RR6	MP9		
2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit	2	5T		2.3	303 344	120 ml	E0	P003	PP17 RR6	MP9		
2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit	2	5TC		2.3+8	303 344	120 ml	E0	P003	PP17 RR6	MP9		
2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit	2	5TF		2.3+2.1	303 344	120 ml	E0	P003	PP17 RR6	MP9		
2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit	2	5TFC		2.3+2.1+8	303 344	120 ml	E0	P003	PP17 RR6	MP9		
2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit	2	5TO		2.3+5.1	303 344	120 ml	E0	P003	PP17 RR6	MP9		
2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit	2	5TOC		2.3+5.1+8	303 344	120 ml	E0	P003	PP17 RR6	MP9		
2038	DINITROTOLUENY, KAPALNÉ	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2044	2,2-DIMETHYLPROPAN	2	2F		2.1		0	E0	P200		MP9	(M)	
2045	ISOBUTYRALDEHYD	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2046	ISOPROPYLTOLUENY (CYMENY)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2047	DICHLORPROPENY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2047	DICHLORPROPENY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2048	DICYKLOPENTADIEN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	2 (E)					80	2031	KYSELINA DUSIČNÁ, jiná než dýmová, obsahující méně než 65 % kyseliny
L10BH	TC6 TT1	AT	1 (E)			CV13 CV24 CV28	S14	856	2032	KYSELINA DUSIČNÁ, DÝMAVÁ
SGAN		AT	2 (E)	V11				80	2033	OXID DRASELNÝ
CxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2034	VODÍK A METHAN, SMĚS, STLAČENÁ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2035	1,1,1-TRIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 143a)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	2036	XENON
			3 (E)			CV9 CV12			2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit
			2 (D)			CV9 CV12	S2		2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit
			3 (E)			CV9 CV12			2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit
			1 (D)			CV9 CV12			2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit
			1 (D)			CV9 CV12			2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit
			1 (D)			CV9 CV12	S2		2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit
			1 (D)			CV9 CV12	S2		2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit
			1 (D)			CV9 CV12			2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit
			1 (D)			CV9 CV12			2037	NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2038	DINITROTOLUENY, KAPALNÉ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2044	2,2-DIMETHYLPROPAN
LGBF		FL	2 (D/E)				S2 S20	33	2045	ISOBUTYRALDEHYD
LGBF		FL	3 (D/E)	V12			S2	30	2046	ISOPROPYLTOLUENY (CYMENY)
LGBF		FL	2 (D/E)				S2 S20	33	2047	DICHLORPROPENY
LGBF		FL	3 (D/E)	V12			S2	30	2047	DICHLORPROPENY
LGBF		FL	3 (D/E)	V12			S2	30	2048	DICYKLOPENTADIEN

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2049	DIETHYLBENZEN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2050	DIISOBUTYLEN, ISOMERNÍ SLOUČENINY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2051	2-(DIMETHYLAMINO)-ETHANOL	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2
2052	DIPENTEN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2053	METHYLISOBUTYLKARBINOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2054	MORFOLIN	8	CF1	I	8+3		0	E0	P001		MP8 MP17	T10	TP2
2055	STYREN, MONOMERNÍ, STABILIZOVANÝ	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2056	TETRAHYDROFURAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2057	TRIPROPYLEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2057	TRIPROPYLEN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2058	VALERALDEHYD	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2059	NITROCELULÓZA, HOŘLAVÝ ROZTOK, obsahující nejvíce 12,6 % hm. dusíku v sušině a nejvíce 55 % nitrocelulózy	3	D	I	3	198 531	0	E0	P001		MP7 MP17	T11	TP1 TP8 TP27
2059	NITROCELULÓZA, HOŘLAVÝ ROZTOK, obsahující nejvíce 12,6 % hm. dusíku v sušině a nejvíce 55 % nitrocelulózy (tenze par při 50 °C je vyšší než 110 kPa)	3	D	II	3	198 531 640C	1 L	E0	P001 IBC02		MP19	T4	TP1 TP8
2059	NITROCELULÓZA, HOŘLAVÝ ROZTOK, obsahující nejvíce 12,6 % hm. dusíku v sušině a nejvíce 55 % nitrocelulózy (tenze par při 50 °C nepřesahuje 110 kPa)	3	D	II	3	198 531 640D	1 L	E0	P001 R001 IBC02		MP19	T4	TP1 TP8
2059	NITROCELULÓZA, HOŘLAVÝ ROZTOK, obsahující nejvíce 12,6 % hm. dusíku v sušině a nejvíce 55 % nitrocelulózy	3	D	III	3	198 531	5 L	E0	P001 LP01 R001 IBC03		MP19	T2	TP1
2067	HNOJIVA OBSAHUJÍCÍ DUSIČNAN AMONNÝ	5.1	O2	III	5.1	186 306 307	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
2071	Hnojiva obsahující dusičnan amonný, stejnoměrně směsi dusíku / fosforečnanu, dusíku / potaše nebo dusíku / fosforečnanu / potaše, obsahující nejvíce 70 % dusičnanu amonného a nejvíce 0,4 % celkového hořlavého / organického materiálu, vypočteno na uhlík, nebo obsahující nejvíce 45 % dusičnanu amonného a bez omezení hořlavého materiálu	9	M11	NENÍ PŘEDMĚTEM PRO ADR									

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
LGBF		FL	3 (D/E)	V12			S2	30	2049	DIETHYLBENZEN
LGBF		FL	2 (D/E)				S2 S20	33	2050	DIISOBUTYLEN, ISOMERNÍ SLOUCENINY
L4BN		FL	2 (D/E)				S2	83	2051	2-(DIMETHYLAMINO)-ETHANOL
LGBF		FL	3 (D/E)	V12			S2	30	2052	DIPENTEN
LGBF		FL	3 (D/E)	V12			S2	30	2053	METHYLISOBUTYLKARBINOL
L10BH		FL	1 (D/E)				S2 S14	883	2054	MORFOLIN
LGBF		FL	3 (D/E)	V12			S2	39	2055	STYREN, MONOMERNÍ, STABILIZOVANÝ
LGBF		FL	2 (D/E)				S2 S20	33	2056	TETRAHYDROFURAN
LGBF		FL	2 (D/E)				S2 S20	33	2057	TRIPROPYLEN
LGBF		FL	3 (D/E)	V12			S2	30	2057	TRIPROPYLEN
LGBF		FL	2 (D/E)				S2 S20	33	2058	VALERALDEHYD
L4BN		FL	1 (B)				S2 S14	33	2059	NITROCELULÓZA, HOŘLAVÝ ROZTOK, obsahující nejvíce 12,6 % hm. dusíku v sušině a nejvíce 55 % nitrocelulózy
L1,5BN		FL	2 (B)				S2 S14	33	2059	NITROCELULÓZA, HOŘLAVÝ ROZTOK, obsahující nejvíce 12,6 % hm. dusíku v sušině a nejvíce 55 % nitrocelulózy (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (B)				S2 S14	33	2059	NITROCELULÓZA, HOŘLAVÝ ROZTOK, obsahující nejvíce 12,6 % hm. dusíku v sušině a nejvíce 55 % nitrocelulózy (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (B)	V12			S2 S14	30	2059	NITROCELULÓZA, HOŘLAVÝ ROZTOK, obsahující nejvíce 12,6 % hm. dusíku v sušině a nejvíce 55 % nitrocelulózy
SGAV	TU3	AT	3 (E)		VV8	CV24	S23	50	2067	HNOJIVA OBSAHUJÍCÍ DUSIČNAN AMONNÝ
NENÍ PŘEDMĚTEM PRO ADR									2071	Hnojiva obsahující dusičnan amonný, stejnoměrné směsi dusíku / fosforečnanu, dusíku / potaše nebo dusíku / fosforečnanu / potaše, obsahující nejvíce 70 % dusičnanu amonného a nejvíce 0,4 % celkového hořlavého / organického materiálu, vypočteno na uhlík, nebo obsahující nejvíce 45 % dusičnanu amonného a bez omezení hořlavého materiálu

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2073	AMONIAK (ČPAVEK), ROZTOK, vodný, s hustotou menší než 0,880 kg/l při 15 °C, s více než 35 %, ale nejvýše 50 % amoniaku (čpavku)	2	4A		2.2	532	120 ml	E1	P200		MP9	(M)	
2074	AKRYLAMID, TUHÝ	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2075	CHLORAL, BEZVODÝ, STABILIZOVANÝ	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2076	KRESOLY, KAPALNÉ	6.1	TC1	II	6.1+8		100 ml	E4	P001 IBC02		MP15	T7	TP2
2077	1-NAFTYLAMIN (alfa-naftylamin)	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2078	TOLUENDIISOKYANÁT	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2
2079	DIETHYLENTRIAMIN	8	C7	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2186	CHLOROVODÍK, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2	3TC				PŘEPRAVA ZAKÁZÁNA						
2187	OXID UHLIČITÝ, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2	3A		2.2	593	120 ml	E1	P203		MP9	T75	TP5
2188	ARSENOVODÍK (ARSIN)	2	2TF		2.3+2.1		0	E0	P200		MP9		
2189	DICHLORSILAN	2	2TFC		2.3+2.1+8		0	E0	P200		MP9	(M)	
2190	FLUORID KYSLIKU, STLAČENÝ	2	1TOC		2.3+5.1+8		0	E0	P200		MP9		
2191	FLUORID SULFURYLU (SULFURYLFLUORID)	2	2T		2.3		0	E0	P200		MP9	(M)	
2192	GERMANOVODÍK (GERMAN)	2	2TF		2.3+2.1	632	0	E0	P200		MP9	(M)	
2193	HEXAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 116)	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
2194	FLUORID SELENOVÝ	2	2TC		2.3+8		0	E0	P200		MP9		
2195	FLUORID TELUROVÝ	2	2TC		2.3+8		0	E0	P200		MP9		
2196	FLUORID WOLFRAMOVÝ	2	2TC		2.3+8		0	E0	P200		MP9		
2197	JODOVODÍK, BEZVODÝ	2	2TC		2.3+8		0	E0	P200		MP9	(M)	
2198	FLUORID FOSFOREČNÝ	2	2TC		2.3+8		0	E0	P200		MP9		
2199	FOSFOROVODÍK (FOSFIN)	2	2TF		2.3+2.1	632	0	E0	P200		MP9		
2200	PROPADIEN, STABILIZOVANÝ	2	2F		2.1		0	E0	P200		MP9	(M)	
2201	OXID DUSNÝ, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2	3O		2.2+5.1		0	E0	P203		MP9	T75	TP5 TP22

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládka, vykládka a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10		20	2073	AMONIAK (ČPAVEK), ROZTOK, vodný, s hustotou menší než 0,880 kg/l při 15 °C, s více než 35 %, ale nejvýše 50 % amoniaku (čpavku)
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2074	AKRYLAMID, TUHÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	69	2075	CHLORAL, BEZVODÝ, STABILIZOVANÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	2076	KRESOLY, KAPALNÉ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2077	1-NAFTYLAMIN (alfa-naftylamin)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2078	TOLUENDIISOKYANÁT
L4BN		AT	2 (E)					80	2079	DIETHYLENTRIAMIN
PŘEPRAVA ZAKÁZÁNA									2186	CHLOROVODÍK, HLUBOCE ZCHLAZENÝ, KAPALNÝ
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	2187	OXID UHLIČITÝ, HLUBOCE ZCHLAZENÝ, KAPALNÝ
			1 (D)			CV9 CV10 CV36	S2 S14		2188	ARSENOVODÍK (ARSIN)
PxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	2189	DICHLORSILAN
			1 (D)			CV9 CV10 CV36	S14		2190	FLUORID KYSLIKU, STLAČENÝ
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	2191	FLUORID SULFURYLU (SULFURYLFLUORID)
		FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	2192	GERMANOVODÍK (GERMAN)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	2193	HEXAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 116)
			1 (D)			CV9 CV10 CV36	S14		2194	FLUORID SELENOVÝ
			1 (D)			CV9 CV10 CV36	S14		2195	FLUORID TELUROVÝ
			1 (D)			CV9 CV10 CV36	S14		2196	FLUORID WOLFRAMOVÝ
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	2197	JODOVODÍK, BEZVODÝ
			1 (D)			CV9 CV10 CV36	S14		2198	FLUORID FOSFOREČNÝ
			1 (D)			CV9 CV10 CV36	S2 S14		2199	FOSFOROVODÍK (FOSFIN)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	2200	PROPADIEN, STABILIZOVANÝ
RxBN	TU7 TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	225	2201	OXID DUŠNÝ, HLUBOCE ZCHLAZENÝ, KAPALNÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
2202	SELENOVODÍK, BEZVODÝ	2	2TF		2.3+2.1		0	E0	P200		MP9		
2203	SILAN	2	2F		2.1	632	0	E0	P200		MP9	(M)	
2204	SULFID KARBONYLU (KARBONYLSULFID)	2	2TF		2.3+2.1		0	E0	P200		MP9	(M)	
2205	ADIPONITRIL	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T3	TP1
2206	ISOKYANÁTY, TOXICKÉ, J.N. nebo ISOKYANÁT, ROZTOK, TOXICKÝ, J.N.	6.1	T1	II	6.1	274 551	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2206	ISOKYANÁTY, TOXICKÉ, J.N. nebo ISOKYANÁT, ROZTOK, TOXICKÝ, J.N.	6.1	T1	III	6.1	274 551	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
2208	CHLORNAN VÁPENATÝ, SMĚS, SUCHÁ, s více než 10 %, ale nejvýše 39 % aktivního chlóru	5.1	O2	III	5.1	314	5 kg	E1	P002 IBC08 LP02 R001	B3 B13 L3	MP10		
2209	FORMALDEHYD, ROZTOK, obsahující nejméně 25 % formaldehydu	8	C9	III	8	533	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2210	MANEB nebo MANEB, PŘÍPRAVKY, s nejméně 60 % manebu	4.2	SW	III	4.2+4.3	273	0	E1	P002 IBC06 R001		MP14	T1	TP33
2211	KULIČKY POLYMERNÍ, ZPĚŇOVATELNÉ, vylučující hořlavé páry	9	M3	III	není	207 633	5 kg	E1	P002 IBC08 R001	PP14 B3 B6	MP10	T1	TP33
2212	AZBEST, MODRÝ (krokydolit) nebo AZBEST, HNĚDÝ (amosit, mysorit)	9	M1	II	9	168	1 kg	E2	P002 IBC08	PP37 B4	MP10	T3	TP33
2213	PARAFORMALDEHYD	4.1	F1	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	PP12 B3	MP10	T1 BK1 BK2	TP33
2214	FTALANHYDRID, obsahující více než 0,05 % maleinanhydridu	8	C4	III	8	169	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2215	MALEINANHYDRID, ROZTAVENÝ	8	C3	III	8		0	E0				T4	TP3
2215	MALEINANHYDRID	8	C4	III	8		5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33
2216	Moučka rybí (odpad rybí), stabilizovaná(ý)	9	M11	NENÍ PŘEDMĚTEM PRO ADR									
2217	ZBYTKY PO LISOVÁNÍ OLEJOVÝCH SEMEN, s nejvýše 1,5 % oleje a nejvýše 11 % vlhkosti	4.2	S2	III	4.2	142	0	E1	P002 IBC08 LP02 R001	PP20 B3 B6	MP14		
2218	KYSELINA AKRYLOVÁ, STABILIZOVANÁ	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2
2219	ALLYLGLYCIDYLETHER	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2222	ANISOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2224	BENZONITRIL	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (D)			CV9 CV10 CV36	S2 S14		2202	SELENOVODÍK, BEZVODÝ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2203	SILAN
PxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	2204	SULFID KARBONYLU (KARBONYLSULFID)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2205	ADIPONITRIL
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2206	ISOKYANÁTY, TOXICKÉ, J.N. nebo ISOKYANÁT, ROZTOK, TOXICKÝ, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2206	ISOKYANÁTY, TOXICKÉ, J.N. nebo ISOKYANÁT, ROZTOK, TOXICKÝ, J.N.
SGAN	TU3	AT	3 (E)			CV24 CV35		50	2208	CHLORNAN VÁPENATÝ, SMĚS, SUCHÁ, s více než 10 %, ale nejvýše 39 % aktivního chlóru
L4BN		AT	3 (E)	V12				80	2209	FORMALDEHYD, ROZTOK, obsahující nejméně 25 % formaldehydu
SGAN		AT	3 (E)	V1	VV4			40	2210	MANEB nebo MANEB, PŘÍPRAVKY, s nejméně 60 % manebu
SGAN	TE20	AT	3 (D/E)		VV3			90	2211	KULIČKY POLYMERNÍ, ZPĚŇOVATELNÉ, vylučující hořlavé páry
SGAH	TU15	AT	2 (E)	V11		CV1 CV13 CV28	S19	90	2212	AZBEST, MODRÝ (krokydolit) nebo AZBEST, HNĚDÝ (amosit, mysorit)
SGAV		AT	3 (E)	V13	VV1			40	2213	PARAFORMALDEHYD
SGAV L4BN		AT	3 (E)		VV9			80	2214	FTALANHYDRID, obsahující více než 0,05 % maleinanhydridu
L4BN		AT	0 (E)					80	2215	MALEINANHYDRID, ROZTAVENÝ
SGAV		AT	3 (E)		VV9			80	2215	MALEINANHYDRID
NENÍ PŘEDMĚTEM PRO ADR									2216	Moučka rybí (odpad rybí), stabilizovaná(y)
			3 (E)	V1	VV4			40	2217	ZBYTKY PO LISOVÁNÍ OLEJOVÝCH SEMEN, s nejvýše 1,5 % oleje a nejvýše 11 % vlhkosti
L4BN		FL	2 (D/E)				S2	839	2218	KYSELINA AKRYLOVÁ, STABILIZOVANÁ
LGBF		FL	3 (D/E)	V12			S2	30	2219	ALLYLGLYCIDYLETHER
LGBF		FL	3 (D/E)	V12			S2	30	2222	ANISOL
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2224	BENZONITRIL

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2225	BENZENSULFONYLCHLORID	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2226	BENZOTRICHLORID	8	C9	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2227	n-BUTYLMETHAKRYLÁT, STABILIZOVANÝ (n-BUTYLMETHAKRYLÁT, STABILIZOVANÝ)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2232	2-CHLORETHANAL	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2233	CHLORANIZIDINY	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2234	CHLORBENZOTRIFLUORIDY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2235	CHLORBENZYLCHLORIDY, KAPALNÉ	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2236	3-CHLOR-4-METHYLFENYLISOKYANÁT, KAPALNÝ	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15		
2237	CHLORNITROANILÍNY	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2238	CHLORTOLUENY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2239	CHLORTOLUIDINY, TUHÉ	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2240	KYSELINA CHROMSÍROVÁ	8	C1	I	8		0	E0	P001		MP8 MP17	T10	TP2
2241	CYKLOHEPTAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2242	CYKLOHEPTEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2243	CYKLOHEXYLACETÁT	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2244	CYKLOPENTANOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2245	CYKLOPENTANON	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2246	CYKLOPENTEN	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T7	TP2
2247	n-DEKAN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2248	DI-n-BUTYLAMIN	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	(4.3.5, 6.8.4)	(9.1.1.2)	(1.1.3.6 (8.6))	(7.2.4)	(7.3.3)	(7.5.11)	(8.5)	(5.3.2.3)	(1)	(2)
L4BN		AT	3 (E)	V12				80	2225	BENZENSULFONYLCHLORID
L4BN		AT	2 (E)					80	2226	BENZOTRICHLORID
LGBF		FL	3 (D/E)	V12			S2	39	2227	n-BUTYLMETHAKRYLÁT, STABILIZOVANÝ (n-BUTYL-METHAKRYLÁT, STABILIZOVANÝ)
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	2232	2-CHLORETHANAL
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2233	CHLORANIZIDINY
LGBF		FL	3 (D/E)	V12			S2	30	2234	CHLORBENZOTRIFLUORIDY
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2235	CHLORBENZYLCHLORIDY, KAPALNÉ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2236	3-CHLOR-4-METHYLFENYLISOKYANÁT, KAPALNÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2237	CHLORNITROANILÍNY
LGBF		FL	3 (D/E)	V12			S2	30	2238	CHLORTOLUENY
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2239	CHLORTOLUIDINY, TUHÉ
L10BH		AT	1 (E)				S20	88	2240	KYSELINA CHROMSÍROVÁ
LGBF		FL	2 (D/E)				S2 S20	33	2241	CYKLOHEPTAN
LGBF		FL	2 (D/E)				S2 S20	33	2242	CYKLOHEPTEN
LGBF		FL	3 (D/E)	V12			S2	30	2243	CYKLOHEXYLACETÁT
LGBF		FL	3 (D/E)	V12			S2	30	2244	CYKLOPENTANOL
LGBF		FL	3 (D/E)	V12			S2	30	2245	CYKLOPENTANON
L1,5BN		FL	2 (D/E)				S2 S20	33	2246	CYKLOPENTEN
LGBF		FL	3 (D/E)	V12			S2	30	2247	n-DEKAN
L4BN		FL	2 (D/E)				S2	83	2248	DI-n-BUTYLAMIN

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2249	DICHLORDIMETHYLETHER, SYMETRICKÝ	6.1	TF1	PŘEPRAVA ZAKÁZÁNA									
2250	DICHLORFENYLISOKYANÁTY	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2251	BICYKLO[2.2.1]HEPTA-2,5-DIEN, STABILIZOVANÝ (2,5-NORBORNADIEN, STABILIZOVANÝ)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP2
2252	1,2-DIMETHOXYETHAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2253	N,N-DIMETHYLANILÍN	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2254	ZÁPALKY VĚTROVÉ	4.1	F1	III	4.1	293	5 kg	E1	P407 R001		MP11		
2256	CYKLOHEXEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2257	DRASLÍK	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2	T9	TP7 TP33
2258	1,2-PROPYLENDIAMIN	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2
2259	TRIETHYLENTETRAMIN	8	C7	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2260	TRIPROPYLAMIN	3	FC	III	3+8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2261	XYLENOLY, TUHÉ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2262	DIMETHYLKARBAAMOYLCHLORID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2263	DIMETHYLCYKLOHEXANY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2264	N,N-DIMETHYLCYKLOHEXYLAMIN	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2
2265	N,N-DIMETHYLFORMAMID	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP2
2266	DIMETHYL-N-PROPYLAMIN	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP2
2267	DIMETHYLTHIOFOSFORYLCHLORID	6.1	TC1	II	6.1+8		100 ml	E4	P001 IBC02		MP15	T7	TP2
2269	3,3'-IMINOBIISPROPYLAMIN	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2
2270	ETHYLAMIN, VODNÝ ROZTOK, obsahující nejméně 50 %, ale nejvýše 70 % ethylaminu	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
2271	ETHYLAMYLKETON	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2272	N-ETHYLANILÍN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2273	2-ETHYLANILÍN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2274	N-ETHYL-N-BENZYLANILÍN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PŘEPRAVA ZAKÁZÁNA									2249	DICHLORDIMETHYLETHER, SYMETRICKÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2250	DICHLORFENYLISOKYANÁTY
LGBF		FL	2 (D/E)				S2 S20	339	2251	BICYKLO[2.2.1]HEPTA-2,5-DIEN, STABILIZOVANÝ (2,5-NORBORNADIEN, STABILIZOVANÝ)
LGBF		FL	2 (D/E)				S2 S20	33	2252	1,2-DIMETHOXYETHAN
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2253	N,N-DIMETHYLANILÍN
			4 (E)						2254	ZAPALKY VĚTROVÉ
LGBF		FL	2 (D/E)				S2 S20	33	2256	CYKLOHEXEN
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	2257	DRASLÍK
L4BN		FL	2 (D/E)				S2	83	2258	1,2-PROPYLENDIAMIN
L4BN		AT	2 (E)					80	2259	TRIETHYLENTETRAMIN
L4BN		FL	3 (D/E)	V12			S2	38	2260	TRIPROPYLAMIN
SGAH L4BH L4BN	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2261	XYLENOLY, TUHÉ
L4BN		AT	2 (E)					80	2262	DIMETHYLKARBAMOYLCHLORID
LGBF		FL	2 (D/E)				S2 S20	33	2263	DIMETHYLCYKLOHEXANY
L4BN		FL	2 (D/E)				S2	83	2264	N,N-DIMETHYLCYKLOHEXYLAMIN
LGBF		FL	3 (D/E)	V12			S2	30	2265	N,N-DIMETHYLFORMAMID
L4BH		FL	2 (D/E)				S2 S20	338	2266	DIMETHYL-N-PROPYLAMIN
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	2267	DIMETHYLTHIOFOSFORYLCHLORID
L4BN		AT	3 (E)	V12				80	2269	3,3'-IMINOBISSOPROPYLAMIN
L4BH		FL	2 (D/E)				S2 S20	338	2270	ETHYLAMIN, VODNÝ ROZTOK, obsahující nejméně 50 %, ale nejvýše 70 % ethylaminu
LGBF		FL	3 (D/E)	V12			S2	30	2271	ETHYLAMYLKETON
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2272	N-ETHYLANILÍN
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2273	2-ETHYLANILÍN
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2274	N-ETHYL-N-BENZYLANILÍN

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2275	2-ETHYLBUTANOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2276	2-ETHYLHEXYLAMIN	3	FC	III	3+8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2277	ETHYLMETHAKRYLÁT, STABILIZOVANÝ (ETHYLMETHAKRYLÁT, STABILIZOVANÝ)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2278	n-HEPTEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2279	HEXACHLORBUTADIEN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2280	HEXAMETHYLENDIAMIN, TUHÝ	8	C8	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2281	HEXAMETHYLENDIISOKYANÁT	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2282	HEXANOLY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2283	ISOBUTYLMETHAKRYLÁT, STABILIZOVANÝ (ISOBUTYLMETHAKRYLÁT, STABILIZOVANÝ)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2284	ISOBUTYRONITRIL	3	FT1	II	3+6.1		1 L	E2	P001 IBC02		MP19	T7	TP2
2285	ISOKYANÁTOBENZOTRIFLUORIDY	6.1	TF1	II	6.1+3		100 ml	E4	P001 IBC02		MP15	T7	TP2
2286	PENTAMETHYLHEPTAN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2287	ISOHEPTEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2288	ISOHEXEN	3	F1	II	3		1 L	E2	P001 IBC02 R001	B8	MP19	T11	TP1
2289	ISOFORONDIAMIN	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2290	ISOFORONDIISOKYANÁT	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2
2291	SLOUČENINA OLOVA, ROZPUSTNÁ, J.N.	6.1	T5	III	6.1	199 274 535	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2293	4-METHOXY-4-METHYLPENTAN-2-ON	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2294	N-METHYLANILÍN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládka, vykládka a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	3 (D/E)	V12			S2	30	2275	2-ETHYLBUTANOL
L4BN		FL	3 (D/E)	V12			S2	38	2276	2-ETHYLHEXYLAMIN
LGBF		FL	2 (D/E)				S2 S20	339	2277	ETHYLMETHAKRYLÁT, STABILIZOVANÝ (ETHYL-METHAKRYLÁT, STABILIZOVANÝ)
LGBF		FL	2 (D/E)				S2 S20	33	2278	n-HEPTEN
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2279	HEXACHLORBUTADIEN
SGAV L4BN		AT	3 (E)		VV9			80	2280	HEXAMETHYLENDIAMIN, TUHÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2281	HEXAMETHYLENDIISOKYANÁT
LGBF		FL	3 (D/E)	V12			S2	30	2282	HEXANOLY
LGBF		FL	3 (D/E)	V12			S2	39	2283	ISOBUTYLMETHAKRYLÁT, STABILIZOVANÝ (ISOBUTYL-METHAKRYLÁT, STABILIZOVANÝ)
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2284	ISOBUTYRONITRIL
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2285	ISOKYANÁTOBENZOTRIFLUORIDY
LGBF		FL	3 (D/E)	V12			S2	30	2286	PENTAMETHYLHEPTAN
LGBF		FL	2 (D/E)				S2 S20	33	2287	ISOHEPTEN
LGBF		FL	2 (D/E)				S2 S20	33	2288	ISOHEXEN
L4BN		AT	3 (E)	V12				80	2289	ISOFORONDIAMIN
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2290	ISOFORONDIISOKYANÁT
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2291	SLOUČENINA OLOVA, ROZPUSTNÁ, J.N.
LGBF		FL	3 (D/E)	V12			S2	30	2293	4-METHOXY-4-METHYLPENTAN-2-ON
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2294	N-METHYLANILÍN

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2295	METHYLCHLORACETÁT (METHYLCHLORACETÁT)	6.1	TF1	I	6.1+3		0	E5	P001		MP8 MP17	T14	TP2
2296	METHYLCYKLOHEXAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2297	METHYLCYKLOHEXANON	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2298	METHYLCYKLOPENTAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2299	METHYLDICHLORACETÁT (METHYL-DICHLORACETÁT)	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2300	2-METHYL-5-ETHYLPYRIDIN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2301	2-METHYLFURAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2302	5-METHYLHEXAN-2-ON	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2303	ISOPROPENYLBENZEN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2304	NAFTALEN, ROZTAVENÝ	4.1	F2	III	4.1	536	0	E0				T1	TP3
2305	KYSELINA NITROBENZENSULFONOVÁ	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2306	NITROBENZOTRIFLUORIDY, KAPALNÉ	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2307	3-NITRO-4-CHLORBENZOTRIFLUORID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP10	T7	TP2
2308	KYSELINA NITROSYLSÍROVÁ, KAPALNÁ	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
2309	OKTADIENY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2310	2,4-PENTADION (PENTA-2,4-DION)	3	FT1	III	3+6.1		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2311	FENETIDINY (ETHOXYANILÍNY)	6.1	T1	III	6.1	279	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2312	FENOL, ROZTAVENÝ	6.1	T1	II	6.1		0	E0				T7	TP3
2313	PIKOLINY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2315	BIFENYLY POLYCHLOROVANÉ, KAPALNÉ	9	M2	II	9	305	1 L	E2	P906 IBC02		MP15	T4	TP1
2316	DIKYANOMÉDNAN SODNÝ, TUHÝ	6.1	T5	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravení kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2295	METHYLCHLORACETÁT (METHYL- CHLORACETÁT)
LGBF		FL	2 (D/E)				S2 S20	33	2296	METHYLCYKLOHEXAN
LGBF		FL	3 (D/E)	V12			S2	30	2297	METHYLCYKLOHEXANON
LGBF		FL	2 (D/E)				S2 S20	33	2298	METHYLCYKLOPENTAN
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2299	METHYLDICHLORACETÁT (METHYL- DICHLORACETÁT)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2300	2-METHYL-5-ETHYLPYRIDIN
LGBF		FL	2 (D/E)				S2 S20	33	2301	2-METHYLFURAN
LGBF		FL	3 (D/E)	V12			S2	30	2302	5-METHYLHEXAN-2-ON
LGBF		FL	3 (D/E)	V12			S2	30	2303	ISOPROPENYLBENZEN
LGBV	TU27 TE4 TE6	AT	3 (E)					44	2304	NAFTALEN, ROZTAVENÝ
L4BN SGAN		AT	2 (E)	V11				80	2305	KYSELINA NITROBENZENSULFONOVÁ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2306	NITROBENZOTRIFLUORIDY, KAPALNÉ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2307	3-NITRO-4-CHLORBENZOTRIFLUORID
L4BN		AT	2 (E)					X80	2308	KYSELINA NITROSYLSÍROVÁ, KAPALNÁ
LGBF		FL	2 (D/E)				S2 S20	33	2309	OKTADIENY
L4BH	TU15	FL	3 (D/E)	V12		CV13 CV28	S2	36	2310	2,4-PENTADION (PENTA-2,4-DION)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2311	FENETIDINY (ETHOXYANILÍNY)
L4BH	TU15 TE19	AT	0 (D/E)			CV13	S9 S19	60	2312	FENOL, ROZTAVENÝ
LGBF		FL	3 (D/E)	V12			S2	30	2313	PIKOLINY
L4BH	TU15	AT	0 (D/E)		VV15	CV1 CV13 CV28	S19	90	2315	BIFENYLY POLYCHLOROVANÉ, KAPALNÉ
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2316	DIKYANOMÉDNAN SODNÝ, TUHÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2317	DIKYANOMÉDNAN SODNÝ, ROZTOK	6.1	T4	I	6.1		0	E5	P001		MP8 MP17	T14	TP2
2318	HYDROGENSULFID SODNÝ, s méně než 25 % krystalové vody	4.2	S4	II	4.2	504	0	E2	P410 IBC06		MP14	T3	TP33
2319	UHLOVODÍKY, TERPENICKÉ, J.N.	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
2320	TETRAETHYLENPENTAMIN	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2321	TRICHLORBENZENY, KAPALNÉ	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2322	TRICHLORBUTEN	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2323	TRIETHYLFOSFIT (TRIETHYLFOSFIT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2324	TRIIISOBUTYLEN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2325	1,3,5-TRIMETHYLBENZEN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2326	TRIMETHYL CYKLOHEXYLAMIN	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2327	TRIMETHYLHEXAMETHYLEN-DIAMINY (TRIMETHYLHEXAMETHYLENDIAMINY)	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2328	TRIMETHYLHEXAMETHYLEN-DIISOKYANÁT (TRIMETHYLHEXAMETHYLENDIISOKYANÁT) (a isomerní směsí)	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2
2329	TRIMETHYLFOSFIT (TRIMETHYLFOSFIT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2330	UNDEKAN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2331	CHLORID ZINEČNATÝ, BEZVODÝ	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2332	ACETALDEHYDOXIM	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2333	ALLYLACETÁT (ALLYL-ACETÁT)	3	FT1	II	3+6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2334	ALLYLAMIN	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
2335	ALLYLETHYLETER	3	FT1	II	3+6.1		1 L	E2	P001 IBC02		MP19	T7	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2317	DIKYANOMĚDNAN SODNÝ, ROZTOK
SGAN		AT	2 (D/E)	V1				40	2318	HYDROGENSULFID SODNÝ, s méně než 25 % krystalové vody
LGBF		FL	3 (D/E)	V12			S2	30	2319	UHĽOVODÍKY, TERPENICKÉ, J.N.
L4BN		AT	3 (E)	V12				80	2320	TETRAETHYLENPENTAMIN
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2321	TRICHLORBENZENY, KAPALNĚ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2322	TRICHLORBUTEN
LGBF		FL	3 (D/E)	V12			S2	30	2323	TRIETHYLFOSFIT (TRIETHYL-FOSFIT)
LGBF		FL	3 (D/E)	V12			S2	30	2324	TRIIISOBUTYLEN
LGBF		FL	3 (D/E)	V12			S2	30	2325	1,3,5-TRIMETHYLBENZEN
L4BN		AT	3 (E)	V12				80	2326	TRIMETHYLCYKLOHEXYLAMIN
L4BN		AT	3 (E)	V12				80	2327	TRIMETHYLHEXAMETHYLEN-DIAMINY (TRIMETHYLHEXAMETHYLENDIAMINY)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2328	TRIMETHYLHEXAMETHYLEN-DIISOKYANÁT (TRIMETHYLHEXAMETHYLENDIISOKYANÁT) (a isomerní směsí)
LGBF		FL	3 (D/E)	V12			S2	30	2329	TRIMETHYLFOSFIT (TRIMETHYL-FOSFIT)
LGBF		FL	3 (D/E)	V12			S2	30	2330	UNDEKAN
SGAV		AT	3 (E)		VV9			80	2331	CHLORID ZINEČNATÝ, BEZVODÝ
LGBF		FL	3 (D/E)	V12			S2	30	2332	ACETALDEHYDOXIM
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2333	ALLYLACETÁT (ALLYL-ACETÁT)
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2334	ALLYLAMIN
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2335	ALLYLETHYLETER

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2336	ALLYLFORMIÁT (ALLYL-FORMIÁT)	3	FT1	I	3+6.1		0	E0	P001		MP7 MP17	T14	TP2
2337	THIOFENOL (fenymerkaptan)	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
2338	BENZOTRIFLUORID	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2339	2-BROMBUTAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2340	2-BROMETHYLETHYLETER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2341	1-BROM-3-METHYLBUTAN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2342	BROMMETHYLPROPANY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2343	2-BROMPENTAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2344	BROMPROPANY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2344	BROMPROPANY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2345	3-BROMPROPIN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2346	BUTANDION	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2347	BUTANTHIOL (butylmerkaptan)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2348	BUTYLAKRYLÁTY, STABILIZOVANÉ (BUTYLAKRYLÁTY, STABILIZOVANÉ)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2350	BUTYLMETHYLETER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2351	BUTYLNITRITY (BUTYL-NITRITY)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2351	BUTYLNITRITY (BUTYL-NITRITY)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2352	BUTYLVINYLETER, STABILIZOVANÝ	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2353	BUTYRYLCHLORID	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T8	TP2
2354	CHLORMETHYLETHYLETER	3	FT1	II	3+6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2356	2-CHLORPROPAN	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
2357	CYKLOHEXYLAMIN	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2336	ALLYLFORMIÁT (ALLYL-FORMIÁT)
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2337	THIOFENOL (fenymerkaptan)
LGBF		FL	2 (D/E)				S2 S20	33	2338	BENZOTRIFLUORID
LGBF		FL	2 (D/E)				S2 S20	33	2339	2-BROMBUTAN
LGBF		FL	2 (D/E)				S2 S20	33	2340	2-BROMETHYLETHYLETHER
LGBF		FL	3 (D/E)	V12			S2	30	2341	1-BROM-3-METHYLBUTAN
LGBF		FL	2 (D/E)				S2 S20	33	2342	BROMMETHYLPROPANY
LGBF		FL	2 (D/E)				S2 S20	33	2343	2-BROMPENTAN
LGBF		FL	2 (D/E)				S2 S20	33	2344	BROMPROPANY
LGBF		FL	3 (D/E)	V12			S2	30	2344	BROMPROPANY
LGBF		FL	2 (D/E)				S2 S20	33	2345	3-BROMPROPIN
LGBF		FL	2 (D/E)				S2 S20	33	2346	BUTANDION
LGBF		FL	2 (D/E)				S2 S20	33	2347	BUTANTHIOL (butylmerkaptan)
LGBF		FL	3 (D/E)	V12			S2	39	2348	BUTYLAKRYLÁTY, STABILIZOVANÉ (BUTYLAKRYLÁTY, STABILIZOVANÉ)
LGBF		FL	2 (D/E)				S2 S20	33	2350	BUTYLMETHYLETHER
LGBF		FL	2 (D/E)				S2 S20	33	2351	BUTYLNITRITY (BUTYL-NITRITY)
LGBF		FL	3 (D/E)	V12			S2	30	2351	BUTYLNITRITY (BUTYL-NITRITY)
LGBF		FL	2 (D/E)				S2 S20	339	2352	BUTYLVINYLETHER, STABILIZOVANÝ
L4BH		FL	2 (D/E)				S2 S20	338	2353	BUTYRYLCHLORID
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2354	CHLORMETHYLETHYLETHER
L4BN		FL	1 (D/E)				S2 S20	33	2356	2-CHLORPROPAN
L4BN		FL	2 (D/E)				S2	83	2357	CYKLOHEXYLAMIN

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2358	CYKLOOKTATETRAEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2359	DIALLYLAMIN	3	FTC	II	3+6.1+8		1 L	E2	P001 IBC02		MP19	T7	TP1
2360	DIALLYLETHER	3	FT1	II	3+6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2361	DIISOBUTYLAMIN	3	FC	III	3+8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2362	1,1-DICHLORETHAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2363	ETHANTHIOL (ethylmerkaptan)	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
2364	n-PROPYLBENZEN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2366	DIETHYLKARBONÁT (DIETHYLKARBONÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2367	alfa-METHYLVALERALDEHYD	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2368	alfa-PINEN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2370	1-HEXEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2371	ISOPENTENY	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
2372	1,2-BIS(DIMETHYLAMINO)ETHAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2373	DIETHOXYMETHAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2374	3,3-DIETHOXYPROPEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2375	DIETHYLSULFID	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1
2376	2,3-DIHYDROPIRAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2377	1,1-DIMETHOXYETHAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1
2378	DIMETHYLAMINOACETONITRIL	3	FT1	II	3+6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2379	1,3-DIMETHYLBUTYLAMIN	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
2380	DIMETHYLDIETHOXSILAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2381	DIMETHYLDISULFID	3	FT1	II	3+6.1		1 L	E2	P001 IBC02		MP19	T7	TP2 TP39
2382	DIMETHYLHYDRAZIN, SYMETRICKÝ	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2383	DIPROPYLAMIN	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBF		FL	2 (D/E)				S2 S20	33	2358	CYKLOOKTATETRAEN
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	338	2359	DIALLYLAMIN
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2360	DIALLYLETHER
L4BN		FL	3 (D/E)	V12			S2	38	2361	DIISOBUTYLAMIN
LGBF		FL	2 (D/E)				S2 S20	33	2362	1,1-DICHLORETHAN
L4BN		FL	1 (D/E)				S2 S20	33	2363	ETHANTHIOL (ethylmerkaptan)
LGBF		FL	3 (D/E)	V12			S2	30	2364	n-PROPYLBENZEN
LGBF		FL	3 (D/E)	V12			S2	30	2366	DIETHYLKARBONÁT (DIETHYL-KARBONÁT)
LGBF		FL	2 (D/E)				S2 S20	33	2367	alfa-METHYLVALERALDEHYD
LGBF		FL	3 (D/E)	V12			S2	30	2368	alfa-PINEN
LGBF		FL	2 (D/E)				S2 S20	33	2370	1-HEXEN
L4BN		FL	1 (D/E)				S2 S20	33	2371	ISOPENTENY
LGBF		FL	2 (D/E)				S2 S20	33	2372	1,2-BIS(DIMETHYLAMINO)ETHAN
LGBF		FL	2 (D/E)				S2 S20	33	2373	DIETHOXYMETHAN
LGBF		FL	2 (D/E)				S2 S20	33	2374	3,3-DIETHOXYPROPEN
LGBF		FL	2 (D/E)				S2 S20	33	2375	DIETHYLSULFID
LGBF		FL	2 (D/E)				S2 S20	33	2376	2,3-DIHYDROPIRAN
LGBF		FL	2 (D/E)				S2 S20	33	2377	1,1-DIMETHOXYETHAN
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2378	DIMETHYLAMINOACETONITRIL
L4BH		FL	2 (D/E)				S2 S20	338	2379	1,3-DIMETHYLBUTYLAMIN
LGBF		FL	2 (D/E)				S2 S20	33	2380	DIMETHYLDIETHOXYSIAN
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2381	DIMETHYLDISULFID
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2382	DIMETHYLHYDRAZIN, SYMETRICKÝ
L4BH		FL	2 (D/E)				S2 S20	338	2383	DIPROPYLAMIN

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2384	DI-n-PROPYLETER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2385	ETHYLISOBUTYRÁT (ETHYL- ISOBUTYRÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2386	1-ETHYLPYRIDIN	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
2387	FLUORBENZEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2388	FLUORTOLUENY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2389	FURAN	3	F1	I	3		0	E3	P001		MP7 MP17	T12	TP2
2390	2-JOBBUTAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2391	IODMETHYLPROPANY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2392	IODPROPANY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2393	ISOBUTYLFORMIÁT (ISOBUTYL- FORMIÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2394	ISOBUTYLPROPIONÁT (ISOBUTYL- PROPIONÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2395	ISOBUTYRYLCHLORID	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP2
2396	METHAKRYLALDEHYD, STABILIZOVANÝ	3	FT1	II	3+6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2397	3-METHYLBUTAN-2-ON	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2398	terc-BUTYLMETHYLETER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1
2399	1-METHYLPYRIDIN	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
2400	METHYLISOVALERÁT (METHYL- ISOVALERÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2401	PIPERIDIN	8	CF1	I	8+3		0	E0	P001		MP8 MP17	T10	TP2
2402	PROPANTHIOLY (propylmerkaptany)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2403	ISOPROPENYLACETÁT (ISOPROPENYL-ACETÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2404	PROPIONITRIL	3	FT1	II	3+6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2405	ISOPROPYL-BUTYRÁT (ISOPROPYL- BUTYRÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2406	ISOPROPYLISOBUTYRÁT (ISOPROPYL-ISOBUTYRÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2407	ISOPROPYLCHLORFORMIÁT (ISOPROPYL-CHLORFORMIÁT) (isopropyl-chlorkarbonát)	6.1	TFC	I	6.1+3+8	354	0	E0	P602		MP8 MP17		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
LGBF		FL	2 (D/E)				S2 S20	33	2384	DI-n-PROPYLEETHER
LGBF		FL	2 (D/E)				S2 S20	33	2385	ETHYLISOBYTRÁT (ETHYL-ISOBYTRÁT)
L4BH		FL	2 (D/E)				S2 S20	338	2386	1-ETHYLPIPERIDIN
LGBF		FL	2 (D/E)				S2 S20	33	2387	FLUORBENZEN
LGBF		FL	2 (D/E)				S2 S20	33	2388	FLUORTOLUENY
L4BN		FL	1 (D/E)				S2 S20	33	2389	FURAN
LGBF		FL	2 (D/E)				S2 S20	33	2390	2-JOBYTAN
LGBF		FL	2 (D/E)				S2 S20	33	2391	JODMETHYLPROPANY
LGBF		FL	3 (D/E)	V12			S2	30	2392	JODPROPANY
LGBF		FL	2 (D/E)				S2 S20	33	2393	ISOBYTYLFORMIÁT (ISOBYTYL-FORMIÁT)
LGBF		FL	3 (D/E)	V12			S2	30	2394	ISOBYTYLPROPIONÁT (ISOBYTYL-PROPIONÁT)
L4BH		FL	2 (D/E)				S2 S20	338	2395	ISOBYTYRYLCHLORID
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2396	METHAKRYLALDEHYD, STABILIZOVANÝ
LGBF		FL	2 (D/E)				S2 S20	33	2397	3-METHYLBUTAN-2-ON
LGBF		FL	2 (D/E)				S2 S20	33	2398	terc-BUTYLMETHYLEETHER
L4BH		FL	2 (D/E)				S2 S20	338	2399	1-METHYLPIPERIDIN
LGBF		FL	2 (D/E)				S2 S20	33	2400	METHYLISOVALERÁT (METHYL-ISOVALERÁT)
L10BH		FL	1 (D/E)				S2 S14	883	2401	PIPERIDIN
LGBF		FL	2 (D/E)				S2 S20	33	2402	PROPANTHIOLY (propylmerkaptany)
LGBF		FL	2 (D/E)				S2 S20	33	2403	ISOPROPENYLACETÁT (ISOPROPENYL-ACETÁT)
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2404	PROPIONITRIL
LGBF		FL	3 (D/E)	V12			S2	30	2405	ISOPROPYLBUTYRÁT (ISOPROPYL-BUTYRÁT)
LGBF		FL	2 (D/E)				S2 S20	33	2406	ISOPROPYLIISOBYTRÁT (ISOPROPYL-ISOBYTRÁT)
			1 (D)			CV1 CV13 CV28	S2 S9 S14		2407	ISOPROPYLCHLORFORMIÁT (ISOPROPYL-CHLORFORMIÁT) (isopropyl-chlorkarbonát)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2409	ISOPROPYLPROPIONÁT (ISOPROPYL-PROPIONÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2410	1,2,3,6-TETRAHYDROPYRIDIN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2411	BUTYRONITRIL	3	FT1	II	3+6.1		1 L	E2	P001 IBC02		MP19	T7	TP1
2412	TETRAHYDROTHIOFEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2413	TETRAPROPYLORTHOTITANÁT (TETRAPROPYL-ORTHOTITANÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2414	THIOFEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2416	TRIMETHYLBORÁT (TRIMETHYLBORÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1
2417	FLUORID KARBONYLU (KARBONYLFLUORID)	2	2TC		2.3+8		0	E0	P200		MP9	(M)	
2418	FLUORID SIŘIČITÝ	2	2TC		2.3+8		0	E0	P200		MP9		
2419	BROMTRIFLUORETHYLEN	2	2F		2.1		0	E0	P200		MP9	(M)	
2420	HEXAFLUORACETON	2	2TC		2.3+8		0	E0	P200		MP9	(M)	
2421	OXID DUSITÝ	2	2TOC				PŘEPRAVA ZAKÁZÁNA						
2422	OKTAFLUOR-2-BUTEN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 1318)	2	2A		2.2		120 ml	E1	P200		MP9	(M)	
2424	OKTAFLUORPROPAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 218)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
2426	DUSIČNAN AMONNÝ, KAPALNÝ, horký koncentrovaný roztok, v koncentraci vyšší než 80 %, ale nepřesahující 93 %	5.1	O1		5.1	252 644	0	E0				T7	TP1 TP16 TP17
2427	CHLOREČNAN DRASELNÝ, VODNÝ ROZTOK	5.1	O1	II	5.1		1 L	E2	P504 IBC02		MP2	T4	TP1
2427	CHLOREČNAN DRASELNÝ, VODNÝ ROZTOK	5.1	O1	III	5.1		5 L	E1	P504 IBC02 R001		MP2	T4	TP1
2428	CHLOREČNAN SODNÝ, VODNÝ ROZTOK	5.1	O1	II	5.1		1 L	E2	P504 IBC02		MP2	T4	TP1
2428	CHLOREČNAN SODNÝ, VODNÝ ROZTOK	5.1	O1	III	5.1		5 L	E1	P504 IBC02 R001		MP2	T4	TP1
2429	CHLOREČNAN VÁPENATÝ, VODNÝ ROZTOK	5.1	O1	II	5.1		1 L	E2	P504 IBC02		MP2	T4	TP1
2429	CHLOREČNAN VÁPENATÝ, VODNÝ ROZTOK	5.1	O1	III	5.1		5 L	E1	P504 IBC02 R001		MP2	T4	TP1
2430	ALKYL FENOLY, TUHÉ, J.N. (včetně homologů C2-C12)	8	C4	I	8		0	E0	P002 IBC07		MP18	T6	TP33
2430	ALKYL FENOLY, TUHÉ, J.N. (včetně homologů C2-C12)	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
LGBF		FL	2 (D/E)				S2 S20	33	2409	ISOPROPYLPROPIONÁT (ISOPROPYL-PROPIONÁT)
LGBF		FL	2 (D/E)				S2 S20	33	2410	1,2,3,6-TETRAHYDROPYRIDIN
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2411	BUTYRONITRIL
LGBF		FL	2 (D/E)				S2 S20	33	2412	TETRAHYDROTHIOFEN
LGBF		FL	3 (D/E)	V12			S2	30	2413	TETRAPROPYLORTHOTITANÁT (TETRAPROPYL-ORTHOTITANÁT)
LGBF		FL	2 (D/E)				S2 S20	33	2414	THIOFEN
LGBF		FL	2 (D/E)				S2 S20	33	2416	TRIMETHYLBORÁT (TRIMETHYL-BORÁT)
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	2417	FLUORID KARBONYLU (KARBONYLFLUORID)
			1 (D)			CV9 CV10 CV36	S14		2418	FLUORID SIŘIČITÝ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2419	BROMTRIFLUORETHYLEN
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	2420	HEXAFLUORACETON
PŘEPRAVA ZAKAZÁNA									2421	OXID DUSITÝ
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	2422	OKTAFLUOR-2-BUTEN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 1318)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	2424	OKTAFLUORPROPAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 218)
L4BV(+)	TU3 TU12 TU29 TC3 TE9 TE10 TA1	AT	0 (E)				S23	59	2426	DUSIČNAN AMONNÝ, KAPALNÝ, horký koncentrovaný roztok, v koncentraci vyšší než 80 %, ale nepřesahující 93 %
L4BN	TU3	AT	2 (E)			CV24		50	2427	CHLOREČNAN DRASELNÝ, VODNÝ ROZTOK
LGBV	TU3	AT	3 (E)			CV24		50	2427	CHLOREČNAN DRASELNÝ, VODNÝ ROZTOK
L4BN	TU3	AT	2 (E)			CV24		50	2428	CHLOREČNAN SODNÝ, VODNÝ ROZTOK
LGBV	TU3	AT	3 (E)			CV24		50	2428	CHLOREČNAN SODNÝ, VODNÝ ROZTOK
L4BN	TU3	AT	2 (E)			CV24		50	2429	CHLOREČNAN VÁPENATÝ, VODNÝ ROZTOK
LGBV	TU3	AT	3 (E)			CV24		50	2429	CHLOREČNAN VÁPENATÝ, VODNÝ ROZTOK
S10AN L10BH		AT	1 (E)	V10			S20	88	2430	ALKYL FENOLY, TUHÉ, J.N. (včetně homologů C2-C12)
SGAN L4BN		AT	2 (E)	V11				80	2430	ALKYL FENOLY, TUHÉ, J.N. (včetně homologů C2-C12)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2430	ALKYLFENOLY, TUHÉ, J.N. (včetně homologů C2-C12)	8	C4	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2431	ANISIDINY	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2432	N,N-DIETHYLANILÍN	6.1	T1	III	6.1	279	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2433	CHLORNITROTOLUENY, KAPALNÉ	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2434	DIBENZYL-DICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
2435	ETHYLFENYL-DICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
2436	KYSELINA THIOOCTOVÁ	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2437	METHYLFENYL-DICHLORSILAN	8	C3	II	8		0	E0	P010		MP15	T10	TP2 TP7
2438	TRIMETHYLACETYLCHLORID	6.1	TFC	I	6.1+3+8		0	E5	P001		MP8 MP17	T14	TP2
2439	HYDROGENFLUORID SODNÝ	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2440	CHLORID ČÍŇIČITÝ, PENTAHYDRÁT	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2441	CHLORID TITANITÝ, PYROFORNÍ nebo SMĚSI CHLORIDU TITANITĚHO, PYROFORNÍ	4.2	SC4	I	4.2+8	537	0	E0	P404		MP13		
2442	TRICHLORACETYLCHLORID	8	C3	II	8		0	E2	P001		MP15	T7	TP2
2443	TRICHLORID VANADYLU (OXYCHLORID VANADIČITÝ)	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2444	CHLORID VANADIČITÝ	8	C1	I	8		0	E0	P802		MP8 MP17	T10	TP2
2446	NITROKRESOLY, TUHÉ	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2447	FOSFOR, BÍLÝ, ROZTAVENÝ	4.2	ST3	I	4.2+6.1		0	E0				T21	TP3 TP7 TP26
2448	SÍRA, ROZTAVENÁ	4.1	F3	III	4.1	538	0	E0				T1	TP3
2451	FLUORID DUSITÝ	2	2O		2.2+5.1		0	E0	P200		MP9	(M)	
2452	ETHYLACETYLÉN, STABILIZOVANÝ	2	2F		2.1		0	E0	P200		MP9	(M)	
2453	FLUORETHAN (ETHYLFLUORID) (PLYN JAKO CHLADICÍ PROSTŘEDEK R 161)	2	2F		2.1		0	E0	P200		MP9	(M)	
2454	FLUORMETHAN (METHYLFLUORID) (PLYN JAKO CHLADICÍ PROSTŘEDEK R 41)	2	2F		2.1		0	E0	P200		MP9	(M)	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAV L4BN		AT	3 (E)		VV9			80	2430	ALKYLFENOLY, TUHÉ, J.N. (včetně homologů C2-C12)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2431	ANISIDINY
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2432	N,N-DIETHYLANILÍN
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2433	CHLORNITROTOLUENY, KAPALNÉ
L4BN		AT	2 (E)					X80	2434	DIBENZYLDICHLORSILAN
L4BN		AT	2 (E)					X80	2435	ETHYLFENYLDICHLORSILAN
LGBF		FL	2 (D/E)				S2 S20	33	2436	KYSELINA THIOOCTOVÁ
L4BN		AT	2 (E)					X80	2437	METHYLFENYLDICHLORSILAN
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2438	TRIMETHYLACETYLCHLORID
SGAN		AT	2 (E)	V11				80	2439	HYDROGENFLUORID SODNÝ
SGAV		AT	3 (E)		VV9			80	2440	CHLORID CÍNIČITÝ, PENTAHYDRÁT
			0 (E)	V1			S20		2441	CHLORID TITANITÝ, PYROFORNÍ nebo SMĚSI CHLORIDU TITANITÉHO, PYROFORNÍ
L4BN		AT	2 (E)					X80	2442	TRICHLORACETYLCHLORID
L4BN		AT	2 (E)					80	2443	TRICHLORID VANADYLU (OXYCHLORID VANADIČITÝ)
L10BH		AT	1 (E)				S20	X88	2444	CHLORID VANADIČITÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2446	NITROKRESOLY, TUHÉ
L10DH(+)	TU14 TU16 TU21 TE3 TE21	AT	0 (B/E)				S20	446	2447	FOSFOR, BÍLÝ, ROZTAVENÝ
LGBV(+)	TU27 TE4 TE6	AT	3 (E)					44	2448	SÍRA, ROZTAVENÁ
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		25	2451	FLUORID DUSITÝ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	239	2452	ETHYLACETYLÉN, STABILIZOVANÝ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2453	FLUORETHAN (ETHYLFLUORID) (PLYN JAKO CHLADICÍ PROSTŘEDEK R 161)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2454	FLUORMETHAN (METHYLFLUORID) (PLYN JAKO CHLADICÍ PROSTŘEDEK R 41)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky		
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
2455	METHYLNITRIT (METHYL-NITRIT)	2	2A				PŘEPRAVA ZAKÁZÁNA							
2456	2-CHLORPROPEN	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2	
2457	2,3-DIMETHYLBUTAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T7	TP1	
2458	HEXADIENY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	
2459	2-METHYL-1-BUTEN	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2	
2460	2-METHYL-2-BUTEN	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T7	TP1	
2461	METHYLPENTADIEN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	
2463	HYDRID HLINITÝ	4.3	W2	I	4.3		0	E0	P403		MP2			
2464	DUSIČNAN BERYLLNATÝ	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	
2465	KYSELINA DICHLORISOKYANUROVÁ, SUCHÁ nebo KYSELINA DICHLORISOKYANUROVÁ, SOLI	5.1	O2	II	5.1	135	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
2466	SUPEROXID DRASELNÝ	5.1	O2	I	5.1		0	E0	P503 IBC06		MP2			
2468	KYSELINA TRICHLORISOKYANUROVÁ, SUCHÁ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
2469	BROMIČNAN ZINEČNATÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
2470	FENYLACETONITRIL, KAPALNÝ	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
2471	OXID OSMIČELÝ	6.1	T5	I	6.1		0	E5	P002 IBC07	PP30	MP18	T6	TP33	
2473	ARSANILÁT SODNÝ	6.1	T3	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
2474	THIOFOSGEN	6.1	T1	I	6.1	279 354	0	E0	P602		MP8 MP17	T20	TP2 TP37	
2475	CHLORID VANADITÝ	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
2477	METHYLISOTHIOKYANÁT	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37	
2478	ISOKYANÁTY, HOŘLAVÉ, TOXICKÉ, J.N. nebo ISOKYANÁT, ROZTOK, HOŘLAVÝ, TOXICKÝ, J.N.	3	FT1	II	3+6.1	274 539	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27	
2478	ISOKYANÁTY, HOŘLAVÉ, TOXICKÉ, J.N. nebo ISOKYANÁT, ROZTOK, HOŘLAVÝ, TOXICKÝ, J.N.	3	FT1	III	3+6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28	
2480	METHYLISOKYANÁT	6.1	TF1	I	6.1+3	354	0	E0	P601		MP2	T22	TP2	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PŘEPRAVA ZAKÁZÁNA									2455	METHYLNITRIT (METHYL-NITRIT)
L4BN		FL	1 (D/E)				S2 S20	33	2456	2-CHLORPROPEN
LGBF		FL	2 (D/E)				S2 S20	33	2457	2,3-DIMETHYLBUTAN
LGBF		FL	2 (D/E)				S2 S20	33	2458	HEXADIENY
L4BN		FL	1 (D/E)				S2 S20	33	2459	2-METHYL-1-BUTEN
L1,5BN		FL	2 (D/E)				S2 S20	33	2460	2-METHYL-2-BUTEN
LGBF		FL	2 (D/E)				S2 S20	33	2461	METHYLPENTADIEN
			1 (E)	V1		CV23	S20		2463	HYDRID HLINITÝ
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	2464	DUSIČNAN BERYLLNATÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	2465	KYSELINA DICHLORISOKYANUROVÁ, SUCHÁ nebo KYSELINA DICHLORISOKYANUROVÁ, SOLI
			1 (E)	V10		CV24	S20		2466	SUPEROXID DRASELNÝ
SGAN	TU3	AT	2 (E)	V11		CV24		50	2468	KYSELINA TRICHLORISOKYANUROVÁ, SUCHÁ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	2469	BROMIČNAN ZINEČNATÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2470	FENYLACETONITRIL, KAPALNÝ
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2471	OXID OSMIČELÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2473	ARSANILÁT SODNÝ
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	2474	THIOFOSGEN
SGAV		AT	3 (E)		VV9			80	2475	CHLORID VANADITÝ
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2477	METHYLISOTHIOKYANÁT
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2478	ISOKYANÁTY, HOŘLAVÉ, TOXICKÉ, J.N. nebo ISOKYANÁT, ROZTOK, HOŘLAVÝ, TOXICKÝ, J.N.
L4BH	TU15	FL	3 (D/E)	V12		CV13 CV28	S2	36	2478	ISOKYANÁTY, HOŘLAVÉ, TOXICKÉ, J.N. nebo ISOKYANÁT, ROZTOK, HOŘLAVÝ, TOXICKÝ, J.N.
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2480	METHYLISOKYANÁT

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2481	ETHYLISOKYANÁT	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2482	n-PROPYLISOKYANÁT	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2483	ISOPROPYLISOKYANÁT	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2484	terc-BUTYLISOKYANÁT	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2485	n-BUTYLISOKYANÁT	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2486	ISOBUTYLISOKYANÁT	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2487	FENYLISOKYANÁT	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2488	CYKLOHEXYLISOKYANÁT	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2490	BIS(2-CHLOROISOPROPYL)ETHER	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2491	ETHANOLAMIN nebo ETHANOLAMIN, ROZTOK	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2493	HEXAMETHYLENIMIN	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
2495	FLUORID JODIČNÝ	5.1	OTC	I	5.1+6.1+8		0	E0	P200		MP2		
2496	ANHYDRID KYSELINY PROPIONOVÉ	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2498	1,2,3,6-TETRAHYDROBENZALDEHYD	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2501	TRIS-(1-AZIRIDINYL)-FOSFINOXID, ROZTOK	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2501	TRIS-(1-AZIRIDINYL)-FOSFINOXID, ROZTOK	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2502	VALERYLCHLORID	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2
2503	CHLORID ZIRKONIČITÝ	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2504	TETRABROMETHAN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2481	ETHYLISOKYANÁT
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2482	n-PROPYLISOKYANÁT
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2483	ISOPROPYLISOKYANÁT
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2484	terc-BUTYLISOKYANÁT
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2485	n-BUTYLISOKYANÁT
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2486	ISOBUTYLISOKYANÁT
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2487	FENYLISOKYANÁT
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2488	CYKLOHEXYLISOKYANÁT
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2490	BIS(2-CHLOROISOPROPYL)ETHER
L4BN		AT	3 (E)	V12				80	2491	ETHANOLAMIN nebo ETHANOLAMIN, ROZTOK
L4BH		FL	2 (D/E)				S2 S20	338	2493	HEXAMETHYLENIMIN
L10DH	TU3	AT	1 (B/E)			CV24 CV28	S20	568	2495	FLUORID JODIČNÝ
L4BN		AT	3 (E)	V12				80	2496	ANHYDRID KYSELINY PROPIONOVÉ
LGBF		FL	3 (D/E)	V12			S2	30	2498	1,2,3,6-TETRAHYDROBENZALDEHYD
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2501	TRIS-(1-AZIRIDINYL)-FOSFINOXID, ROZTOK
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2501	TRIS-(1-AZIRIDINYL)-FOSFINOXID, ROZTOK
L4BN		FL	2 (D/E)				S2	83	2502	VALERYLCHLORID
SGAV		AT	3 (E)		VV9			80	2503	CHLORID ZIRKONIČITÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2504	TETRABROMETHAN

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2505	FLUORID AMONNÝ	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2506	HYDROGENSIRAN AMONNÝ	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2507	KYSELINA HEXACHLOROPLATIČITÁ, TUHÁ	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2508	CHLORID MOLYBDENIČNÝ	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2509	HYDROGENSIRAN DRASELNÝ	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2511	KYSELINA 2-CHLORPROPIONOVÁ	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2
2512	AMINOFENOLY (o-, m-, p-)	6.1	T2	III	6.1	279	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2513	BROMACETYL-BROMID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
2514	BROMBENZEN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2515	BROMOFORM	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2516	TETRABROMMETHAN	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2517	1-CHLOR-1,1-DIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 142b)	2	2F		2.1		0	E0	P200		MP9	(M) T50	
2518	1,5,9-CYKLODODEKATRIEN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2520	CYKLOOKTADIENY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2521	DIKETEN, STABILIZOVANÝ	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2522	2-DIMETHYLAMINOETHYLMETHAKRYLÁT (2-DIMETHYLAMINOETHYL- METHAKRYLÁT)	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2524	ETHYLORTHOFORMIÁT (ETHYL- ORTHOFORMIÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2525	ETHYLOXALÁT (ETHYL-OXALÁT)	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2526	FURFURYLAMIN	3	FC	III	3+8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2505	FLUORID AMONNÝ
SGAV		AT	2 (E)	V11	VV9			80	2506	HYDROGENSÍRAN AMONNÝ
SGAV		AT	3 (E)		VV9			80	2507	KYSELINA HEXACHLOROPLATIČITÁ, TUHÁ
SGAV		AT	3 (E)		VV9			80	2508	CHLORID MOLYBDENIČNÝ
SGAV		AT	2 (E)	V11	VV9			80	2509	HYDROGENSÍRAN DRASELNÝ
L4BN		AT	3 (E)	V12				80	2511	KYSELINA 2-CHLORPROPIONOVÁ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2512	AMINOFENOLY (o-, m-, p-)
L4BN		AT	2 (E)					X80	2513	BROMACETYL-BROMID
LGBF		FL	3 (D/E)	V12			S2	30	2514	BROMBENZEN
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2515	BROMOFORM
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2516	TETRABROMMETHAN
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2517	1-CHLOR-1,1-DIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 142b)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2518	1,5,9-CYKLODODEKATRIEN
LGBF		FL	3 (D/E)	V12			S2	30	2520	CYKLOOKTADIENY
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2521	DIKETEN, STABILIZOVANÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	69	2522	2-DIMETHYLAMINOETHYLMETHAKRYLÁT (2-DIMETHYLAMINOETHYL-METHAKRYLÁT)
LGBF		FL	3 (D/E)	V12			S2	30	2524	ETHYLORTHOFORMIÁT (ETHYL-ORTHOFORMIÁT)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2525	ETHYLOXALÁT (ETHYL-OXALÁT)
L4BN		FL	3 (D/E)	V12			S2	38	2526	FURFURYLAMIN

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky		
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
2527	ISOBUTYLAKRYLÁT, STABILIZOVANÝ (ISOBUTYLAKRYLÁT, STABILIZOVANÝ)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
2528	ISOBUTYLISOBUTYRÁT (ISOBUTYLISOBUTYRÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
2529	KYSELINA ISOMÁSELNÁ	3	FC	III	3+8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1	
2531	KYSELINA METHAKRYLOVÁ, STABILIZOVANÁ	8	C3	II	8		1 L	E2	P001 IBC02 LP01		MP15	T7	TP1 TP18 TP30	
2533	METHYLTRICHLORACETÁT (METHYL-TRICHLORACETÁT)	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
2534	METHYLCHLORSILAN	2	2TFC		2.3+2.1+8		0	E0	P200		MP9	(M)		
2535	4-METHYLMORFOLIN (N-METHYLMORFOLIN)	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1	
2536	METHYLTETRAHYDROFURAN	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	
2538	NITRONAFTALEN	4.1	F1	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
2541	TERPINOLEN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
2542	TRIBUTYLAMIN	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	
2545	HAFNIUM, PRÁŠEK, SUCHÝ	4.2	S4	I	4.2	540	0	E0	P404		MP13			
2545	HAFNIUM, PRÁŠEK, SUCHÝ	4.2	S4	II	4.2	540	0	E2	P410 IBC06		MP14	T3	TP33	
2545	HAFNIUM, PRÁŠEK, SUCHÝ	4.2	S4	III	4.2	540	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33	
2546	TITAN, PRÁŠEK, SUCHÝ	4.2	S4	I	4.2	540	0	E0	P404		MP13			
2546	TITAN, PRÁŠEK, SUCHÝ	4.2	S4	II	4.2	540	0	E2	P410 IBC06		MP14	T3	TP33	
2546	TITAN, PRÁŠEK, SUCHÝ	4.2	S4	III	4.2	540	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33	
2547	SUPEROXID SODNÝ	5.1	O2	I	5.1		0	E0	P503 IBC06		MP2			
2548	FLUORID CHLORÉČNÝ (CHLORPENTAFLUORID)	2	2TOC		2.3+5.1+8		0	E0	P200		MP9			
2552	HEXAFLUORACETON, HYDRÁT, KAPALNÝ	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	
2554	METHYLALYLCHLORID	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	
2555	NITROCELULÓZA S VODOU, s nejméně 25 % hm. vody	4.1	D	II	4.1	541	0	E0	P406		MP2			
2556	NITROCELULÓZA S ALKOHOLEM, s nejméně 25 % hm. alkoholu a nejvýše 12,6 % hm. dusíku v sušině	4.1	D	II	4.1	541	0	E0	P406		MP2			

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
LGBF		FL	3 (D/E)	V12			S2	39	2527	ISOBUTYLAKRYLÁT, STABILIZOVANÝ (ISOBUTYL- AKRYLÁT, STABILIZOVANÝ)
LGBF		FL	3 (D/E)	V12			S2	30	2528	ISOBUTYLISOBUTYRÁT (ISOBUTYL- ISOBUTYRÁT)
L4BN		FL	3 (D/E)	V12			S2	38	2529	KYSELINA ISOMÁSELNÁ
L4BN		AT	2 (E)					89	2531	KYSELINA METHAKRYLOVÁ, STABILIZOVANÁ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2533	METHYLTRICHLORACETÁT (METHYL- TRICHLORACETÁT)
		FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	2534	METHYLCHLORSILAN
L4BH		FL	2 (D/E)				S2 S20	338	2535	4-METHYLMORFOLIN (N-METHYLMORFOLIN)
LGBF		FL	2 (D/E)				S2 S20	33	2536	METHYLTETRAHYDROFURAN
SGAV		AT	3 (E)		VV1			40	2538	NITRONAFTALEN
LGBF		FL	3 (D/E)	V12			S2	30	2541	TERPINOLEN
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2542	TRIBUTYLAMIN
			0 (E)	V1			S20		2545	HAFNIUM, PRAŠEK, SUCHÝ
SGAN		AT	2 (D/E)	V1				40	2545	HAFNIUM, PRAŠEK, SUCHÝ
SGAN		AT	3 (E)	V1	VV4			40	2545	HAFNIUM, PRAŠEK, SUCHÝ
			0 (E)	V1			S20		2546	TITAN, PRAŠEK, SUCHÝ
SGAN		AT	2 (D/E)	V1				40	2546	TITAN, PRAŠEK, SUCHÝ
SGAN		AT	3 (E)	V1	VV4			40	2546	TITAN, PRAŠEK, SUCHÝ
			1 (E)	V10		CV24	S20		2547	SUPEROXID SODNÝ
			1 (D)			CV9 CV10 CV36	S14		2548	FLUORID CHLOREČNÝ (CHLORPENTAFLUORID)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2552	HEXAFLUORACETON, HYDRÁT, KAPALNÝ
LGBF		FL	2 (D/E)				S2 S20	33	2554	METHYLALLYLCHLORID
			2 (B)				S14		2555	NITROCELULÓZA S VODOU, s nejméně 25 % vody
			2 (B)				S14		2556	NITROCELULÓZA S ALKOHOLEM, s nejméně 25 % hm. alkoholu a nejvýše 12,6 % hm. dusíku v sušině

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2557	NITROCELULÓZA, s nejvýše 12,6 % hm. dusíku v sušině, SMĚS S nebo BEZ PLASTIFIKAČNÍHO PROSTŘEDKU, S nebo BEZ PIGMENTU	4.1	D	II	4.1	241 541	0	E0	P406		MP2		
2558	EPIBROMHYDRIN	6.1	TF1	I	6.1+3		0	E5	P001		MP8 MP17	T14	TP2
2560	2-METHYLPENTAN-2-OL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2561	3-METHYL-1-BUTEN	3	F1	I	3		0	E3	P001		MP7 MP17	T11	TP2
2564	KYSELINA TRICHLOROCTOVÁ, ROZTOK	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2564	KYSELINA TRICHLOROCTOVÁ, ROZTOK	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2565	DICYKLOHEXYLAMIN	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2567	PENTACHLORFENOLÁT SODNÝ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2570	SLOUČENINA KADMIA	6.1	T5	I	6.1	274 596	0	E5	P002 IBC07		MP18	T6	TP33
2570	SLOUČENINA KADMIA	6.1	T5	II	6.1	274 596	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2570	SLOUČENINA KADMIA	6.1	T5	III	6.1	274 596	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2571	KYSELINY ALKYL-SIROVÉ	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2 TP28
2572	FENYLHYDRAZIN	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2573	CHLOREČNAN THALNÝ	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC06		MP2	T3	TP33
2574	TRIKRESYLFOSFÁT (TRIKRESYLFOSFÁT), s více než 3 % ortho-isomerů	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2576	BROMID FOSFORYLU, ROZTAVENÝ	8	C1	II	8		0	E0				T7	TP3
2577	FENYLACETYLCHLORID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2578	OXID FOSFORITÝ	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2579	PIPERAZIN	8	C8	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2580	BROMID HLINITÝ, ROZTOK	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2581	CHLORID HLINITÝ, ROZTOK	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládka, vykládka a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			2 (B)				S14		2557	NITROCELULOZA, s nejvýše 12,6 % hm. dusíku v sušině, SMĚS S nebo BEZ PLASTIFIKAČNÍHO PROSTŘEDKU, S nebo BEZ PIGMENTU
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2558	EPIBROMHYDRIN
LGBF		FL	3 (D/E)	V12			S2	30	2560	2-METHYLPENTAN-2-OL
L4BN		FL	1 (D/E)				S2 S20	33	2561	3-METHYL-1-BUTEN
L4BN		AT	2 (E)					80	2564	KYSELINA TRICHLOROCTOVÁ, ROZTOK
L4BN		AT	3 (E)	V12				80	2564	KYSELINA TRICHLOROCTOVÁ, ROZTOK
L4BN		AT	3 (E)	V12				80	2565	DICYKLOHEXYLAMIN
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2567	PENTACHLORFENOLÁT SODNÝ
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2570	SLOUČENINA KADMIA
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2570	SLOUČENINA KADMIA
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2570	SLOUČENINA KADMIA
L4BN		AT	2 (E)					80	2571	KYSELINY ALKYLSIROVÉ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2572	FENYLHYDRAZIN
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	2573	CHLOREČNAN THALLNÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2574	TRIKRESYLFOSFÁT (TRIKRESYL-FOSFÁT), s více než 3 % ortho-isomerů
L4BN		AT	2 (E)					80	2576	BROMID FOSFORYLU, ROZTAVENÝ
L4BN		AT	2 (E)					80	2577	FENYLACETYLCHLORID
SGAV		AT	3 (E)		VV9			80	2578	OXID FOSFORITÝ
SGAV L4BN		AT	3 (E)		VV9			80	2579	PIPERAZIN
L4BN		AT	3 (E)	V12				80	2580	BROMID HLINITÝ, ROZTOK
L4BN		AT	3 (E)	V12				80	2581	CHLORID HLINITÝ, ROZTOK

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky		
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
2582	CHLORID ŽELEZITÝ, ROZTOK	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
2583	KYSELINY ALKYL-SULFONOVÉ, TUHÉ nebo KYSELINY ARYL-SULFONOVÉ, TUHÉ, obsahující více než 5 % volné kyseliny sírové	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
2584	KYSELINY ALKYL-SULFONOVÉ, KAPALNÉ nebo KYSELINY ARYL-SULFONOVÉ, KAPALNÉ, obsahující více než 5 % volné kyseliny sírové	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2	
2585	KYSELINY ALKYL-SULFONOVÉ, TUHÉ nebo KYSELINY ARYL-SULFONOVÉ, TUHÉ, obsahující nejvýše 5 % volné kyseliny sírové	8	C4	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
2586	KYSELINY ALKYL-SULFONOVÉ, KAPALNÉ nebo KYSELINY ARYL-SULFONOVÉ, KAPALNÉ, obsahující nejvýše 5 % volné kyseliny sírové	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
2587	BENZOCHINON	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
2588	PESTICID, TUHÝ, TOXICKÝ, J.N.	6.1	T7	I	6.1	61 648 274	0	E5	P002 IBC02		MP18	T6	TP33	
2588	PESTICID, TUHÝ, TOXICKÝ, J.N.	6.1	T7	II	6.1	61 648 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
2588	PESTICID, TUHÝ, TOXICKÝ, J.N.	6.1	T7	III	6.1	61 648 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
2589	VINYLCHLORACETÁT (VINYLCHLORACETÁT)	6.1	TF1	II	6.1+3		100 ml	E4	P001 IBC02		MP15	T7	TP2	
2590	AZBEST BÍLÝ (chrysotil, aktinolit, antofylit, tremolit)	9	M1	III	9	168 542	5 kg	E1	P002 IBC08 R001	PP37 B4	MP10	T1	TP33	
2591	XENON, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2	3A		2.2	593	120 ml	E1	P203		MP9	T75	TP5	
2599	CHLORTRIFLUORMETHAN A TRIFLUORMETHAN, AZEOTROPNÍ SMĚS s cca 60 % chlortrifluormethanu (PLYN JAKO CHLADICÍ PROSTŘEDEK R 503)	2	2A		2.2		120 ml	E1	P200		MP9	(M)		
2601	CYKLOBUTAN	2	2F		2.1		0	E0	P200		MP9	(M)		
2602	DICHLORDIFLUORMETHAN A 1,1-DIFLUORETHAN, AZEOTROPNÍ SMĚS s cca 74 % dichlordifluormethanu (PLYN JAKO CHLADICÍ PROSTŘEDEK R 500)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50		
2603	CYKLOHEPTATRIEN	3	FT1	II	3+6.1		1 L	E2	P001 IBC02		MP19	T7	TP1	
2604	DIETHYLETERÁT FLUORIDU BORTĚHO	8	CF1	I	8+3		0	E0	P001		MP8 MP17	T10	TP2	
2605	METHOXYMETHYLISOKYANÁT	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	3 (E)	V12				80	2582	CHLORID ŽELEZITÝ, ROZTOK
SGAN L4BN		AT	2 (E)	V11				80	2583	KYSELINY ALKYL-SULFONOVÉ, TUHÉ nebo KYSELINY ARYL-SULFONOVÉ, TUHÉ, obsahující více než 5 % volné kyseliny sírové
L4BN		AT	2 (E)					80	2584	KYSELINY ALKYL-SULFONOVÉ, KAPALNÉ nebo KYSELINY ARYL-SULFONOVÉ, KAPALNÉ, obsahující více než 5 % volné kyseliny sírové
SGAV		AT	3 (E)		VV9			80	2585	KYSELINY ALKYL-SULFONOVÉ, TUHÉ nebo KYSELINY ARYL-SULFONOVÉ, TUHÉ, obsahující nejvýše 5 % volné kyseliny sírové
L4BN		AT	3 (E)	V12				80	2586	KYSELINY ALKYL-SULFONOVÉ, KAPALNÉ nebo KYSELINY ARYL-SULFONOVÉ, KAPALNÉ, obsahující nejvýše 5 % volné kyseliny sírové
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2587	BENZOCHINON
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2588	PESTICID, TUHÝ, TOXICKÝ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2588	PESTICID, TUHÝ, TOXICKÝ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2588	PESTICID, TUHÝ, TOXICKÝ, J.N.
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2589	VINYLCHLORACETÁT (VINYL-CHLORACETÁT)
SGAH	TU15	AT	3 (E)	V11		CV13 CV28		90	2590	AZBEST BÍLÝ (chrysotil, aktinolit, antofylit, tremolit)
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	2591	XENON, HLUBOCE ZCHLAZENÝ, KAPALNÝ
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	2599	CHLORTRIFLUORMETHAN A TRIFLUORMETHAN, AZEOTROPNÍ SMĚS s cca 60 % chlordifluormethanu (PLYN JAKO CHLADICÍ PROSTŘEDEK R 503)
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	2601	CYKLOBUTAN
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	2602	DICHLORDIFLUORMETHAN A 1,1-DIFLUORETHAN, AZEOTROPNÍ SMĚS s cca 74 % dichlordifluormethanu (PLYN JAKO CHLADICÍ PROSTŘEDEK R 500)
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2603	CYKLOHEPTATRIEN
L10BH		FL	1 (D/E)				S2 S14	883	2604	DIETHYLETERÁT FLUORIDU BORITÉHO
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2605	METHOXYMETHYLISOKYANÁT

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2606	METHYLORTHOSILIKÁT (METHYL-ORTHOSILIKÁT)	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2607	AKROLEIN DIMER, STABILIZOVANÝ	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2608	NITROPROPANY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2609	TRIALLYLBORÁT (TRIALLYL-BORÁT)	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19		
2610	TRIALLYLAMIN	3	FC	III	3+8		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2611	PROPYLENCHLORHYDRIN	6.1	TF1	II	6.1+3		100 ml	E4	P001 IBC02		MP15	T7	TP2
2612	METHYLPROPYLETHER	3	F1	II	3		1 L	E2	P001 IBC02	B8	MP19	T7	TP2
2614	METHYLALLYLALKOHOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2615	ETHYLPROPYLETHER	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2616	TRISOPROPYLBORÁT (TRISOPROPYL-BORÁT)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2616	TRISOPROPYLBORÁT (TRISOPROPYL-BORÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2617	METHYLCYKLOHEXANOLY, hořlavé	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2618	VINYLTOLUENY, STABILIZOVANÉ	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2619	BENZYLDIMETHYLAMIN	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2
2620	AMYL BUTYRÁT (AMYL-BUTYRÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2621	ACETYLMETHYLKARBINOL	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2622	GLYCIDALDEHYD	3	FT1	II	3+6.1		1 L	E2	P001 IBC02	B8	MP19	T7	TP1
2623	PODPALOVAČ, TUHÝ, s hořlavou kapalnou látkou	4.1	F1	III	4.1		5 kg	E1	P002 LP02 R001	PP15	MP11		
2624	SILICID HOŘČÍKU	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33
2626	KYSELINA CHLOREČNÁ, VODNÝ ROZTOK, s nejvýše 10 % kyseliny chlorečné	5.1	O1	II	5.1	613	1 L	E2	P504 IBC02		MP2	T4	TP1
2627	DUSITANY, ANORGANICKÉ, J.N.	5.1	O2	II	5.1	103 274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravení kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2606	METHYLORTHOSILIKÁT (METHYL-ORTHOSILIKÁT)
LGBF		FL	3 (D/E)	V12			S2	39	2607	AKROLEIN DIMER, STABILIZOVANÝ
LGBF		FL	3 (D/E)	V12			S2	30	2608	NITROPROPANY
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2609	TRIALLYLBORÁT (TRIALLYL-BORÁT)
L4BN		FL	3 (D/E)	V12			S2	38	2610	TRIALLYLAMIN
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2611	PROPYLENCHLORHYDRIN
L1,5BN		FL	2 (D/E)				S2 S20	33	2612	METHYLPROPYLETER
LGBF		FL	3 (D/E)	V12			S2	30	2614	METHYLALLYLALKOHOL
LGBF		FL	2 (D/E)				S2 S20	33	2615	ETHYLPROPYLETER
LGBF		FL	2 (D/E)				S2 S20	33	2616	TRISOPROPYLBORÁT (TRISOPROPYL-BORÁT)
LGBF		FL	3 (D/E)	V12			S2	30	2616	TRISOPROPYLBORÁT (TRISOPROPYL-BORÁT)
LGBF		FL	3 (D/E)	V12			S2	30	2617	METHYLCYKLOHEXANOLY, hořlavé
LGBF		FL	3 (D/E)	V12			S2	39	2618	VINYLTOLUENY, STABILIZOVANÉ
L4BN		FL	2 (D/E)				S2	83	2619	BENZYLDIMETHYLAMIN
LGBF		FL	3 (D/E)	V12			S2	30	2620	AMYL BUTYRÁT (AMYL-BUTYRÁT)
LGBF		FL	3 (D/E)	V12			S2	30	2621	ACETYLMETHYLKARBINOL
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	2622	GLYCIDALDEHYD
			4 (E)						2623	PODPALOVAC, TUHÝ, s hořlavou kapalnou látkou
SGAN		AT	2 (D/E)	V1		CV23		423	2624	SILICID HOŘČÍKU
L4BN	TU3	AT	2 (E)			CV24		50	2626	KYSELINA CHLOREČNÁ, VODNÝ ROZTOK, s nejvýše 10 % kyseliny chlorečné
SGAN	TU3	AT	2 (E)	V11		CV24		50	2627	DUSITANY, ANORGANICKÉ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2628	FLUORACETÁT DRASELNÝ	6.1	T2	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
2629	FLUORACETÁT SODNÝ	6.1	T2	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
2630	SELENANÝ nebo SELENIČITANY	6.1	T5	I	6.1	274	0	E5	P002 IBC07		MP18	T6	TP33
2642	KYSELINA FLUOROCTOVÁ	6.1	T2	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
2643	METHYLBROMACETÁT (METHYLBROMACETÁT)	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2644	METHYLJODID	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
2645	FENACYLBROMID	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2646	HEXACHLORCYKLOPENTADIEN	6.1	T1	I	6.1	354	0	E0	P602		MP8 MP17	T20	TP2 TP35
2647	MALONONITRIL	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2648	1,2-DIBROMBUTAN-3-ON	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15		
2649	1,3-DICHLORACETON	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2650	1,1-DICHLOR-1-NITROETHAN	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2651	4,4'-DIAMINODIFENYLMETHAN	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2653	BENZYLJODID	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2655	HEXAFLUOROKŘEMIČITAN DRASELNÝ	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2656	CHINOLIN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2657	SULFID SELENIČITÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2659	CHLOROCTAN SODNÝ	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2660	NITROTOLUIDINY (MONO)	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2661	HEXACHLORACETON	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2664	DIBROMMETHAN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2628	FLUORACETÁT DRASELNÝ
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2629	FLUORACETÁT SODNÝ
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2630	SELENANY nebo SELENIČITANY
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2642	KYSELINA FLUOROCTOVÁ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2643	METHYLBROMACETÁT (METHYL- BROMACETÁT)
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	2644	METHYLJODID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2645	FENACYLBROMID
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	2646	HEXACHLORCYKLOPENTADIEN
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2647	MALONONITRIL
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2648	1,2-DIBROMBUTAN-3-ON
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2649	1,3-DICHLORACETON
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2650	1,1-DICHLOR-1-NITROETHAN
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2651	4,4'-DIAMINODIFENYLMETHAN
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2653	BENZYLJODID
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2655	HEXAFLUOROKŘEMIČITAN DRASELNÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2656	CHINOLIN
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2657	SULFID SELENIČITÝ
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2659	CHLOROCTAN SODNÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2660	NITROTOLUIDINY (MONO)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2661	HEXACHLORACETON
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2664	DIBROMMETHAN

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky		
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	(10)	4.2.5.3
2667	BUTYL TOLUENY	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4		TP1
2668	CHLORACETONITRIL	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20		TP2 TP37
2669	CHLORKRESOLY, ROZTOK	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7		TP2
2669	CHLORKRESOLY, ROZTOK	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7		TP2
2670	KYANURCHLORID	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3		TP33
2671	AMINOPYRIDINY (o-, m-, p-)	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3		TP33
2672	AMONIAK (ČPAVEK), ROZTOK, vodný, s hustotou mezi 0,880 a 0,957 kg/l při 15 °C, s více než 10 %, ale nejvíce 35 % amoniaku (čpavku)	8	C5	III	8	543	5 L	E1	P001 IBC03 LP01 R001		MP19	T7		TP1
2673	2-AMINO-4-CHLORFENOL	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3		TP33
2674	HEXAFLUOROKŘEMIČITAN SODNÝ	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1		TP33
2676	ANTIMONOVOĐÍK (STIBIN)	2	2TF		2.3+2.1		0	E0	P200		MP9			
2677	HYDROXID RUBIDNÝ, ROZTOK	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7		TP2
2677	HYDROXID RUBIDNÝ, ROZTOK	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4		TP1
2678	HYDROXID RUBIDNÝ	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3		TP33
2679	HYDROXID LITHNÝ, ROZTOK	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7		TP2
2679	HYDROXID LITHNÝ, ROZTOK	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4		TP2
2680	HYDROXID LITHNÝ	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3		TP33
2681	HYDROXID CESNÝ, ROZTOK	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7		TP2
2681	HYDROXID CESNÝ, ROZTOK	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4		TP1
2682	HYDROXID CESNÝ	8	C6	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3		TP33
2683	SULFID AMONNÝ, ROZTOK	8	CFT	II	8+3+6.1		1 L	E2	P001 IBC01		MP15	T7		TP2
2684	3-DIETHYLAMINOPROPYLAMIN	3	FC	III	3+8		5 L	E1	P001 IBC03 R001		MP19	T4		TP1
2685	N,N-DIETHYLETHYLENDIAMIN	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7		TP2
2686	2-DIETHYLAMINOETHANOL	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7		TP2
2687	DICYKLOHEXYLAMONIUMNITRIT (DICYKLOHEXYLAMONIUM-NITRIT)	4.1	F3	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1		TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2667	BUTYL TOLUENY
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2668	CHLORACETONITRIL
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2669	CHLORKRESOLY, ROZTOK
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2669	CHLORKRESOLY, ROZTOK
SGAN L4BN		AT	2 (E)	V11				80	2670	KYANURCHLORID
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2671	AMINOPYRIDINY (o-, m-, p-)
L4BN		AT	3 (E)	V12				80	2672	AMONIAK (ČPAVEK), ROZTOK, vodný, s hustotou mezi 0,880 a 0,957 kg/l při 15 °C, s více než 10 %, ale nejvíce 35 % amoniaku (čpavku)
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2673	2-AMINO-4-CHLORFENOL
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2674	HEXAFLUOROKŘEMIČITAN SODNÝ
			1 (D)			CV9 CV10 CV36	S2 S14		2676	ANTIMONOVOODÍK (STIBIN)
L4BN		AT	2 (E)					80	2677	HYDROXID RUBIDNÝ, ROZTOK
L4BN		AT	3 (E)	V12				80	2677	HYDROXID RUBIDNÝ, ROZTOK
SGAN		AT	2 (E)	V11				80	2678	HYDROXID RUBIDNÝ
L4BN		AT	2 (E)					80	2679	HYDROXID LITHNÝ, ROZTOK
L4BN		AT	3 (E)	V12				80	2679	HYDROXID LITHNÝ, ROZTOK
SGAN		AT	2 (E)	V11				80	2680	HYDROXID LITHNÝ
L4BN		AT	2 (E)					80	2681	HYDROXID CESNÝ, ROZTOK
L4BN		AT	3 (E)	V12				80	2681	HYDROXID CESNÝ, ROZTOK
SGAN		AT	2 (E)	V11				80	2682	HYDROXID CESNÝ
L4BN		FL	2 (D/E)			CV13 CV28	S2	86	2683	SULFID AMONNÝ, ROZTOK
L4BN		FL	3 (D/E)	V12			S2	38	2684	3-DIETHYLAMINOPROPYLAMIN
L4BN		FL	2 (D/E)				S2	83	2685	N,N-DIETHYLETHYLENDIAMIN
L4BN		FL	2 (D/E)				S2	83	2686	2-DIETHYLAMINOETHANOL
SGAV		AT	3 (E)		VV1			40	2687	DICYKLOHEXYLAMONIUMNITRIT (DICYKLOHEXYLAMONIUM-NITRIT)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky		
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
2688	1-BROM-3-CHLORPROPAN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
2689	3-CHLOR-1,2-PROPANDIOL (glycerol-alfa-monochlorhydrin)	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
2690	N-(n-BUTYL)-IMIDAZOL	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2	
2691	BROMID FOSFOREČNÝ	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
2692	BROMID BORITÝ	8	C1	I	8		0	E0	P602		MP8 MP17	T20	TP2	
2693	HYDROGENSIŘIČITANY, VODNÝ ROZTOK, J.N.	8	C1	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28	
2698	TETRAHYDROFTALANHYDRIDY, obsahující více než 0,05 % maleinanhydridu	8	C4	III	8	169	5 kg	E1	P002 IBC08 LP02 R001	PP14 B3	MP10	T1	TP33	
2699	KYSELINA TRIFLUOROCTOVÁ	8	C3	I	8		0	E0	P001		MP8 MP17	T10	TP2	
2705	1-PENTOL	8	C9	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2	
2707	DIMETHYLDIOXANY	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	
2707	DIMETHYLDIOXANY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
2709	BUTYLBENZENY	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
2710	DIPROPYLKETON	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1	
2713	AKRIDIN	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
2714	RESINÁT (abietát) ZINEČNATÝ	4.1	F3	III	4.1		5 kg	E1	P002 IBC06 R001		MP11	T1	TP33	
2715	RESINÁT (abietát) HLINITÝ	4.1	F3	III	4.1		5 kg	E1	P002 IBC06 R001		MP11	T1	TP33	
2716	BUTIN-1,4-DIOL	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
2717	KAFR, syntetický	4.1	F1	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
2719	BROMIČNAN BARNATÝ	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	
2720	DUSIČNAN CHROMITÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
2721	CHLOREČNAN MĚDNATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2688	1-BROM-3-CHLORPROPAN
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2689	3-CHLOR-1,2-PROPANDIOL (glycerol-alfa-monochlorhydrin)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2690	N-(n-BUTYL)-IMIDAZOL
SGAN		AT	2 (E)	V11				80	2691	BROMID FOSFOREČNÝ
L10BH		AT	1 (E)				S20	X88	2692	BROMID BORITÝ
L4BN		AT	3 (E)	V12				80	2693	HYDROGENSÍŘIČTANY, VODNÝ ROZTOK, J.N.
SGAV L4BN		AT	3 (E)		VV9			80	2698	TETRAHYDROFTALANHYDRIDY, obsahující více než 0,05 % maleinanhydridu
L10BH		AT	1 (E)				S20	88	2699	KYSELINA TRIFLUOROCTOVÁ
L4BN		AT	2 (E)					80	2705	1-PENTOL
LGBF		FL	2 (D/E)				S2 S20	33	2707	DIMETHYLDIOXANY
LGBF		FL	3 (D/E)	V12			S2	30	2707	DIMETHYLDIOXANY
LGBF		FL	3 (D/E)	V12			S2	30	2709	BUTYLBENZENY
LGBF		FL	3 (D/E)	V12			S2	30	2710	DIPROPYLKETON
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2713	AKRIDIN
SGAV		AT	3 (E)		VV1			40	2714	RESINÁT (abietát) ZINEČNATÝ
SGAV		AT	3 (E)		VV1			40	2715	RESINÁT (abietát) HLINITÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2716	BUTIN-1,4-DIOL
SGAV		AT	3 (E)		VV1			40	2717	KAFR, syntetický
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	2719	BROMIČNAN BARNATÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	2720	DUSIČNAN CHROMITÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	2721	CHLOREČNAN MĚDNATÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2722	DUSIČNAN LITHNÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2723	CHLOREČNAN HOŘEČNATÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
2724	DUSIČNAN MANGANATÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2725	DUSIČNAN NIKELNATÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2726	DUSITAN NIKELNATÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2727	DUSIČNAN THALLNÝ	6.1	TO2	II	6.1+5.1		500 g	E4	P002 IBC06		MP10	T3	TP33
2728	DUSIČNAN ZIRKONIČITÝ	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2729	HEXACHLORBENZEN	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2730	NITROANISOLY, KAPALNÉ	6.1	T1	III	6.1	279	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2732	NITROBROMBENZENY, KAPALNÉ	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2733	AMINY HOŘLAVÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY HOŘLAVÉ, ŽÍRAVÉ, J.N.	3	FC	I	3+8	274 544	0	E0	P001		MP7 MP17	T14	TP1 TP27
2733	AMINY HOŘLAVÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY HOŘLAVÉ, ŽÍRAVÉ, J.N.	3	FC	II	3+8	274 544	1 L	E2	P001 IBC02		MP19	T11	TP1 TP27
2733	AMINY HOŘLAVÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY HOŘLAVÉ, ŽÍRAVÉ, J.N.	3	FC	III	3+8	274 544	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
2734	AMINY KAPALNÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N. nebo POLYAMINY KAPALNÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N.	8	CF1	I	8+3	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
2734	AMINY KAPALNÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N. nebo POLYAMINY KAPALNÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N.	8	CF1	II	8+3	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
2735	AMINY KAPALNÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY KAPALNÉ, ŽÍRAVÉ, J.N.	8	C7	I	8	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
2735	AMINY KAPALNÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY KAPALNÉ, ŽÍRAVÉ, J.N.	8	C7	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP1 TP27
2735	AMINY KAPALNÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY KAPALNÉ, ŽÍRAVÉ, J.N.	8	C7	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
2738	N-BUTYLANILÍN	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2739	ANHYDRID KYSELINY MÁSELNÉ	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAV	TU3	AT	3 (E)		VV8	CV24		50	2722	DUSIČNAN LITHNÝ
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	2723	CHLOREČNAN HOŘEČNATÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	2724	DUSIČNAN MANGANATÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	2725	DUSIČNAN NIKELNATÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	2726	DUSITAN NIKELNATÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	65	2727	DUSIČNAN THALLNÝ
SGAV	TU3	AT	3 (E)		VV8	CV24		50	2728	DUSIČNAN ZIRKONIČITÝ
SGAH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2729	HEXACHLORBENZEN
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2730	NITROANISOLY, KAPALNÉ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2732	NITROBROMBENZENY, KAPALNÉ
L10CH	TU14 TE21	FL	1 (C/E)				S2 S20	338	2733	AMINY HOŘLAVÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY HOŘLAVÉ, ŽÍRAVÉ, J.N.
L4BH		FL	2 (D/E)				S2 S20	338	2733	AMINY HOŘLAVÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY HOŘLAVÉ, ŽÍRAVÉ, J.N.
L4BN		FL	3 (D/E)	V12			S2	38	2733	AMINY HOŘLAVÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY HOŘLAVÉ, ŽÍRAVÉ, J.N.
L10BH		FL	1 (D/E)				S2 S14	883	2734	AMINY KAPALNÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N. nebo POLYAMINY KAPALNÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N.
L4BN		FL	2 (D/E)				S2	83	2734	AMINY KAPALNÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N. nebo POLYAMINY KAPALNÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N.
L10BH		AT	1 (E)				S20	88	2735	AMINY KAPALNÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY KAPALNÉ, ŽÍRAVÉ, J.N.
L4BN		AT	2 (E)					80	2735	AMINY KAPALNÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY KAPALNÉ, ŽÍRAVÉ, J.N.
L4BN		AT	3 (E)	V12				80	2735	AMINY KAPALNÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY KAPALNÉ, ŽÍRAVÉ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2738	N-BUTYLANILÍN
L4BN		AT	3 (E)	V12				80	2739	ANHYDRID KYSELINY MÁSELNÉ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2740	n-PROPYLCHLORFORMIÁT (n-PROPYL-CHLORFORMIÁT) (n-propylchlorokarbonát)	6.1	TFC	I	6.1+3+8		0	E5	P602		MP8 MP17	T20	TP2
2741	CHLORNAN BARNATÝ, s více než 22 % aktivního chlóru	5.1	OT2	II	5.1+6.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
2742	CHLOROKARBONÁTY (CHLORFORMIÁTY), TOXICKÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N.	6.1	TFC	II	6.1+3+8	274 561	100 ml	E4	P001 IBC01		MP15		
2743	n-BUTYLCHLORFORMIÁT (n-BUTYL-CHLORFORMIÁT) (n-butylchlorokarbonát)	6.1	TFC	II	6.1+3+8		100 ml	E4	P001		MP15	T20	TP2
2744	CYKLOBUTYLCHLORFORMIÁT (cyklobutylchlorokarbonát)	6.1	TFC	II	6.1+3+8		100 ml	E4	P001 IBC01		MP15	T7	TP2
2745	CHLORMETHYLCHLORFORMIÁT (CHLORMETHYL-CHLORFORMIÁT) (chlormethylchlorokarbonát)	6.1	TC1	II	6.1+8		100 ml	E4	P001 IBC02		MP15	T7	TP2
2746	FENYLCHLORFORMIÁT (FENYL-CHLORFORMIÁT) (fenylchlorokarbonát)	6.1	TC1	II	6.1+8		100 ml	E4	P001 IBC02		MP15	T7	TP2
2747	terc-BUTYLCYKLOHEXYLCHLORFORMIÁT (terc-BUTYLCYKLOHEXYL-CHLORFORMIÁT)	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2748	2-ETHYLHEXYLCHLORFORMIÁT (2-ETHYLHEXYL-CHLORFORMIÁT) (2-ethylhexylchlorokarbonát)	6.1	TC1	II	6.1+8		100 ml	E4	P001 IBC02		MP15	T7	TP2
2749	TETRAMETHYLSILAN	3	F1	I	3		0	E3	P001		MP7 MP17	T14	TP2
2750	1,3-DICHLOR-2-PROPANOL (1,3-DICHLORPROPAN-2-OL)	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2751	DIETHYLTHIOFOSFORYLCHLORID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2752	1,2-EPOXY-3-ETHOXYPROPAN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2753	N-ETHYLBENZYLTOUIDIN, KAPALNÝ	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1
2754	N-ETHYLTOLUIDINY	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2757	PESTICID - KARBAMÁT, TUHÝ, TOXICKÝ	6.1	T7	I	6.1	61 648 274	0	E5	P002 IBC07		MP18	T6	TP33
2757	PESTICID - KARBAMÁT, TUHÝ, TOXICKÝ	6.1	T7	II	6.1	61 648 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2757	PESTICID - KARBAMÁT, TUHÝ, TOXICKÝ	6.1	T7	III	6.1	61 648 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2758	PESTICID - KARBAMÁT, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	I	3+6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2758	PESTICID - KARBAMÁT, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	II	3+6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	668	2740	n-PROPYLCHLORFORMIÁT (n-PROPYL-CHLORFORMIÁT) (n-propyl-chlorkarbonát)
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	2741	CHLORAN BARNATÝ, s více než 22 % aktivního chlóru
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	638	2742	CHLOROKARBONÁTY (CHLORFORMIÁTY), TOXICKÉ, ŽIRAVÉ, HOŘLAVÉ, J.N.
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	638	2743	n-BUTYLCHLORFORMIÁT (n-BUTYL-CHLORFORMIÁT) (n-butyl-chlorkarbonát)
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	638	2744	CYKLOBUTYLCHLORFORMIÁT (cyklobutylchlorkarbonát)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	2745	CHLORMETHYLCHLORFORMIÁT (CHLORMETHYL-CHLORFORMIÁT) (chlormethyl-chlorkarbonát)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	2746	FENYLCHLORFORMIÁT (FENYL-CHLORFORMIÁT) (fenyl-chlorkarbonát)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2747	terc-BUTYL-CYKLOHEXYLCHLORFORMIÁT (terc-BUTYL-CYKLOHEXYL-CHLORFORMIÁT)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	2748	2-ETHYLHEXYLCHLORFORMIÁT (2-ETHYLHEXYL-CHLORFORMIÁT) (2-ethylhexylchlorkarbonát)
L4BN		FL	1 (D/E)				S2 S20	33	2749	TETRAMETHYLSILAN
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2750	1,3-DICHLOR-2-PROPANOL (1,3-DICHLORPROPAN-2-OL)
L4BN		AT	2 (E)					80	2751	DIETHYLTHIOFOSFORYLCHLORID
LGBF		FL	3 (D/E)	V12			S2	30	2752	1,2-EPOXY-3-ETHOXYPROPAN
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2753	N-ETHYLBENZYLTOLOUDIN, KAPALNÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2754	N-ETHYLTOLUIDINY
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2757	PESTICID - KARBAMÁT, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2757	PESTICID - KARBAMÁT, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2757	PESTICID - KARBAMÁT, TUHÝ, TOXICKÝ
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2758	PESTICID - KARBAMÁT, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2758	PESTICID - KARBAMÁT, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2759	PESTICID NA BÁZI ARSENU, TUHÝ, TOXICKÝ	6.1	T7	I	6.1	61 648 274	0	E5	P002 IBC07		MP18	T6	TP33
2759	PESTICID NA BÁZI ARSENU, TUHÝ, TOXICKÝ	6.1	T7	II	6.1	61 648 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2759	PESTICID NA BÁZI ARSENU, TUHÝ, TOXICKÝ	6.1	T7	III	6.1	61 648 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2760	PESTICID NA BÁZI ARSENU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	I	3+6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2760	PESTICID NA BÁZI ARSENU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	II	3+6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2761	PESTICID - ORGANICKÁ SLOUČENINA CHLORU, TUHÝ, TOXICKÝ	6.1	T7	I	6.1	61 648 274	0	E5	P002 IBC07		MP18	T6	TP33
2761	PESTICID - ORGANICKÁ SLOUČENINA CHLORU, TUHÝ, TOXICKÝ	6.1	T7	II	6.1	61 648 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2761	PESTICID - ORGANICKÁ SLOUČENINA CHLORU, TUHÝ, TOXICKÝ	6.1	T7	III	6.1	61 648 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2762	PESTICID - ORGANICKÁ SLOUČENINA CHLORU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	I	3+6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2762	PESTICID - ORGANICKÁ SLOUČENINA CHLORU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	II	3+6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2763	PESTICID NA BÁZI TRIAZINU, TUHÝ, TOXICKÝ	6.1	T7	I	6.1	61 648 274	0	E5	P002 IBC07		MP18	T6	TP33
2763	PESTICID NA BÁZI TRIAZINU, TUHÝ, TOXICKÝ	6.1	T7	II	6.1	61 648 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2763	PESTICID NA BÁZI TRIAZINU, TUHÝ, TOXICKÝ	6.1	T7	III	6.1	61 648 274	5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33
2764	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	I	3+6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2764	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	II	3+6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2771	PESTICID NA BÁZI THIOKARBAMÁTU, TUHÝ, TOXICKÝ	6.1	T7	I	6.1	61 648 274	0	E5	P002 IBC07		MP18	T6	TP33
2771	PESTICID NA BÁZI THIOKARBAMÁTU, TUHÝ, TOXICKÝ	6.1	T7	II	6.1	61 648 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2771	PESTICID NA BÁZI THIOKARBAMÁTU, TUHÝ, TOXICKÝ	6.1	T7	III	6.1	61 648 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2759	PESTICID NA BÁZI ARSENU, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2759	PESTICID NA BÁZI ARSENU, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2759	PESTICID NA BÁZI ARSENU, TUHÝ, TOXICKÝ
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2760	PESTICID NA BÁZI ARSENU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2760	PESTICID NA BÁZI ARSENU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2761	PESTICID - ORGANICKÁ SLOUČENINA CHLORU, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2761	PESTICID - ORGANICKÁ SLOUČENINA CHLORU, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2761	PESTICID - ORGANICKÁ SLOUČENINA CHLORU, TUHÝ, TOXICKÝ
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2762	PESTICID - ORGANICKÁ SLOUČENINA CHLORU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2762	PESTICID - ORGANICKÁ SLOUČENINA CHLORU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2763	PESTICID NA BÁZI TRIAZINU, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2763	PESTICID NA BÁZI TRIAZINU, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2763	PESTICID NA BÁZI TRIAZINU, TUHÝ, TOXICKÝ
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2764	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2764	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2771	PESTICID NA BÁZI THIOKARBAMÁTU, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2771	PESTICID NA BÁZI THIOKARBAMÁTU, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2771	PESTICID NA BÁZI THIOKARBAMÁTU, TUHÝ, TOXICKÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2772	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	I	3+6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2772	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	II	3+6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2775	PESTICID NA BÁZI MĚDI, TUHÝ, TOXICKÝ	6.1	T7	I	6.1	61 648 274	0	E5	P002 IBC07		MP18	T6	TP33
2775	PESTICID NA BÁZI MĚDI, TUHÝ, TOXICKÝ	6.1	T7	II	6.1	61 648 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2775	PESTICID NA BÁZI MĚDI, TUHÝ, TOXICKÝ	6.1	T7	III	6.1	61 648 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2776	PESTICID NA BÁZI MĚDI, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	I	3+6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2776	PESTICID NA BÁZI MĚDI, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	II	3+6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2777	PESTICID NA BÁZI RTUTI, TUHÝ, TOXICKÝ	6.1	T7	I	6.1	61 648 274	0	E5	P002 IBC07		MP18	T6	TP33
2777	PESTICID NA BÁZI RTUTI, TUHÝ, TOXICKÝ	6.1	T7	II	6.1	61 648 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2777	PESTICID NA BÁZI RTUTI, TUHÝ, TOXICKÝ	6.1	T7	III	6.1	61 648 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2778	PESTICID NA BÁZI RTUTI, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	I	3+6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2778	PESTICID NA BÁZI RTUTI, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	II	3+6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2779	PESTICID - SUBSTITUOVANÝ NITROFENOL, TUHÝ, TOXICKÝ	6.1	T7	I	6.1	61 648 274	0	E5	P002 IBC07		MP18	T6	TP33
2779	PESTICID - SUBSTITUOVANÝ NITROFENOL, TUHÝ, TOXICKÝ	6.1	T7	II	6.1	61 648 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2779	PESTICID - SUBSTITUOVANÝ NITROFENOL, TUHÝ, TOXICKÝ	6.1	T7	III	6.1	61 648 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2780	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	I	3+6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2780	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	II	3+6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2781	PESTICID NA BÁZI BIPYRIDYLU, TUHÝ, TOXICKÝ	6.1	T7	I	6.1	61 648 274	0	E5	P002 IBC07		MP18	T6	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2772	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2772	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2775	PESTICID NA BÁZI MĚDI, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2775	PESTICID NA BÁZI MĚDI, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2775	PESTICID NA BÁZI MĚDI, TUHÝ, TOXICKÝ
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2776	PESTICID NA BÁZI MĚDI, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2776	PESTICID NA BÁZI MĚDI, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2777	PESTICID NA BÁZI RTUTI, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2777	PESTICID NA BÁZI RTUTI, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2777	PESTICID NA BÁZI RTUTI, TUHÝ, TOXICKÝ
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2778	PESTICID NA BÁZI RTUTI, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2778	PESTICID NA BÁZI RTUTI, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2779	PESTICID - SUBSTITUOVANÝ NITROFENOL, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2779	PESTICID - SUBSTITUOVANÝ NITROFENOL, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2779	PESTICID - SUBSTITUOVANÝ NITROFENOL, TUHÝ, TOXICKÝ
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2780	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2780	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2781	PESTICID NA BÁZI BIPYRIDYLU, TUHÝ, TOXICKÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2781	PESTICID NA BÁZI BIPYRIDYLU, TUHÝ, TOXICKÝ	6.1	T7	II	6.1	61 648 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2781	PESTICID NA BÁZI BIPYRIDYLU, TUHÝ, TOXICKÝ	6.1	T7	III	6.1	61 648 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2782	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	I	3+6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2782	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	II	3+6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2783	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, TUHÝ, TOXICKÝ	6.1	T7	I	6.1	61 648 274	0	E5	P002 IBC07		MP18	T6	TP33
2783	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, TUHÝ, TOXICKÝ	6.1	T7	II	6.1	61 648 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2783	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, TUHÝ, TOXICKÝ	6.1	T7	III	6.1	61 648 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2784	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	I	3+6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2784	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	II	3+6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2785	4-THIAPENTANAL	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2786	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, TUHÝ, TOXICKÝ	6.1	T7	I	6.1	61 648 274	0	E5	P002 IBC07		MP18	T6	TP33
2786	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, TUHÝ, TOXICKÝ	6.1	T7	II	6.1	61 648 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2786	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, TUHÝ, TOXICKÝ	6.1	T7	III	6.1	61 648 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2787	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	I	3+6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
2787	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	II	3+6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
2788	SLOUČENINA CÍNU, ORGANICKÁ, KAPALNÁ, J.N.	6.1	T3	I	6.1	43 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2788	SLOUČENINA CÍNU, ORGANICKÁ, KAPALNÁ, J.N.	6.1	T3	II	6.1	43 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2788	SLOUČENINA CÍNU, ORGANICKÁ, KAPALNÁ, J.N.	6.1	T3	III	6.1	43 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2781	PESTICID NA BÁZI BIPYRIDYLU, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2781	PESTICID NA BÁZI BIPYRIDYLU, TUHÝ, TOXICKÝ
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2782	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2782	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2783	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2783	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2783	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, TUHÝ, TOXICKÝ
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2784	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2784	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2785	4-THIAPENTANAL
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2786	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2786	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2786	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, TUHÝ, TOXICKÝ
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2787	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	2787	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2788	SLOUČENINA CÍNU, ORGANICKÁ, KAPALNÁ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2788	SLOUČENINA CÍNU, ORGANICKÁ, KAPALNÁ, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2788	SLOUČENINA CÍNU, ORGANICKÁ, KAPALNÁ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2789	KYSELINA OCTOVÁ, LEDOVÁ nebo KYSELINA OCTOVÁ, ROZTOK, obsahující více než 80 % hm. kyseliny	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2
2790	KYSELINA OCTOVÁ, ROZTOK, obsahující nejméně 50 % hm., ale nejvíce 80 % hm. kyseliny	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2790	KYSELINA OCTOVÁ, ROZTOK, obsahující nejméně 10 % hm., ale nejvíce 50 % hm. kyseliny	8	C3	III	8	597 647	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2793	KOVÝ ŽELEZNÉ JAKO TRÍSKY PŘI VRTÁNÍ, FRÉZOVÁNÍ, SOUSTRUŽENÍ, ODPADY ve formě schopné samoohřevu	4.2	S4	III	4.2	592	0	E1	P003 IBC08 LP02 R001	PP20 B3 B6	MP14		
2794	AKUMULÁTORY (BATERIE), NAPLNĚNÉ KYSELÝM KAPALNÝM ELEKTROLYTEM	8	C11		8	295 598	1 L	E0	P801 P801a				
2795	AKUMULÁTORY (BATERIE), NAPLNĚNÉ ALKALICKÝM KAPALNÝM ELEKTROLYTEM	8	C11		8	295 598	1 L	E0	P801 P801a				
2796	KYSELINA ŠIROVÁ, obsahující nejvýše 51 % kyseliny nebo ELEKTROLYT PRO AKUMULÁTORY (BATERIE), KYSELÝ	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T8	TP2
2797	ELEKTROLYT PRO AKUMULÁTORY (BATERIE), ALKALICKÝ	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2 TP28
2798	DICHLORFENYLFOSFIN (FENYLFOSFODICHLORID)	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2799	FENYLTHIOFOSFORYLDICHLORID	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2800	AKUMULÁTORY (BATERIE), JÍSTĚNÉ PROTI VYTEČENÍ NAPLNĚNÉ KAPALNÝM ELEKTROLYTEM	8	C11		8	238 295 598	1 L	E0	P003 P801a	PP16			
2801	BARVIVO, KAPALNÉ, ŽÍRAVÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, ŽÍRAVÝ, J.N.	8	C9	I	8	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
2801	BARVIVO, KAPALNÉ, ŽÍRAVÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, ŽÍRAVÝ, J.N.	8	C9	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
2801	BARVIVO, KAPALNÉ, ŽÍRAVÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, ŽÍRAVÝ, J.N.	8	C9	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
2802	CHLORID MĚDNATÝ	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2803	GALLIUM	8	C10	III	8		5 kg	E0	P800	PP41	MP10	T1	TP33
2805	HYDRID LITHNÝ, ROZTAVENÝ A ZTUHLÝ	4.3	W2	II	4.3		500 g	E2	P410 IBC04	PP40	MP14	T3	TP33
2806	NITRID LITHNÝ	4.3	W2	I	4.3		0	E0	P403 IBC04		MP2		
2807	Látky magnetizované	9	M11	NENÍ PŘEDMĚTEM PRO ADR									
2809	RTUŤ	8	CT1	III	8+6.1	365	5 kg	E0	P800		MP15		
2810	LÁTKA TOXICKÁ, KAPALNÁ, ORGANICKÁ, J.N.	6.1	T1	I	6.1	274 315 614	0	E5	P001		MP8 MP17	T14	TP2 TP27
2810	LÁTKA TOXICKÁ, KAPALNÁ, ORGANICKÁ, J.N.	6.1	T1	II	6.1	274 614	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis	
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz				
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)	
L4BN		FL	2 (D/E)					S2	83	2789	KYSELINA OCTOVÁ, LEDOVÁ nebo KYSELINA OCTOVÁ, ROZTOK, obsahující více než 80 % hm. kyseliny
L4BN		AT	2 (E)						80	2790	KYSELINA OCTOVÁ, ROZTOK, obsahující nejméně 50 % hm., ale nejvíce 80 % hm. kyseliny
L4BN		AT	3 (E)	V12					80	2790	KYSELINA OCTOVÁ, ROZTOK, obsahující nejméně 10 % hm., ale nejvíce 50 % hm. kyseliny
			3 (E)	V1	VV4				40	2793	KOVY ŽELEZNÉ JAKO TRÍSKY PŘI VRTÁNÍ, FRÉZOVÁNÍ, SOUSTRUŽENÍ, ODPADY ve formě schopné samoohřevu
			3 (E)		VV14				80	2794	AKUMULÁTORY (BATERIE), NAPLNĚNÉ KYSELÝM KAPALNÝM ELEKTROLYTEM
			3 (E)		VV14				80	2795	AKUMULÁTORY (BATERIE), NAPLNĚNÉ ALKALICKÝM KAPALNÝM ELEKTROLYTEM
L4BN		AT	2 (E)						80	2796	KYSELINA ŠIROVÁ, obsahující nejvýše 51 % kyseliny nebo ELEKTROLYT PRO AKUMULÁTORY (BATERIE), KYSELÝ
L4BN		AT	2 (E)						80	2797	ELEKTROLYT PRO AKUMULÁTORY (BATERIE), ALKALICKÝ
L4BN		AT	2 (E)						80	2798	DICHLORFENYLFOSFIN (FENYLFOSFODICHLORID)
L4BN		AT	2 (E)						80	2799	FENYLTHIOFOSFORYLDICHLORID
			3 (E)		VV14				80	2800	AKUMULÁTORY (BATERIE), JIŠTĚNÉ PROTI VÝTEČENÍ NAPLNĚNÉ KAPALNÝM ELEKTROLYTEM
L10BH		AT	1 (E)					S20	88	2801	BARVIVO, KAPALNÉ, ŽÍRAVÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, ŽÍRAVÝ, J.N.
L4BN		AT	2 (E)						80	2801	BARVIVO, KAPALNÉ, ŽÍRAVÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, ŽÍRAVÝ, J.N.
L4BN		AT	3 (E)	V12					80	2801	BARVIVO, KAPALNÉ, ŽÍRAVÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, ŽÍRAVÝ, J.N.
SGAV		AT	3 (E)		VV9				80	2802	CHLORID MĚĎNATÝ
SGAV L4BN		AT	3 (E)		VV9				80	2803	GALLIUM
SGAN		AT	2 (D/E)	V1		CV23			423	2805	HYDRID LITHNÝ, ROZTAVENÝ A ZTUHLÝ
			1 (E)	V1		CV23	S20			2806	NITRID LITHNÝ
NENÍ PŘEDMĚTEM PRO ADR									2807	Látky magnetizované	
L4BN		AT	3 (E)			CV13 CV28			86	2809	RTUŤ
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14		66	2810	LÁTKA TOXICKÁ, KAPALNÁ, ORGANICKÁ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19		60	2810	LÁTKA TOXICKÁ, KAPALNÁ, ORGANICKÁ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2810	LÁTKA TOXICKÁ, KAPALNÁ, ORGANICKÁ, J.N.	6.1	T1	III	6.1	274 614	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
2811	LÁTKA TOXICKÁ, TUHÁ, ORGANICKÁ, J.N.	6.1	T2	I	6.1	274 614	0	E5	P002 IBC07		MP18	T6	TP33
2811	LÁTKA TOXICKÁ, TUHÁ, ORGANICKÁ, J.N.	6.1	T2	II	6.1	274 614	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2811	LÁTKA TOXICKÁ, TUHÁ, ORGANICKÁ, J.N.	6.1	T2	III	6.1	274 614	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2812	Hlítilan sodný, tuhý	8	C6	NEJÍ PŘEDMĚTEM PRO ADR									
2813	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, J.N.	4.3	W2	I	4.3	274	0	E0	P403 IBC99	PP83	MP2	T9	TP7 TP33
2813	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, J.N.	4.3	W2	II	4.3	274	500 g	E2	P410 IBC07	PP83	MP14	T3	TP33
2813	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, J.N.	4.3	W2	III	4.3	274	1 kg	E1	P410 IBC08 R001	PP83 B4	MP14	T1	TP33
2814	LÁTKA INFEKČNÍ, NEBEZPEČNÁ PRO LIDI	6.2	I1		6.2	318	0	E0	P620		MP5		
2814	LÁTKA INFEKČNÍ, NEBEZPEČNÁ PRO LIDI, ve zmraženém kapalném dusíku	6.2	I1		6.2+2.2	318	0	E0	P620		MP5		
2814	LÁTKA INFEKČNÍ, NEBEZPEČNÁ PRO LIDI (pouze materiál ze zvířat)	6.2	I1		6.2	318	0	E0	P620		MP5	BK1 BK2	
2815	N-AMINOETHYLPIPERAZIN	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2817	HYDROGENFLUORID AMONNÝ, ROZTOK	8	CT1	II	8+6.1		1 L	E2	P001 IBC02		MP15	T8	TP2
2817	HYDROGENFLUORID AMONNÝ, ROZTOK	8	CT1	III	8+6.1		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2818	POLYSULFID AMONNÝ, ROZTOK	8	CT1	II	8+6.1		1 L	E2	P001 IBC02		MP15	T7	TP2
2818	POLYSULFID AMONNÝ, ROZTOK	8	CT1	III	8+6.1		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2819	AMYLFOSFÁT (AMYL-FOSFÁT)	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2820	KYSELINA MÁSELNÁ	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2821	FENOL, ROZTOK	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2821	FENOL, ROZTOK	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2822	2-CHLORPYRIDIN	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2810	LÁTKA TOXICKÁ, KAPALNÁ, ORGANICKÁ, J.N.
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	2811	LÁTKA TOXICKÁ, TUHÁ, ORGANICKÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2811	LÁTKA TOXICKÁ, TUHÁ, ORGANICKÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2811	LÁTKA TOXICKÁ, TUHÁ, ORGANICKÁ, J.N.
NENÍ PŘEDMĚTEM PRO ADR									2812	Hlítnan sodný, tuhý
S10AN L10DH	TU4 TU14 TU22 TE21 TM2	AT	0 (B/E)	V1		CV23	S20	X423	2813	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, J.N.
SGAN		AT	0 (D/E)	V1		CV23		423	2813	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, J.N.
SGAN		AT	0 (E)	V1	VV5	CV23		423	2813	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, J.N.
			0 (E)			CV13 CV25 CV26 CV28	S3 S9 S15		2814	LÁTKA INFEKČNÍ, NEBEZPEČNÁ PRO LIDI
			0 (E)			CV13 CV25 CV26 CV28	S3 S9 S15		2814	LÁTKA INFEKČNÍ, NEBEZPEČNÁ PRO LIDI, ve zmraženém kapalném dusíku
			0 (E)			CV13 CV25 CV26 CV28	S3 S9 S15	606	2814	LÁTKA INFEKČNÍ, NEBEZPEČNÁ PRO LIDI (pouze materiál ze zvířat)
L4BN		AT	3 (E)	V12				80	2815	N-AMINOETHYLPIPERAZIN
L4DH	TU14 TE21	AT	2 (E)			CV13 CV28		86	2817	HYDROGENFLUORID AMONNÝ, ROZTOK
L4DH	TU14 TE21	AT	3 (E)	V12		CV13 CV28		86	2817	HYDROGENFLUORID AMONNÝ, ROZTOK
L4BN		AT	2 (E)			CV13 CV28		86	2818	POLYSULFID AMONNÝ, ROZTOK
L4BN		AT	3 (E)	V12		CV13 CV28		86	2818	POLYSULFID AMONNÝ, ROZTOK
L4BN		AT	3 (E)	V12				80	2819	AMYLFOSFÁT (AMYL-FOSFÁT)
L4BN		AT	3 (E)	V12				80	2820	KYSELINA MÁSELNÁ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2821	FENOL, ROZTOK
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2821	FENOL, ROZTOK
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2822	2-CHLORPYRIDIN

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2823	KYSELINA KROTONOVÁ, TUHÁ	8	C4	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2826	ETHYLCHLORTHIOFORMIÁT (ETHYL-CHLORTHIOFORMIÁT) (ethyl-chlorthiokarbonát)	8	CF1	II	8+3		0	E2	P001		MP15	T7	TP2
2829	KYSELINA KAPRONOVÁ	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2830	SLITINA KŘEMÍK / ŽELEZO / LITHIUM	4.3	W2	II	4.3		500 g	E2	P410 IBC07		MP14	T3	TP33
2831	1,1,1-TRICHOLORETHAN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2834	KYSELINA FOSFORITÁ	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2835	TETRAHYDRIDOHLINITAN SODNÝ	4.3	W2	II	4.3		500 g	E2	P410 IBC04		MP14	T3	TP33
2837	HYDROGENSULFÁTY, VODNÝ ROZTOK (HYDROGENSÍRANY, VODNÝ ROZTOK)	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2837	HYDROGENSULFÁTY, VODNÝ ROZTOK (HYDROGENSÍRANY, VODNÝ ROZTOK)	8	C1	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2838	VINYLBUTYRÁT, STABILIZOVANÝ (VINYL-BUTYRÁT, STABILIZOVANÝ)	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
2839	ALDOL (3- HYDROXYBUTYRALDEHYD)	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2840	BUTYRALDOXIM	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2841	DI-n-AMYLAMIN	3	FT1	III	3+6.1		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
2842	NITROETHAN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2844	SLITINA VÁPNIK / MANGAN / KŘEMÍK	4.3	W2	III	4.3		1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33
2845	LÁTKA PYROFORNÍ, KAPALNÁ, ORGANICKÁ, J.N.	4.2	S1	I	4.2	274	0	E0	P400		MP2	T22 TP7	TP2 TP7
2846	LÁTKA PYROFORNÍ, TUHÁ, ORGANICKÁ, J.N.	4.2	S2	I	4.2	274	0	E0	P404		MP13		
2849	3-CHLOR-1-PROPANOL	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2850	TETRAMER PROPYLENU	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2851	FLUORID BORITÝ, DIHYDRÁT	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
2852	DIPIKRYLSULFID, VLHČENÝ nejméně 10 % hm. vody	4.1	D	I	4.1	545	0	E0	P406	PP24	MP2		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAV L4BN		AT	3 (E)		VV9			80	2823	KYSELINA KROTONOVÁ, TUHÁ
L4BN		FL	2 (D/E)					83	2826	ETHYLCHLORTHIOFORMIÁT (ETHYL- CHLORTHIOFORMIÁT) (ethyl-chlorthiokarbonát)
L4BN		AT	3 (E)	V12				80	2829	KYSELINA KAPRONOVÁ
SGAN		AT	2 (D/E)	V1		CV23		423	2830	SLITINA KŘEMÍK / ŽELEZO / LITHIUM
L4BH TU15 TE19		AT	2 (E)	V12		CV13 CV28	S9	60	2831	1,1,1-TRICHLORETHAN
SGAV		AT	3 (E)		VV9			80	2834	KYSELINA FOSFORITÁ
SGAN		AT	2 (D/E)	V1		CV23		423	2835	TETRAHYDRIDOHLINITAN SODNÝ
L4BN		AT	2 (E)					80	2837	HYDROGENSULFÁTY, VODNÝ ROZTOK (HYDROGENSÍRANY, VODNÝ ROZTOK)
L4BN		AT	3 (E)	V12				80	2837	HYDROGENSULFÁTY, VODNÝ ROZTOK (HYDROGENSÍRANY, VODNÝ ROZTOK)
LGBF		FL	2 (D/E)				S2 S20	339	2838	VINYLBUTYRÁT, STABILIZOVANÝ (VINYLBUTYRÁT, STABILIZOVANÝ)
L4BH TU15 TE19		AT	2 (D/E)			CV13 CV28	S9 S19	60	2839	ALDOL (3-HYDROXYBUTYRALDEHYD)
LGBF		FL	3 (D/E)	V12			S2	30	2840	BUTYRALDOXIM
L4BH TU15		FL	3 (D/E)	V12		CV13 CV28	S2	36	2841	DI-n-AMYLAMIN
LGBF		FL	3 (D/E)	V12			S2	30	2842	NITROETHAN
SGAN		AT	3 (E)	V1	VV5 VV7	CV23		423	2844	SLITINA VÁPŇÍK / MANGAN / KŘEMÍK
L21DH TU14 TC1 TE21 TM1		AT	0 (B/E)	V1			S20	333	2845	LÁTKA PYROFORNÍ, KAPALNÁ, ORGANICKÁ, J.N.
			0 (E)	V1			S20		2846	LÁTKA PYROFORNÍ, TUHÁ, ORGANICKÁ, J.N.
L4BH TU15 TE19		AT	2 (E)	V12		CV13 CV28	S9	60	2849	3-CHLOR-1-PROPANOL
LGBF		FL	3 (D/E)	V12			S2	30	2850	TETRAMER PROPYLENU
L4BN		AT	2 (E)					80	2851	FLUORID BORITÝ, DIHYDRÁT
			1 (B)				S14		2852	DIPIKRYLSULFID, VLHČENÝ nejméně 10 % hm. vody

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2853	HEXAFLUOROKŘEMIČITAN HOŘEČNATÝ	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2854	HEXAFLUOROKŘEMIČITAN AMONNÝ	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2855	HEXAFLUOROKŘEMIČITAN ZINEČNATÝ	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2856	HEXAFLUOROKŘEMIČITANY, J.N.	6.1	T5	III	6.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2857	STROJE CHLADIČÍ, obsahující nehořlavé, netoxické plyny nebo roztoky amoniaku (UN 2672)	2	6A		2.2	119	0	E0	P003	PP32	MP9		
2858	ZIRKONIUM, SUCHÉ, stočený drát, hotové plechy, pásy (tenčí než 254 mikrometrů, ale ne méně než 18 mikrometrů)	4.1	F3	III	4.1	546	5 kg	E1	P002 LP02 R001		MP11		
2859	METAVANADIČNAN AMONNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2861	POLYVANADIČNAN AMONNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2862	OXID VANADIČNÝ, neroztavený	6.1	T5	III	6.1	600	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2863	ORTHOVANADIČNAN SODNOAMONNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2864	METAVANADIČNAN DRASELNÝ	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2865	HYDROXYLAMINSULFÁT (HYDROXYLAMIN-SULFÁT)	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2869	CHLORID TITANITÝ, SMĚS	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2869	CHLORID TITANITÝ, SMĚS	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2870	TETRAHYDRIDOBORITAN HLINITÝ	4.2	SW	I	4.2+4.3		0	E0	P400		MP2	T21	TP7 TP33
2870	TETRAHYDRIDOBORITAN HLINITÝ V PŘÍSTROJÍCH	4.2	SW	I	4.2+4.3		0	E0	P002	PP13	MP2		
2871	ANTIMON, PRÁŠEK	6.1	T5	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2872	DIBROMCHLORPROPANY	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2872	DIBROMCHLORPROPANY	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2873	DIBUTYLAMINOETHANOL	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2874	FURFURYLALKOHOL	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2853	HEXAFLUOROKŘEMIČITAN HOŘEČNATÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2854	HEXAFLUOROKŘEMIČITAN AMONNÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2855	HEXAFLUOROKŘEMIČITAN ZINEČNATÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2856	HEXAFLUOROKŘEMIČITANY, J.N.
			3 (E)			CV9			2857	STROJE CHLADICÍ, obsahující nehořlavé, netoxické plyny nebo roztoky amoniaku (UN 2672)
			3 (E)		VV1			40	2858	ZIRKONIUM, SUCHÉ, stočený drát, hotové plechy, pásy (tenčí než 254 mikrometrů, ale ne méně než 18 mikrometrů)
SGAH TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2859	METAVANADIČNAN AMONNÝ	
SGAH TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2861	POLYVANADIČNAN AMONNÝ	
SGAH TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2862	OXID VANADIČNÝ, neroztavený	
SGAH TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2863	ORTHOVANADIČNAN SODNOAMONNÝ	
SGAH TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2864	METAVANADIČNAN DRASELNÝ	
SGAV		AT	3 (E)		VV9			80	2865	HYDROXYLAMINSULFÁT (HYDROXYLAMIN-SULFÁT)
SGAN		AT	2 (E)	V11				80	2869	CHLORID TITANITÝ, SMĚS
SGAV		AT	3 (E)		VV9			80	2869	CHLORID TITANITÝ, SMĚS
L21DH	TU14 TC1 TE21 TM1	AT	0 (B/E)	V1			S20	X333	2870	TETRAHYDRIDOBORITAN HLINITÝ
			0 (E)	V1			S20		2870	TETRAHYDRIDOBORITAN HLINITÝ V PŘÍSTROJÍCH
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2871	ANTIMON, PRAŠEK
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2872	DIBROMCHLORPROPANY
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2872	DIBROMCHLORPROPANY
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2873	DIBUTYLAMINOETHANOL
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2874	FURFURYLALKOHOL

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2875	HEXACHLOROFEN	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2876	RESORCIN	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2878	TITAN - HOUBA, ČÁSTICE nebo TITAN - HOUBA, PRAŠEK	4.1	F3	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33
2879	CHLORID SELENINYLU (OXYCHLORID SELENIČITÝ)	8	CT1	I	8+6.1		0	E0	P001		MP8 MP17	T10	TP2
2880	CHLORNAN VÁPENATÝ, HYDRATOVANÝ nebo CHLORNAN VÁPENATÝ, HYDRATOVANÁ SMĚS, s nejméně 5,5 %, ale nejvýše 16 % vody	5.1	O2	II	5.1	314 322	1 kg	E2	P002 IBC08	B4 B13	MP10		
2880	CHLORNAN VÁPENATÝ, HYDRATOVANÝ nebo CHLORNAN VÁPENATÝ, HYDRATOVANÁ SMĚS, s nejméně 5,5 %, ale nejvýše 16 % vody	5.1	O2	III	5.1	314	5 kg	E1	P002 IBC08 R001	B4 B13	MP10		
2881	KATALYZÁTOR, KOVOVÝ, SUCHÝ	4.2	S4	I	4.2	274	0	E0	P404		MP13	T21	TP7 TP33
2881	KATALYZÁTOR, KOVOVÝ, SUCHÝ	4.2	S4	II	4.2	274	0	E2	P410 IBC06		MP14	T3	TP33
2881	KATALYZÁTOR, KOVOVÝ, SUCHÝ	4.2	S4	III	4.2	274	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
2900	LÁTKA INFEKČNÍ, NEBEZPEČNÁ pouze PRO ZVÍŘATA	6.2	I2		6.2	318	0	E0	P620		MP5		
2900	LÁTKA INFEKČNÍ, NEBEZPEČNÁ pouze PRO ZVÍŘATA, ve zmrazeném kapalném dusíku	6.2	I2		6.2+2.2	318	0	E0	P620		MP5		
2900	LÁTKA INFEKČNÍ, NEBEZPEČNÁ pouze PRO ZVÍŘATA (pouze materiál ze zvířat)	6.2	I2		6.2	318	0	E0	P620		MP5	BK1 BK2	
2901	CHLORID BROMU (BROMCHLORID)	2	2TOC		2.3+5.1+8		0	E0	P200		MP9	(M)	
2902	PESTICID, KAPALNÝ, TOXICKÝ, J.N.	6.1	T6	I	6.1	61 648 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2902	PESTICID, KAPALNÝ, TOXICKÝ, J.N.	6.1	T6	II	6.1	61 648 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2902	PESTICID, KAPALNÝ, TOXICKÝ, J.N.	6.1	T6	III	6.1	61 648 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
2903	PESTICID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, J.N., s bodem vzplanutí 23 °C a vyšším	6.1	TF2	I	6.1+3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2903	PESTICID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, J.N., s bodem vzplanutí 23 °C a vyšším	6.1	TF2	II	6.1+3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2903	PESTICID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, J.N., s bodem vzplanutí 23 °C a vyšším	6.1	TF2	III	6.1+3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2875	HEXACHLOROFEN
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	2876	RESORCIN
SGAV		AT	3 (E)		VV1			40	2878	TITAN - HOUBA, ČÁSTICE nebo TITAN - HOUBA, PRÁŠEK
L10BH		AT	1 (C/D)			CV13 CV28	S14	X886	2879	CHLORID SELENINYLU (OXYCHLORID SELENICITÝ)
SGAN	TU3	AT	2 (E)	V11		CV24 CV35		50	2880	CHLORNAN VÁPENATÝ, HYDRATOVANÝ nebo CHLORNAN VÁPENATÝ, HYDRATOVANÁ SMĚS, s nejméně 5,5 %, ale nejvýše 16 % vody
SGAV	TU3	AT	3 (E)		VV8	CV24 CV35		50	2880	CHLORNAN VÁPENATÝ, HYDRATOVANÝ nebo CHLORNAN VÁPENATÝ, HYDRATOVANÁ SMĚS, s nejméně 5,5 %, ale nejvýše 16 % vody
		AT	0 (B/E)	V1			S20	43	2881	KATALYZÁTOR, KOVOVÝ, SUCHÝ
SGAN		AT	2 (D/E)	V1				40	2881	KATALYZÁTOR, KOVOVÝ, SUCHÝ
SGAN		AT	3 (E)	V1	VV4			40	2881	KATALYZÁTOR, KOVOVÝ, SUCHÝ
			0 (E)			CV13 CV25 CV26 CV28	S3 S9 S15		2900	LÁTKA INFEKČNÍ, NEBEZPEČNÁ pouze PRO ZVÍŘATA
			0 (E)			CV13 CV25 CV26 CV28	S3 S9 S15		2900	LÁTKA INFEKČNÍ, NEBEZPEČNÁ pouze PRO ZVÍŘATA, ve zmraženém kapalném dusíku
			0 (E)			CV13 CV25 CV26 CV28	S3 S9 S15	606	2900	LÁTKA INFEKČNÍ, NEBEZPEČNÁ pouze PRO ZVÍŘATA (pouze materiál ze zvířat)
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	2901	CHLORID BROMU (BROMCHLORID)
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2902	PESTICID, KAPALNÝ, TOXICKÝ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2902	PESTICID, KAPALNÝ, TOXICKÝ, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2902	PESTICID, KAPALNÝ, TOXICKÝ, J.N.
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	2903	PESTICID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, J.N., s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2903	PESTICID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, J.N., s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	2903	PESTICID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, J.N., s bodem vzplanutí 23 °C a vyšším

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2904	CHLORFENOLÁTY, KAPALNÉ nebo FENOLÁTY, KAPALNÉ	8	C9	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19		
2905	CHLORFENOLÁTY, TUHÉ nebo FENOLÁTY, TUHÉ	8	C10	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2907	DINITRÁT ISOSORBITOLU, SMĚS, s nejméně 60 % laktózy, mannosy, škrobu nebo hydrogenfosforečnanu vápenatého	4.1	D	II	4.1	127	0	E0	P406 IBC06	PP26 PP80 B12	MP2		
2908	LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS - PRÁZDNÝ OBAL	7				290	0	E0	viz 1.7	viz 4.1.9.1.3			
2909	LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS - VÝROBKY Z PŘÍRODNÍHO URANU nebo OCHUZENÉHO URANU nebo PŘÍRODNÍHO THORIA	7				290	0	E0	viz 1.7	viz 4.1.9.1.3			
2910	LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS - OMEZENÁ MNOŽSTVÍ	7				290 325	0	E0	viz 1.7	viz 4.1.9.1.3			
2911	LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS - PŘÍSTROJE nebo VÝROBKY	7				290	0	E0	viz 1.7	viz 4.1.9.1.3			
2912	LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-I), jiná než štěpná nebo vyjmutá štěpná	7			7X	172 317 325	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3		T5	TP4
2913	LÁTKA, RADIOAKTIVNÍ - POVRCHOVĚ KONTAMINOVANÉ PŘEDMĚTY (SCO-I nebo SCO-II), jiné než štěpné nebo vyjmuté štěpné	7			7X	172 317 336	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
2915	LÁTKA RADIOAKTIVNÍ, KUS TYPU A, jiné než zvláštní formy, jiná než štěpná nebo vyjmutá štěpná	7			7X	172 317 325	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
2916	LÁTKA RADIOAKTIVNÍ, KUS TYPU B (U), jiná než štěpná nebo vyjmutá štěpná	7			7X	172 317 325 337	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
2917	LÁTKA RADIOAKTIVNÍ, KUS TYPU B (M), jiná než štěpná nebo vyjmutá štěpná	7			7X	172 317 325 337	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
2919	LÁTKA RADIOAKTIVNÍ, PŘEPRAVOVANÁ ZA ZVLÁŠTNÍCH PODMÍNEK, jiná než štěpná nebo vyjmutá štěpná	7			7X	172 317 325	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
2920	LÁTKA ŽIRAVÁ, KAPALNÁ, HOŘLAVÁ, J.N.	8	CF1	I	8+3	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
2920	LÁTKA ŽIRAVÁ, KAPALNÁ, HOŘLAVÁ, J.N.	8	CF1	II	8+3	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
2921	LÁTKA ŽIRAVÁ, TUHÁ, HOŘLAVÁ, J.N.	8	CF2	I	8+4.1	274	0	E0	P002 IBC05		MP18	T6	TP33
2921	LÁTKA ŽIRAVÁ, TUHÁ, HOŘLAVÁ, J.N.	8	CF2	II	8+4.1	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2922	LÁTKA ŽIRAVÁ, KAPALNÁ, TOXICKÁ, J.N.	8	CT1	I	8+6.1	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
2922	LÁTKA ŽIRAVÁ, KAPALNÁ, TOXICKÁ, J.N.	8	CT1	II	8+6.1	274	1 L	E2	P001 IBC02		MP15	T7	TP2
2922	LÁTKA ŽIRAVÁ, KAPALNÁ, TOXICKÁ, J.N.	8	CT1	III	8+6.1	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
2923	LÁTKA ŽIRAVÁ, TUHÁ, TOXICKÁ, J.N.	8	CT2	I	8+6.1	274	0	E0	P002 IBC05		MP18	T6	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	3 (E)	V12				80	2904	CHLORFENOLÁTY, KAPALNÉ nebo FENOLÁTY, KAPALNÉ
SGAV L4BN		AT	3 (E)		VV9			80	2905	CHLORFENOLÁTY, TUHÉ nebo FENOLÁTY, TUHÉ
			2 (B)	V11			S14		2907	DINITRÁT ISOSORBITOLU, SMĚS, s nejméně 60 % laktózy, mannosy, škrobu nebo hydrogenfosforečnanu vápenatého
			4 (E)			CV33	S5 S13 S21		2908	LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS - PRÁZDNÝ OBAL
			4 (E)			CV33	S5 S13 S21		2909	LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS - VÝROBKY Z PŘÍRODNÍHO URANU nebo OCHUZENÉHO URANU nebo PŘÍRODNÍHO THORIA
			4 (E)			CV33	S5 S13 S21		2910	LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS - OMEZENÁ MNOŽSTVÍ
			4 (E)			CV33	S5 S13 S21		2911	LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS - PŘÍSTROJE nebo VÝROBKY
S2,65AN(+) L2,65CN(+)	TU36 TT7 TM7	AT	0 (E)		VV16	CV33	S6 S11 S13 S21	70	2912	LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-I), jiná než štěpná nebo vyjmutá štěpná
			0 (E)		VV17	CV33	S6 S11 S13 S21	70	2913	LÁTKA, RADIOAKTIVNÍ - POVRCHOVĚ KONTAMINOVANÉ PŘEDMĚTY (SCO-I nebo SCO-II), jiná než štěpná nebo vyjmutá štěpná
			0 (E)			CV33	S6 S11 S12 S13 S21	70	2915	LÁTKA RADIOAKTIVNÍ, KUS TYPU A, jiná než zvláštní formy, jiná než štěpná nebo vyjmutá štěpná
			0 (E)			CV33	S6 S11 S13 S21	70	2916	LÁTKA RADIOAKTIVNÍ, KUS TYPU B (U), jiná než štěpná nebo vyjmutá štěpná
			0 (E)			CV33	S6 S11 S13 S21	70	2917	LÁTKA RADIOAKTIVNÍ, KUS TYPU B (M), jiná než štěpná nebo vyjmutá štěpná
			0 (-)			CV33	S6 S11 S13 S21	70	2919	LÁTKA RADIOAKTIVNÍ, PŘEPRAVOVANÁ ZA ZVLÁŠTNÍCH PODMÍNEK, jiná než štěpná nebo vyjmutá štěpná
L10BH		FL	1 (D/E)				S2 S14	883	2920	LÁTKA ŽÍRAVÁ, KAPALNÁ, HOŘLAVÁ, J.N.
L4BN		FL	2 (D/E)				S2	83	2920	LÁTKA ŽÍRAVÁ, KAPALNÁ, HOŘLAVÁ, J.N.
S10AN L10BH		AT	1 (E)	V10			S14	884	2921	LÁTKA ŽÍRAVÁ, TUHÁ, HOŘLAVÁ, J.N.
SGAN L4BN		AT	2 (E)	V11				84	2921	LÁTKA ŽÍRAVÁ, TUHÁ, HOŘLAVÁ, J.N.
L10BH		AT	1 (C/D)			CV13 CV28	S14	886	2922	LÁTKA ŽÍRAVÁ, KAPALNÁ, TOXICKÁ, J.N.
L4BN		AT	2 (E)			CV13 CV28		86	2922	LÁTKA ŽÍRAVÁ, KAPALNÁ, TOXICKÁ, J.N.
L4BN		AT	3 (E)	V12		CV13 CV28		86	2922	LÁTKA ŽÍRAVÁ, KAPALNÁ, TOXICKÁ, J.N.
S10AN L10BH		AT	1 (E)	V10		CV13 CV28	S14	886	2923	LÁTKA ŽÍRAVÁ, TUHÁ, TOXICKÁ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3
2923	LÁTKA ŽÍRAVÁ, TUHÁ, TOXICKÁ, J.N.	8	CT2	II	8+6.1	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
2923	LÁTKA ŽÍRAVÁ, TUHÁ, TOXICKÁ, J.N.	8	CT2	III	8+6.1	274	5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33
2924	LÁTKA HOŘLAVÁ, KAPALNÁ, ŽÍRAVÁ, J.N.	3	FC	I	3+8	274	0	E0	P001		MP7 MP17	T14	TP2
2924	LÁTKA HOŘLAVÁ, KAPALNÁ, ŽÍRAVÁ, J.N.	3	FC	II	3+8	274	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27
2924	LÁTKA HOŘLAVÁ, KAPALNÁ, ŽÍRAVÁ, J.N.	3	FC	III	3+8	274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
2925	LÁTKA HOŘLAVÁ, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	4.1	FC1	II	4.1+8	274	1 kg	E2	P002 IBC06		MP10	T3	TP33
2925	LÁTKA HOŘLAVÁ, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	4.1	FC1	III	4.1+8	274	5 kg	E1	P002 IBC06 R001		MP10	T1	TP33
2926	LÁTKA HOŘLAVÁ, TUHÁ, TOXICKÁ, ORGANICKÁ, J.N.	4.1	FT1	II	4.1+6.1	274	1 kg	E2	P002 IBC06		MP10	T3	TP33
2926	LÁTKA HOŘLAVÁ, TUHÁ, TOXICKÁ, ORGANICKÁ, J.N.	4.1	FT1	III	4.1+6.1	274	5 kg	E1	P002 IBC06 R001		MP10	T1	TP33
2927	LÁTKA TOXICKÁ, KAPALNÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	6.1	TC1	I	6.1+8	274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27
2927	LÁTKA TOXICKÁ, KAPALNÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	6.1	TC1	II	6.1+8	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2928	LÁTKA TOXICKÁ, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	6.1	TC2	I	6.1+8	274	0	E5	P002 IBC05		MP18	T6	TP33
2928	LÁTKA TOXICKÁ, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	6.1	TC2	II	6.1+8	274	500 g	E4	P002 IBC06		MP10	T3	TP33
2929	LÁTKA TOXICKÁ, KAPALNÁ, HOŘLAVÁ, ORGANICKÁ, J.N.	6.1	TF1	I	6.1+3	274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27
2929	LÁTKA TOXICKÁ, KAPALNÁ, HOŘLAVÁ, ORGANICKÁ, J.N.	6.1	TF1	II	6.1+3	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2930	LÁTKA TOXICKÁ, TUHÁ, HOŘLAVÁ, ORGANICKÁ, J.N.	6.1	TF3	I	6.1+4.1	274	0	E5	P002 IBC05		MP18	T6	TP33
2930	LÁTKA TOXICKÁ, TUHÁ, HOŘLAVÁ, ORGANICKÁ, J.N.	6.1	TF3	II	6.1+4.1	274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2931	SÍRAN VANADYLU	6.1	T5	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
2933	METHYL-2-CHLORPROPIONÁT	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2934	ISOPROPYL-2-CHLORPROPIONÁT	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2935	ETHYL-2-CHLORPROPIONÁT	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2936	KYSELINA THIOMLÉČNÁ	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2937	alfa-METHYLBENZYLALKOHOL, KAPALNÝ	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2940	9-FOSFABICYKLONONANY (CYKLOKTADIENFOSFINY)	4.2	S2	II	4.2		0	E2	P410 IBC06		MP14	T3	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN L4BN		AT	2 (E)	V11		CV13 CV28		86	2923	LÁTKA ŽÍRAVÁ, TUHÁ, TOXICKÁ, J.N.
SGAV L4BN		AT	3 (E)		VV9	CV13 CV28		86	2923	LÁTKA ŽÍRAVÁ, TUHÁ, TOXICKÁ, J.N.
L10CH	TU14 TE21	FL	1 (C/E)				S2 S20	338	2924	LÁTKA HOŘLAVÁ, KAPALNÁ, ŽÍRAVÁ, J.N.
L4BH		FL	2 (D/E)				S2 S20	338	2924	LÁTKA HOŘLAVÁ, KAPALNÁ, ŽÍRAVÁ, J.N.
L4BN		FL	3 (D/E)	V12			S2	38	2924	LÁTKA HOŘLAVÁ, KAPALNÁ, ŽÍRAVÁ, J.N.
SGAN		AT	2 (E)	V11				48	2925	LÁTKA HOŘLAVÁ, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.
SGAN		AT	3 (E)					48	2925	LÁTKA HOŘLAVÁ, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.
SGAN		AT	2 (E)	V11		CV28		46	2926	LÁTKA HOŘLAVÁ, TUHÁ, TOXICKÁ, ORGANICKÁ, J.N.
SGAN		AT	3 (E)			CV28		46	2926	LÁTKA HOŘLAVÁ, TUHÁ, TOXICKÁ, ORGANICKÁ, J.N.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	668	2927	LÁTKA TOXICKÁ, KAPALNÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	2927	LÁTKA TOXICKÁ, KAPALNÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.
S10AH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	668	2928	LÁTKA TOXICKÁ, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	68	2928	LÁTKA TOXICKÁ, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	2929	LÁTKA TOXICKÁ, KAPALNÁ, HOŘLAVÁ, ORGANICKÁ, J.N.
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2929	LÁTKA TOXICKÁ, KAPALNÁ, HOŘLAVÁ, ORGANICKÁ, J.N.
		AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	664	2930	LÁTKA TOXICKÁ, TUHÁ, HOŘLAVÁ, ORGANICKÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	64	2930	LÁTKA TOXICKÁ, TUHÁ, HOŘLAVÁ, ORGANICKÁ, J.N.
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	2931	SÍRAN VANADYLU
LGBF		FL	3 (D/E)	V12			S2	30	2933	METHYL-2-CHLORPROPIONÁT
LGBF		FL	3 (D/E)	V12			S2	30	2934	ISOPROPYL-2-CHLORPROPIONÁT
LGBF		FL	3 (D/E)	V12			S2	30	2935	ETHYL-2-CHLORPROPIONÁT
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2936	KYSELINA THIOMLÉČNÁ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2937	alfa-METHYLBENZYLALKOHOL, KAPALNÝ
SGAN		AT	2 (D/E)	V1				40	2940	9-FOSFABICYKLONONANY (CYKLOOKTADIENFOSFINY)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2941	FLUORANILINY	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2942	2-TRIFLUORMETHYLANILIN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19		
2943	TETRAHYDROFURFURYLAMIN	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2945	N-METHYLBUTYLAMIN	3	FC	II	3+8		1 L	E2	P001 IBC02		MP19	T7	TP1
2946	2-AMINO-5-DIETHYLAMINOPENTAN	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
2947	ISOPROPYLCHLORACETÁT (ISOPROPYL-CHLORACETÁT)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
2948	3-TRIFLUORMETHYLANILIN	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2949	HYDROGENSULFID SODNÝ, HYDRATOVANÝ, obsahující nejméně 25 % krystalové vody	8	C6	II	8	523	1 kg	E2	P002 IBC08	B4	MP10	T7	TP2
2950	GRANULÁTY HOŘČÍKU, POTAŽENÉ, velikost částic nejméně 149 mikrometrů	4.3	W2	III	4.3		1 kg	E1	P410 IBC08 R001	B4	MP14	T1 BK2	TP33
2956	5-terc-BUTYL-2,4,6-TRINITRO-m- XYLEN (XYLENOVÉ PÍŽMO)	4.1	SR1	III	4.1	638	5 kg	E1	P409		MP2		
2965	DIMETHYLETERÁT FLUORIDU BORITÉHO	4.3	WFC	I	4.3+3+8		0	E0	P401		MP2	T10	TP2 TP7
2966	THIOGLYKOL	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
2967	KYSELINA AMIDOSULFONOVÁ	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
2968	MANEB, STABILIZOVANÝ nebo MANEB, PŘÍPRAVKY, STABILIZOVANÉ proti samoohřevu	4.3	W2	III	4.3	547	1 kg	E1	P002 IBC08 R001	B4	MP14	T1	TP33
2969	BOBY RICINOVÉ nebo MOUČKA RICINOVÁ nebo KOLÁČ RICINOVÝ nebo VLOČKY RICINOVÉ	9	M11	II	9	141	5 kg	E2	P002 IBC08	PP34 B4	MP10	T3 BK1 BK2	TP33
2977	LÁTKA RADIOAKTIVNÍ, HEXAFLUORID URANU, ŠTĚPNÁ	7			7X+7E+8	172	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
2978	LÁTKA RADIOAKTIVNÍ, HEXAFLUORID URANU, jiná než štěpná nebo vyjmutá štěpná	7			7X+8	172 317	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
2983	ETHYLENOXID A PRÓPYLENOXID, SMĚS, s nejvýše 30 % ethylenoxidu	3	FT1	I	3+6.1		0	E0	P001		MP7 MP17	T14	TP2 TP7
2984	PEROXID VODÍKU, VODNÝ ROZTOK, s nejméně 8 %, ale méně než 20 % peroxidu vodíku (stabilizovaný podle potřeby)	5.1	O1	III	5.1	65	5 L	E1	P504 IBC02 R001	PP10 B5	MP15	T4	TP1 TP6 TP24
2985	CHLORSILANY, HOŘLAVÉ, ŽÍRAVÉ, J.N.	3	FC	II	3+8	548	0	E0	P010		MP19	T14	TP2 TP27 TP7

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	(4.3.5, 6.8.4)	(9.1.1.2)	(1.1.3.6 (8.6))	(7.2.4)	(7.3.3)	(7.5.11)	(8.5)	(5.3.2.3)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2941	FLUORANILÍNÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2942	2-TRIFLUORMETHYLANILÍN
LGBF		FL	3 (D/E)	V12			S2	30	2943	TETRAHYDROFURFURYLAMIN
L4BH		FL	2 (D/E)				S2 S20	338	2945	N-METHYLBUTYLAMIN
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2946	2-AMINO-5-DIETHYLAMINOPENTAN
LGBF		FL	3 (D/E)	V12			S2	30	2947	ISOPROPYLCHLORACETÁT (ISOPROPYL- CHLORACETÁT)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2948	3-TRIFLUORMETHYLANILÍN
L4BN SGAN		AT	2 (E)	V11				80	2949	HYDROGENSULFID SODNÝ, HYDRATOVANÝ, obsahující nejméně 25 % krystalové vody
SGAN		AT	3 (E)	V1	VV5	CV23		423	2950	GRANULÁTY HOŘČÍKU, POTAŽENÉ, velikost částic nejméně 149 mikrometrů
			3 (D)			CV14	S24		2956	5-terc-BUTYL-2,4,6-TRINITRO-m-XYLEN (XYLENOVÉ PÍŽMO)
L10DH	TU4 TU14 TU22 TE21 TM2	FL	0 (B/E)	V1		CV23	S2 S20	382	2965	DIMETHYLETERÁT FLUORIDU BORITÉHO
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2966	THIOGLYKOL
SGAV		AT	3 (E)		VV9			80	2967	KYSELINA AMIDOSULFONOVÁ
SGAN		AT	0 (E)	V1	VV5	CV23		423	2968	MANEB, STABILIZOVANÝ nebo MANEB, PŘÍPRAVKY, STABILIZOVANÉ proti samoohřevu
SGAV		AT	2 (E)	V11	VV3			90	2969	BOBY RICINOVÉ nebo MOUČKA RICINOVÁ nebo KOLÁČ RICINOVÝ nebo VLOČKY RICINOVÉ
			0 (C)			CV33	S6 S11 S13 S21	78	2977	LÁTKA RADIOAKTIVNÍ, HEXAFLUORID URANU, ŠTĚPNÁ
			0 (C)			CV33	S6 S11 S13 S21	78	2978	LÁTKA RADIOAKTIVNÍ, HEXAFLUORID URANU, jiná než štěpná nebo vyjmutá štěpná
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	2983	ETHYLENOXID A PRÓPYLENOXID, SMĚS, s nejvýše 30 % ethylenoxidu
LGBV	TU3 TC2 TE8 TE11 TT1	AT	3 (E)			CV24		50	2984	PEROXID VODÍKU, VODNÝ ROZTOK, s nejméně 8 %, ale méně než 20 % peroxidu vodíku (stabilizovaný podle potřeby)
L4BH		FL	2 (D/E)				S2 S20	X338	2985	CHLORSILANY, HOŘLAVÉ, ŽÍRAVÉ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
2986	CHLORSILANY, ŽÍRAVÉ, HOŘLAVÉ, J.N.	8	CF1	II	8+3	548	0	E0	P010		MP15	T14	TP2 TP7 TP7
2987	CHLORSILANY, ŽÍRAVÉ, J.N.	8	C3	II	8	548	0	E0	P010		MP15	T14	TP2 TP27 TP7
2988	CHLORSILANY, REAGUJÍCÍ S VODOU, HOŘLAVÉ, ŽÍRAVÉ, J.N.	4.3	WFC	I	4.3+3+8	549	0	E0	P401	RR7	MP2	T14	TP2 TP7
2989	DIHYDROGENFOSFIT OLOVNATÝ	4.1	F3	II	4.1		1 kg	E2	P002 IBC08	B4	MP11	T3	TP33
2989	DIHYDROGENFOSFIT OLOVNATÝ	4.1	F3	III	4.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33
2990	PROSTŘEDKY ZÁCHRANNÉ, SAMONAFUKOVACÍ	9	M5		9	296 635	0	E0	P905				
2991	PESTICID - KARBAMÁT, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	I	6.1+3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2991	PESTICID - KARBAMÁT, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	II	6.1+3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2991	PESTICID - KARBAMÁT, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	III	6.1+3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
2992	PESTICID - KARBAMÁT, KAPALNÝ, TOXICKÝ	6.1	T6	I	6.1	61 648 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2992	PESTICID - KARBAMÁT, KAPALNÝ, TOXICKÝ	6.1	T6	II	6.1	61 648 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2992	PESTICID - KARBAMÁT, KAPALNÝ, TOXICKÝ	6.1	T6	III	6.1	61 648 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
2993	PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	I	6.1+3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2993	PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	II	6.1+3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2993	PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	III	6.1+3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
2994	PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ	6.1	T6	I	6.1	61 648 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2994	PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ	6.1	T6	II	6.1	61 648 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2994	PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ	6.1	T6	III	6.1	61 648 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		FL	2 (D/E)					S2 X83	2986	CHLORSILANY, ŽÍRAVÉ, HOŘLAVÉ, J.N.
L4BN		AT	2 (E)					X80	2987	CHLORSILANY, ŽÍRAVÉ, J.N.
L10DH	TU14 TU26 TE21 TM2 TM3	FL	0 (B/E)	V1		CV23	S2 S20	X338	2988	CHLORSILANY, REAGUJÍCÍ S VODOU, HOŘLAVÉ, ŽÍRAVÉ, J.N.
SGAN		AT	2 (E)	V11				40	2989	DIHYDROGENFOSFIT OLOVNATÝ
SGAV		AT	3 (E)		VV1			40	2989	DIHYDROGENFOSFIT OLOVNATÝ
			3 (E)						2990	PROSTŘEDKY ZÁCHRANNÉ, SAMONAFUKOVACÍ
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	2991	PESTICID - KARBAMÁT, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2991	PESTICID - KARBAMÁT, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	2991	PESTICID - KARBAMÁT, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2992	PESTICID - KARBAMÁT, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2992	PESTICID - KARBAMÁT, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2992	PESTICID - KARBAMÁT, KAPALNÝ, TOXICKÝ
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	2993	PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2993	PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	2993	PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2994	PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2994	PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2994	PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
2995	PESTICID - ORGANICKÁ SLOUČENINA CHLÓRU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	I	6.1+3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2995	PESTICID - ORGANICKÁ SLOUČENINA CHLÓRU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	II	6.1+3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2995	PESTICID - ORGANICKÁ SLOUČENINA CHLÓRU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	III	6.1+3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
2996	PESTICID - ORGANICKÁ SLOUČENINA CHLÓRU, KAPALNÝ, TOXICKÝ	6.1	T6	I	6.1	61 648 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2996	PESTICID - ORGANICKÁ SLOUČENINA CHLÓRU, KAPALNÝ, TOXICKÝ	6.1	T6	II	6.1	61 648 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2996	PESTICID - ORGANICKÁ SLOUČENINA CHLÓRU, KAPALNÝ, TOXICKÝ	6.1	T6	III	6.1	61 648 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
2997	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	I	6.1+3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2997	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	II	6.1+3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2997	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	III	6.1+3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
2998	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, TOXICKÝ	6.1	T6	I	6.1	61 648 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
2998	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, TOXICKÝ	6.1	T6	II	6.1	61 648 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
2998	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, TOXICKÝ	6.1	T6	III	6.1	61 648 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
3005	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	I	6.1+3	61 274	0	E5	P001		MP8 MP17	T14	TP2
3005	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	II	6.1+3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3005	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	III	6.1+3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
3006	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, TOXICKÝ	6.1	T6	I	6.1	61 648 274	0	E5	P001		MP8 MP17	T14	TP2
3006	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, TOXICKÝ	6.1	T6	II	6.1	61 648 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	2995	PESTICID - ORGANICKÁ SLOUČENINA CHLÓRU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2995	PESTICID - ORGANICKÁ SLOUČENINA CHLÓRU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	2995	PESTICID - ORGANICKÁ SLOUČENINA CHLÓRU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2996	PESTICID - ORGANICKÁ SLOUČENINA CHLÓRU, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2996	PESTICID - ORGANICKÁ SLOUČENINA CHLÓRU, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2996	PESTICID - ORGANICKÁ SLOUČENINA CHLÓRU, KAPALNÝ, TOXICKÝ
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	2997	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	2997	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	2997	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	2998	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	2998	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	2998	PESTICID NA BÁZI TRIAZINU, KAPALNÝ, TOXICKÝ
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3005	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3005	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3005	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3006	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3006	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, TOXICKÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky		
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
3006	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, TOXICKÝ	6.1	T6	III	6.1	61 648 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28	
3009	PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	I	6.1+3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3009	PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	II	6.1+3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3009	PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	III	6.1+3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28	
3010	PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ	6.1	T6	I	6.1	61 648 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3010	PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ	6.1	T6	II	6.1	61 648 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3010	PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ	6.1	T6	III	6.1	61 648 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28	
3011	PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	I	6.1+3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3011	PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	II	6.1+3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3011	PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	III	6.1+3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28	
3012	PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ	6.1	T6	I	6.1	61 648 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3012	PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ	6.1	T6	II	6.1	61 648 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3012	PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ	6.1	T6	III	6.1	61 648 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28	
3013	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	I	6.1+3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3013	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	II	6.1+3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3013	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	III	6.1+3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28	
3014	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ	6.1	T6	I	6.1	61 648 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3014	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ	6.1	T6	II	6.1	61 648 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepavní kusů	přepavní ve volně loženém stavu	nakládka, vykládka a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3006	PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, TOXICKÝ
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3009	PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3009	PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3009	PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3010	PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3010	PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3010	PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3011	PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3011	PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3011	PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3012	PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3012	PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3012	PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3013	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3013	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3013	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3014	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3014	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky		
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
3014	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ	6.1	T6	III	6.1	61 648 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28	
3015	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	I	6.1+3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3015	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	II	6.1+3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3015	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	III	6.1+3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28	
3016	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, TOXICKÝ	6.1	T6	I	6.1	61 648 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3016	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, TOXICKÝ	6.1	T6	II	6.1	61 648 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3016	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, TOXICKÝ	6.1	T6	III	6.1	61 648 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28	
3017	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	I	6.1+3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3017	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	II	6.1+3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3017	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	III	6.1+3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28	
3018	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ	6.1	T6	I	6.1	61 648 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3018	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ	6.1	T6	II	6.1	61 648 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3018	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ	6.1	T6	III	6.1	61 648 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28	
3019	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	I	6.1+3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3019	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	II	6.1+3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3019	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	III	6.1+3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28	
3020	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, KAPALNÝ, TOXICKÝ	6.1	T6	I	6.1	61 648 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	(4.3.5, 6.8.4)	(9.1.1.2)	(1.1.3.6 (8.6))	(7.2.4)	(7.3.3)	(7.5.11)	(8.5)	(5.3.2.3)		(3.1.2)
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3014	PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3015	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3015	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3015	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3016	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3016	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3016	PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, TOXICKÝ
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3017	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3017	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3017	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3018	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3018	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3018	PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3019	PESTICID - ORGANICKÁ SLOUČENINA CINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3019	PESTICID - ORGANICKÁ SLOUČENINA CINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3019	PESTICID - ORGANICKÁ SLOUČENINA CINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3020	PESTICID - ORGANICKÁ SLOUČENINA CINU, KAPALNÝ, TOXICKÝ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky		
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
3020	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, KAPALNÝ, TOXICKÝ	6.1	T6	II	6.1	61 648 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3020	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, KAPALNÝ, TOXICKÝ	6.1	T6	III	6.1	61 648 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28	
3021	PESTICID, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, J.N., s bodem vzplanutí nižším než 23 °C	3	FT2	I	3+6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27	
3021	PESTICID, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, J.N., s bodem vzplanutí nižším než 23 °C	3	FT2	II	3+6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27	
3022	1,2-BUTYLENOXID, STABILIZOVANÝ	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1	
3023	2-METHYL-2-HEPTANTHIOL	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP35	
3024	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	I	3+6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27	
3024	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	II	3+6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27	
3025	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	I	6.1+3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3025	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	II	6.1+3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3025	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	III	6.1+3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28	
3026	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ	6.1	T6	I	6.1	61 648 274	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3026	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ	6.1	T6	II	6.1	61 648 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3026	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ	6.1	T6	III	6.1	61 648 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28	
3027	PESTICID - DERIVÁT KUMARINU, TUHÝ, TOXICKÝ	6.1	T7	I	6.1	61 648 274	0	E5	P002 IBC07		MP18	T6	TP33	
3027	PESTICID - DERIVÁT KUMARINU, TUHÝ, TOXICKÝ	6.1	T7	II	6.1	61 648 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
3027	PESTICID - DERIVÁT KUMARINU, TUHÝ, TOXICKÝ	6.1	T7	III	6.1	61 648 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
3028	AKUMULÁTORY (BATERIE), SUCHÉ, OBSAHUJÍCÍ TUHÝ HYDROXID DRASELNÝ	8	C11		8	295 304 598	2 kg	E0	P801 P801a					
3048	PESTICID - FOSFID HLINÍKU	6.1	T7	I	6.1	153 648	0	E5	P002 IBC07		MP18	T6	TP33	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3020	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3020	PESTICID - ORGANICKÁ SLOUČENINA CÍNU, KAPALNÝ, TOXICKÝ
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	3021	PESTICID, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, J.N., s bodem vzplanutí nižším než 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	3021	PESTICID, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, J.N., s bodem vzplanutí nižším než 23 °C
LGBF		FL	2 (D/E)				S2 S20	339	3022	1,2-BUTYLENOXID, STABILIZOVANÝ
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3023	2-METHYL-2-HEPTANTHIOL
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	3024	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	3024	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3025	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3025	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3025	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3026	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3026	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3026	PESTICID - DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3027	PESTICID - DERIVÁT KUMARINU, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3027	PESTICID - DERIVÁT KUMARINU, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3027	PESTICID - DERIVÁT KUMARINU, TUHÝ, TOXICKÝ
			3 (E)		VV14			80	3028	AKUMULÁTORY (BATERIE), SUCHÉ, OBSAHUJÍCÍ TUHÝ HYDROXID DRASELNÝ
S10AH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	642	3048	PESTICID - FOSFID HLINIKU

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
3054	CYKLOHEXANTHIOL (CYKLOHEXYLMERKAPTAN)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
3055	2-(2-AMINOETHOXY)-ETHANOL	8	C7	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3056	n-HEPTALDEHYD	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
3057	TRIFLUORACETYLCHLORID	2	2TC		2.3+8		0	E0	P200		MP9	T50	TP21
3064	NITROGLYCERIN, ROZTOK V ALKOHOLU, s více než 1 %, ale nejvýše 5 % nitroglycerinu	3	D	II	3	359	0	E0	P300		MP2		
3065	NAPOJE ALKOHOLICKÉ, s obsahem více než 70 % obj. alkoholu	3	F1	II	3		5 L	E2	P001 IBC02 R001	PP2	MP19	T4	TP1
3065	NAPOJE ALKOHOLICKÉ, s více než 24 % obj., ale nejvýše 70 % obj. alkoholu	3	F1	III	3	144 145 247	5 L	E1	P001 IBC03 R001	PP2	MP19	T2	TP1
3066	BARVA (včetně laků, emalů, mořidel, šelaku a fermeží, leštidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů)	8	C9	II	8	163	1 L	E2	P001 IBC02		MP15	T7	TP2 TP28
3066	BARVA (včetně laků, emalů, mořidel, šelaku a fermeží, leštidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů)	8	C9	III	8	163	5 L	E1	P001 IBC03 R001		MP19	T4	TP1 TP29
3070	ETHYLENOXID A DICHLORDIFLUORMETHAN, SMĚS, s nejvýše 12,5 % ethylenoxidu	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
3071	THIOLY (merkaptany), KAPALNÉ, TOXICKÉ, HOŘLAVÉ, J.N. nebo SMĚSI THIOLŮ (merkaptanů), KAPALNÉ, TOXICKÉ, HOŘLAVÉ, J.N.	6.1	TF1	II	6.1+3	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3072	PROSTŘEDKY ZÁCHRANNÉ, NIKOLI SAMONAFUKOVACÍ, které obsahují nebezpečné látky jako výbavu	9	M5		9	296 635	0	E0	P905				
3073	VINYLPYRIDINY, STABILIZOVANÉ	6.1	TFC	II	6.1+3+8		100 ml	E4	P001 IBC01		MP15	T7	TP2
3077	LÁTKA OHROŽUJÍCÍ ŽIVOTNÍ PROSTŘEDÍ, TUHÁ, J.N.	9	M7	III	9	274 335 601	5 kg	E1	P002 IBC08 LP02 R001	PP12 B3	MP10	T1 BK1 BK2	TP33
3078	CER, třísky nebo krupice	4.3	W2	II	4.3	550	500 g	E2	P410 IBC07		MP14	T3	TP33
3079	METHAKRYLONITRIL, STABILIZOVANÝ	6.1	TF1	I	6.1+3	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
3080	ISOKYANÁTY, TOXICKÉ, HOŘLAVÉ, J.N. nebo ISOKYANÁT, ROZTOK, TOXICKÝ, HOŘLAVÝ, J.N.	6.1	TF1	II	6.1+3	274 551	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3082	LÁTKA OHROŽUJÍCÍ ŽIVOTNÍ PROSTŘEDÍ, KAPALNÁ, J.N.	9	M6	III	9	274 335 601	5 L	E1	P001 IBC03 LP01 R001	PP1	MP19	T4	TP1 TP29

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
LGBF		FL	3 (D/E)	V12			S2	30	3054	CYKLOHEXANTHIOL (CYKLOHEXYLMEKAPTAN)
L4BN		AT	3 (E)	V12				80	3055	2-(2-AMINOETHOXY)-ETHANOL
LGBF		FL	3 (D/E)	V12			S2	30	3056	n-HEPTALDEHYD
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	3057	TRIFLUORACETYLCHLORID
			2 (B)				S2 S14		3064	NITROGLYCERIN, ROZTOK V ALKOHOLU, s více než 1 %, ale nejvýše 5 % nitroglycerinu
LGBF		FL	2 (D/E)				S2 S20	33	3065	NÁPOJE ALKOHOLICKÉ, s obsahem více než 70 % obj. alkoholu
LGBF		FL	3 (D/E)	V12			S2	30	3065	NÁPOJE ALKOHOLICKÉ, s více než 24 % obj., ale nejvýše 70 % obj. alkoholu
L4BN		AT	2 (E)					80	3066	BARVA (včetně laků, emailů, mořidel, šelaku a fermezí, leštidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů)
L4BN		AT	3 (E)	V12				80	3066	BARVA (včetně laků, emailů, mořidel, šelaku a fermezí, leštidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3070	ETHYLENOXID A DICHLORDIFLUORMETHAN, SMĚS, s nejvýše 12,5 % ethylenoxidu
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3071	THIOLY (merkaptany), KAPALNÉ, TOXICKÉ, HOŘLAVÉ, J.N. nebo SMĚSI THIOLŮ (merkaptanů), KAPALNÉ, TOXICKÉ, HOŘLAVÉ, J.N.
			3 (E)						3072	PROSTŘEDKY ZÁCHRANNÉ, NIKOLI SAMONAFUKOVACÍ, které obsahují nebezpečné látky jako výbavu
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	638	3073	VINYLPYRIDINY, STABILIZOVANÉ
SGAV LGBV		AT	3 (E)	V13	VV1	CV13		90	3077	LÁTKA OHROŽUJÍCÍ ŽIVOTNÍ PROSTŘEDÍ, TUHÁ, J.N.
SGAN		AT	2 (D/E)	V1		CV23		423	3078	CER, třísky nebo krupice
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3079	METHAKRYLONITRIL, STABILIZOVANÝ
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3080	ISOKYANÁTY, TOXICKÉ, HOŘLAVÉ, J.N. nebo ISOKYANÁT, ROZTOK, TOXICKÝ, HOŘLAVÝ, J.N.
LGBV		AT	3 (E)	V12		CV13		90	3082	LÁTKA OHROŽUJÍCÍ ŽIVOTNÍ PROSTŘEDÍ, KAPALNÁ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3
3083	PERCHLORYLFLUORID	2	2TO		2.3+5.1		0	E0	P200		MP9	(M)	
3084	LÁTKA ŽIRAVÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	8	CO2	I	8+5.1	274	0	E0	P002		MP18	T6	TP33
3084	LÁTKA ŽIRAVÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	8	CO2	II	8+5.1	274	1 kg	E2	P002 IBC06		MP10	T3	TP33
3085	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, ŽIRAVÁ, J.N.	5.1	OC2	I	5.1+8	274	0	E0	P503		MP2		
3085	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, ŽIRAVÁ, J.N.	5.1	OC2	II	5.1+8	274	1 kg	E2	P002 IBC06		MP2	T3	TP33
3085	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, ŽIRAVÁ, J.N.	5.1	OC2	III	5.1+8	274	5 kg	E1	P002 IBC08 R001	B3	MP2	T1	TP33
3086	LÁTKA TOXICKÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	6.1	TO2	I	6.1+5.1	274	0	E5	P002		MP18	T6	TP33
3086	LÁTKA TOXICKÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	6.1	TO2	II	6.1+5.1	274	500 g	E4	P002 IBC06		MP10	T3	TP33
3087	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, TOXICKÁ, J.N.	5.1	OT2	I	5.1+6.1	274	0	E0	P503		MP2		
3087	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, TOXICKÁ, J.N.	5.1	OT2	II	5.1+6.1	274	1 kg	E2	P002 IBC06		MP2	T3	TP33
3087	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, TOXICKÁ, J.N.	5.1	OT2	III	5.1+6.1	274	5 kg	E1	P002 IBC08 R001	B3	MP2	T1	TP33
3088	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ORGANICKÁ, J.N.	4.2	S2	II	4.2	274	0	E2	P410 IBC06		MP14	T3	TP33
3088	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ORGANICKÁ, J.N.	4.2	S2	III	4.2	274	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
3089	PRÁŠEK KOVOVÝ, HOŘLAVÝ, J.N.	4.1	F3	II	4.1	552	1 kg	E2	P002 IBC08	B4	MP11	T3	TP33
3089	PRÁŠEK KOVOVÝ, HOŘLAVÝ, J.N.	4.1	F3	III	4.1	552	5 kg	E1	P002 IBC06 R001		MP11	T1	TP33
3090	BATERIE LITHIOVÉ KOVOVÉ (včetně baterií ze slitin lithia)	9	M4	II	9	188 230 310 636 661	0	E0	P903 P903a P903b				
3091	BATERIE LITHIOVÉ KOVOVÉ OBSAŽENÉ V ZAŘÍZENÍ nebo BATERIE LITHIOVÉ KOVOVÉ BALENÉ SE ZAŘÍZENÍM (včetně baterií ze slitin lithia)	9	M4	II	9	188 230 360 636 661	0	E0	P903 P903a P903b				
3092	1-METHOXY-2-PROPANOL (1-METHOXYPROPAN-2-OL)	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T2	TP1
3093	LÁTKA ŽIRAVÁ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	8	CO1	I	8+5.1	274	0	E0	P001		MP8 MP17		
3093	LÁTKA ŽIRAVÁ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	8	CO1	II	8+5.1	274	1 L	E2	P001 IBC02		MP15		
3094	LÁTKA ŽIRAVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.	8	CW1	I	8+4.3	274	0	E0	P001		MP8 MP17		
3094	LÁTKA ŽIRAVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.	8	CW1	II	8+4.3	274	1 L	E2	P001		MP15		
3095	LÁTKA ŽIRAVÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	8	CS2	I	8+4.2	274	0	E0	P002		MP18	T6	TP33
3095	LÁTKA ŽIRAVÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	8	CS2	II	8+4.2	274	1 kg	E2	P002 IBC06		MP10	T3	TP33
3096	LÁTKA ŽIRAVÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.	8	CW2	I	8+4.3	274	0	E0	P002		MP18	T6	TP33
3096	LÁTKA ŽIRAVÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.	8	CW2	II	8+4.3	274	1 kg	E2	P002 IBC06		MP10	T3	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	3083	PERCHLORYLFLUORID
S10AN L10BH		AT	1 (E)			CV24	S14	885	3084	LÁTKA ŽÍRAVÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.
SGAN L4BN		AT	2 (E)	V11		CV24		85	3084	LÁTKA ŽÍRAVÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.
			1 (E)			CV24	S20		3085	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, ŽÍRAVÁ, J.N.
SGAN	TU3	AT	2 (E)	V11		CV24		58	3085	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, ŽÍRAVÁ, J.N.
SGAN	TU3	AT	3 (E)			CV24		58	3085	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, ŽÍRAVÁ, J.N.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	665	3086	LÁTKA TOXICKÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	65	3086	LÁTKA TOXICKÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.
			1 (E)			CV24 CV28	S20		3087	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, TOXICKÁ, J.N.
SGAN	TU3	AT	2 (E)	V11		CV24 CV28		56	3087	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, TOXICKÁ, J.N.
SGAN	TU3	AT	3 (E)			CV24 CV28		56	3087	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, TOXICKÁ, J.N.
SGAV		AT	2 (D/E)	V1				40	3088	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ORGANICKÁ, J.N.
SGAV		AT	3 (E)	V1				40	3088	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ORGANICKÁ, J.N.
SGAN		AT	2 (E)	V11				40	3089	PRÁŠEK KOVOVÝ, HOŘLAVÝ, J.N.
SGAV		AT	3 (E)		VV1			40	3089	PRÁŠEK KOVOVÝ, HOŘLAVÝ, J.N.
			2 (E)						3090	BATERIE LITHIOVÉ KOVOVÉ (včetně baterií ze slitin lithia)
			2 (E)						3091	BATERIE LITHIOVÉ KOVOVÉ OBSAŽENÉ V ZAŘÍZENÍ nebo BATERIE LITHIOVÉ KOVOVÉ BALENÉ SE ZAŘÍZENÍM (včetně baterií ze slitin lithia)
LGBF		FL	3 (D/E)	V12			S2	30	3092	1-METHOXY-2-PROPANOL (1-METHOXYPROPAN-2-OL)
L10BH		AT	1 (E)			CV24	S14	885	3093	LÁTKA ŽÍRAVÁ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N.
L4BN		AT	2 (E)			CV24		85	3093	LÁTKA ŽÍRAVÁ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N.
L10BH		AT	1 (D/E)				S14	823	3094	LÁTKA ŽÍRAVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.
L4BN		AT	2 (E)					823	3094	LÁTKA ŽÍRAVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.
S10AN		AT	1 (E)				S14	884	3095	LÁTKA ŽÍRAVÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.
SGAN		AT	2 (E)	V11				84	3095	LÁTKA ŽÍRAVÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.
S10AN L10BH		AT	1 (E)				S14	842	3096	LÁTKA ŽÍRAVÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.
SGAN L4BN		AT	2 (E)	V11				842	3096	LÁTKA ŽÍRAVÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
3097	LÁTKA HOŘLAVÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	4.1	FO				PŘEPRAVA ZAKÁZÁNA						
3098	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, ŽÍRAVÁ, J.N.	5.1	OC1	I	5.1+8	274	0	E0	P502		MP2		
3098	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, ŽÍRAVÁ, J.N.	5.1	OC1	II	5.1+8	274	1 L	E2	P504 IBC01		MP2		
3098	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, ŽÍRAVÁ, J.N.	5.1	OC1	III	5.1+8	274	5 L	E1	P504 IBC02 R001		MP2		
3099	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, TOXICKÁ, J.N.	5.1	OT1	I	5.1+6.1	274	0	E0	P502		MP2		
3099	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, TOXICKÁ, J.N.	5.1	OT1	II	5.1+6.1	274	1 L	E2	P504 IBC01		MP2		
3099	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, TOXICKÁ, J.N.	5.1	OT1	III	5.1+6.1	274	5 L	E1	P504 IBC02 R001		MP2		
3100	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	5.1	OS				PŘEPRAVA ZAKÁZÁNA						
3101	PEROXID, ORGANICKÝ, TYP B, KAPALNÝ	5.2	P1		5.2+1	122 181 274	25 ml	E0	P520		MP4		
3102	PEROXID, ORGANICKÝ, TYP B, TUHÝ	5.2	P1		5.2+1	122 181 274	100 g	E0	P520		MP4		
3103	PEROXID, ORGANICKÝ, TYP C, KAPALNÝ	5.2	P1		5.2	122 274	25 ml	E0	P520		MP4		
3104	PEROXID, ORGANICKÝ, TYP C, TUHÝ	5.2	P1		5.2	122 274	100 g	E0	P520		MP4		
3105	PEROXID, ORGANICKÝ, TYP D, KAPALNÝ	5.2	P1		5.2	122 274	125 ml	E0	P520		MP4		
3106	PEROXID, ORGANICKÝ, TYP D, TUHÝ	5.2	P1		5.2	122 274	500 g	E0	P520		MP4		
3107	PEROXID, ORGANICKÝ, TYP E, KAPALNÝ	5.2	P1		5.2	122 274	125 ml	E0	P520		MP4		
3108	PEROXID, ORGANICKÝ, TYP E, TUHÝ	5.2	P1		5.2	122 274	500 g	E0	P520		MP4		
3109	PEROXID, ORGANICKÝ, TYP F, KAPALNÝ	5.2	P1		5.2	122 274	125 ml	E0	P520 IBC520		MP4	T23	
3110	PEROXID, ORGANICKÝ, TYP F, TUHÝ	5.2	P1		5.2	122 274	500 g	E0	P520 IBC520		MP4	T23	TP33
3111	PEROXID, ORGANICKÝ, TYP B, KAPALNÝ, S ŘÍZENÍM TEPLoty	5.2	P2		5.2+1	122 181 274	0	E0	P520		MP4		
3112	PEROXID, ORGANICKÝ, TYP B, TUHÝ, S ŘÍZENÍM TEPLoty	5.2	P2		5.2+1	122 181 274	0	E0	P520		MP4		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
PŘEPRAVA ZAKÁZÁNA										
			1 (E)			CV24	S20		3097	LÁTKA HOŘLAVÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.
			2 (E)			CV24			3098	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, ŽIRAVÁ, J.N.
			3 (E)			CV24			3098	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, ŽIRAVÁ, J.N.
			1 (E)			CV24 CV28	S20		3099	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, TOXICKÁ, J.N.
			2 (E)			CV24 CV28			3099	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, TOXICKÁ, J.N.
			3 (E)			CV24 CV28			3099	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, TOXICKÁ, J.N.
PŘEPRAVA ZAKÁZÁNA										
			1 (B)	V1 V5		CV15 CV20 CV22 CV24	S9 S17		3101	PEROXID, ORGANICKÝ, TYP B, KAPALNÝ
			1 (B)	V1 V5		CV15 CV20 CV22 CV24	S9 S17		3102	PEROXID, ORGANICKÝ, TYP B, TUHÝ
			1 (D)	V1		CV15 CV20 CV22 CV24	S8 S18		3103	PEROXID, ORGANICKÝ, TYP C, KAPALNÝ
			1 (D)	V1		CV15 CV20 CV22 CV24	S8 S18		3104	PEROXID, ORGANICKÝ, TYP C, TUHÝ
			2 (D)	V1		CV15 CV22 CV24	S19		3105	PEROXID, ORGANICKÝ, TYP D, KAPALNÝ
			2 (D)	V1		CV15 CV22 CV24	S19		3106	PEROXID, ORGANICKÝ, TYP D, TUHÝ
			2 (D)	V1		CV15 CV22 CV24			3107	PEROXID, ORGANICKÝ, TYP E, KAPALNÝ
			2 (D)	V1		CV15 CV22 CV24			3108	PEROXID, ORGANICKÝ, TYP E, TUHÝ
L4BN(+)	TU3 TU13 TU30 TE12 TA2 TM4	AT	2 (D)	V1		CV15 CV22 CV24		539	3109	PEROXID, ORGANICKÝ, TYP F, KAPALNÝ
S4AN(+)	TU3 TU13 TU30 TE12 TA2 TM4	AT	2 (D)	V1		CV15 CV22 CV24		539	3110	PEROXID, ORGANICKÝ, TYP F, TUHÝ
			1 (B)	V8		CV15 CV20 CV21 CV22 CV24	S4 S9 S16		3111	PEROXID, ORGANICKÝ, TYP B, KAPALNÝ, S ŘÍZENÍM TEPLoty
			1 (B)	V8		CV15 CV20 CV21 CV22 CV24	S4 S9 S16		3112	PEROXID, ORGANICKÝ, TYP B, TUHÝ, S ŘÍZENÍM TEPLoty

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky		
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
3113	PEROXID, ORGANICKÝ, TYP C, KAPALNÝ, S ŘÍZENÍM TEPLoty	5.2	P2		5.2	122 274	0	E0	P520		MP4			
3114	PEROXID, ORGANICKÝ, TYP C, TUHÝ, S ŘÍZENÍM TEPLoty	5.2	P2		5.2	122 274	0	E0	P520		MP4			
3115	PEROXID, ORGANICKÝ, TYP D, KAPALNÝ, S ŘÍZENÍM TEPLoty	5.2	P2		5.2	122 274	0	E0	P520		MP4			
3116	PEROXID, ORGANICKÝ, TYP D, TUHÝ, S ŘÍZENÍM TEPLoty	5.2	P2		5.2	122 274	0	E0	P520		MP4			
3117	PEROXID, ORGANICKÝ, TYP E, KAPALNÝ, S ŘÍZENÍM TEPLoty	5.2	P2		5.2	122 274	0	E0	P520		MP4			
3118	PEROXID, ORGANICKÝ, TYP E, TUHÝ, S ŘÍZENÍM TEPLoty	5.2	P2		5.2	122 274	0	E0	P520		MP4			
3119	PEROXID, ORGANICKÝ, TYP F, KAPALNÝ, S ŘÍZENÍM TEPLoty	5.2	P2		5.2	122 274	0	E0	P520 IBCS20		MP4	T23		
3120	PEROXID, ORGANICKÝ, TYP F, TUHÝ, S ŘÍZENÍM TEPLoty	5.2	P2		5.2	122 274	0	E0	P520 IBCS20		MP4	T23	TP33	
3121	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.	5.1	OW	PŘEPRAVA ZAKÁZÁNA										
3122	LÁTKA TOXICKÁ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	6.1	TO1	I	6.1+5.1	274 315	0	E5	P001		MP8 MP17			
3122	LÁTKA TOXICKÁ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	6.1	TO1	II	6.1+5.1	274	100 ml	E4	P001 IBC02		MP15			
3123	LÁTKA TOXICKÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.	6.1	TW1	I	6.1+4.3	274 315	0	E5	P099		MP8 MP17			
3123	LÁTKA TOXICKÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.	6.1	TW1	II	6.1+4.3	274	100 ml	E4	P001 IBC02		MP15			
3124	LÁTKA TOXICKÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	6.1	TS	I	6.1+4.2	274	0	E5	P002		MP18	T6	TP33	
3124	LÁTKA TOXICKÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	6.1	TS	II	6.1+4.2	274	0	E4	P002 IBC06		MP10	T3	TP33	
3125	LÁTKA TOXICKÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.	6.1	TW2	I	6.1+4.3	274	0	E5	P099		MP18	T6	TP33	
3125	LÁTKA TOXICKÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.	6.1	TW2	II	6.1+4.3	274	500 g	E4	P002 IBC06		MP10	T3	TP33	
3126	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	4.2	SC2	II	4.2+8	274	0	E2	P410 IBC05		MP14	T3	TP33	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			1 (D)	V8		CV15 CV20 CV21 CV22 CV24	S4 S8 S17		3113	PEROXID, ORGANICKÝ, TYP C, KAPALNÝ, S ŘÍZENÍM TEPLoty
			1 (D)	V8		CV15 CV20 CV21 CV22 CV24	S4 S8 S17		3114	PEROXID, ORGANICKÝ, TYP C, TUHÝ, S ŘÍZENÍM TEPLoty
			1 (D)	V8		CV15 CV21 CV22 CV24	S4 S18		3115	PEROXID, ORGANICKÝ, TYP D, KAPALNÝ, S ŘÍZENÍM TEPLoty
			1 (D)	V8		CV15 CV21 CV22 CV24	S4 S18		3116	PEROXID, ORGANICKÝ, TYP D, TUHÝ, S ŘÍZENÍM TEPLoty
			1 (D)	V8		CV15 CV21 CV22 CV24	S4 S19		3117	PEROXID, ORGANICKÝ, TYP E, KAPALNÝ, S ŘÍZENÍM TEPLoty
			1 (D)	V8		CV15 CV21 CV22 CV24	S4 S19		3118	PEROXID, ORGANICKÝ, TYP E, TUHÝ, S ŘÍZENÍM TEPLoty
L4BN(+)	TU3 TU13 TU30 TE12 TA2 TM4	AT	1 (D)	V8		CV15 CV21 CV22 CV24	S4	539	3119	PEROXID, ORGANICKÝ, TYP F, KAPALNÝ, S ŘÍZENÍM TEPLoty
S4AN(+)	TU3 TU13 TU30 TE12 TA2 TM4	AT	1 (D)	V8		CV15 CV21 CV22 CV24	S4	539	3120	PEROXID, ORGANICKÝ, TYP F, TUHÝ, S ŘÍZENÍM TEPLoty
PŘEPRAVA ZAKÁZÁNA									3121	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	665	3122	LÁTKA TOXICKÁ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	65	3122	LÁTKA TOXICKÁ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	623	3123	LÁTKA TOXICKÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	623	3123	LÁTKA TOXICKÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	664	3124	LÁTKA TOXICKÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	64	3124	LÁTKA TOXICKÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	642	3125	LÁTKA TOXICKÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	642	3125	LÁTKA TOXICKÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.
SGAN		AT	2 (D/E)	V1				48	3126	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
3126	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	4.2	SC2	III	4.2+8	274	0	E1	P002 IBC08 R001	B3	MP14	T1	TP33
3127	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	4.2	SO	PŘEPRAVA ZAKÁZÁNA									
3128	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, TOXICKÁ, ORGANICKÁ, J.N.	4.2	ST2	II	4.2+6.1	274	0	E2	P410 IBC05		MP14	T3	TP33
3128	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, TOXICKÁ, ORGANICKÁ, J.N.	4.2	ST2	III	4.2+6.1	274	0	E1	P002 IBC08 R001	B3	MP14	T1	TP33
3129	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, ŽÍRAVÁ, J.N.	4.3	WC1	I	4.3+8	274	0	E0	P402	RR7 RR8	MP2	T14	TP2 TP7
3129	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, ŽÍRAVÁ, J.N.	4.3	WC1	II	4.3+8	274	500 ml	E2	P402 IBC01	RR7 RR8	MP15	T11	TP2 TP7
3129	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, ŽÍRAVÁ, J.N.	4.3	WC1	III	4.3+8	274	1 L	E1	P001 IBC02 R001	RR7	MP15	T7	TP2 TP7
3130	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, TOXICKÁ, J.N.	4.3	WT1	I	4.3+6.1	274	0	E0	P402	RR4 RR8	MP2		
3130	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, TOXICKÁ, J.N.	4.3	WT1	II	4.3+6.1	274	500 ml	E2	P402 IBC01	RR4 RR8 BB1	MP15		
3130	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, TOXICKÁ, J.N.	4.3	WT1	III	4.3+6.1	274	1 L	E1	P001 IBC02 R001		MP15		
3131	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, ŽÍRAVÁ, J.N.	4.3	WC2	I	4.3+8	274	0	E0	P403		MP2	T9	TP7 TP33
3131	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, ŽÍRAVÁ, J.N.	4.3	WC2	II	4.3+8	274	500 g	E2	P410 IBC06		MP14	T3	TP33
3131	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, ŽÍRAVÁ, J.N.	4.3	WC2	III	4.3+8	274	1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33
3132	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, HOŘLAVÁ, J.N.	4.3	WF2	I	4.3+4.1	274	0	E0	P403 IBC99		MP2		
3132	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, HOŘLAVÁ, J.N.	4.3	WF2	II	4.3+4.1	274	500 g	E2	P410 IBC04		MP14	T3	TP33
3132	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, HOŘLAVÁ, J.N.	4.3	WF2	III	4.3+4.1	274	1 kg	E1	P410 IBC06		MP14	T1	TP33
3133	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	4.3	WO	PŘEPRAVA ZAKÁZÁNA									
3134	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, TOXICKÁ, J.N.	4.3	WT2	I	4.3+6.1	274	0	E0	P403		MP2		
3134	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, TOXICKÁ, J.N.	4.3	WT2	II	4.3+6.1	274	500 g	E2	P410 IBC05		MP14	T3	TP33
3134	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, TOXICKÁ, J.N.	4.3	WT2	III	4.3+6.1	274	1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33
3135	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	4.3	WS	I	4.3+4.2	274	0	E0	P403		MP2		
3135	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	4.3	WS	II	4.3+4.2	274	0	E2	P410 IBC05		MP14	T3	TP33
3135	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	4.3	WS	III	4.3+4.2	274	0	E1	P410 IBC08	B4	MP14	T1	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN		AT	3 (E)	V1				48	3126	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.
PŘEPRAVA ZAKÁZÁNA										
SGAN		AT	2 (D/E)	V1		CV28		46	3128	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, TOXICKÁ, ORGANICKÁ, J.N.
SGAN		AT	3 (E)	V1		CV28		46	3128	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, TOXICKÁ, ORGANICKÁ, J.N.
L10DH	TU14 TE21 TM2	AT	0 (B/E)	V1		CV23	S20	X382	3129	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, ŽÍRAVÁ, J.N.
L4DH	TU14 TE21 TM2	AT	0 (D/E)	V1		CV23		382	3129	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, ŽÍRAVÁ, J.N.
L4DH	TU14 TE21 TM2	AT	0 (E)	V1		CV23		382	3129	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, ŽÍRAVÁ, J.N.
L10DH	TU14 TE21 TM2	AT	0 (B/E)	V1		CV23 CV28	S20	X362	3130	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, TOXICKÁ, J.N.
L4DH	TU14 TE21 TM2	AT	0 (D/E)	V1		CV23 CV28		362	3130	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, TOXICKÁ, J.N.
L4DH	TU14 TE21 TM2	AT	0 (E)	V1		CV23 CV28		362	3130	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, TOXICKÁ, J.N.
S10AN L10DH	TU4 TU14 TU22 TE21 TM2	AT	0 (B/E)	V1		CV23	S20	X482	3131	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, ŽÍRAVÁ, J.N.
SGAN		AT	0 (D/E)	V1		CV23		482	3131	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, ŽÍRAVÁ, J.N.
SGAN		AT	0 (E)	V1		CV23		482	3131	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, ŽÍRAVÁ, J.N.
			0 (B/E)	V1		CV23	S20		3132	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, HOŘLAVÁ, J.N.
SGAN L4DH	TU14 TE21 TM2	AT	0 (D/E)	V1		CV23		423	3132	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, HOŘLAVÁ, J.N.
SGAN L4DH	TU14 TE21 TM2	AT	0 (E)	V1		CV23		423	3132	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, HOŘLAVÁ, J.N.
PŘEPRAVA ZAKÁZÁNA										
			0 (E)	V1		CV23 CV28	S20		3134	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, TOXICKÁ, J.N.
SGAN		AT	0 (D/E)	V1		CV23 CV28		462	3134	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, TOXICKÁ, J.N.
SGAN		AT	0 (E)	V1		CV23 CV28		462	3134	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, TOXICKÁ, J.N.
			1 (B/E)	V1		CV23	S20		3135	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.
SGAN L4DH	TU14 TE21 TM2	AT	2 (D/E)	V1		CV23		423	3135	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.
SGAN L4DH	TU14 TE21 TM2	AT	3 (E)	V1		CV23		423	3135	LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
3136	TRIFLUORMETHAN, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2	3A		2.2	593	120 ml	E1	P203		MP9	T75	TP5
3137	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, HOŘLAVÁ, J.N.	5.1	OF	PŘEPRAVA ZAKÁZÁNA									
3138	ETHYLEN, ACETYLEN A PROPYLEN, SMĚS, HLUBOCE ZCHLAZENÁ, KAPALNÁ, obsahující nejméně 71,5 % ethylenu, nejvíce 22,5 % acetylenu a nejvíce 6 % propylenu	2	3F		2.1		0	E0	P203		MP9	T75	TP5
3139	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, J.N.	5.1	O1	I	5.1	274	0	E0	P502		MP2		
3139	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, J.N.	5.1	O1	II	5.1	274	1 L	E2	P504 IBC02		MP2		
3139	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, J.N.	5.1	O1	III	5.1	274	5 L	E1	P504 IBC02 R001		MP2		
3140	ALKALOIDY, KAPALNÉ, J.N. nebo SOLI ALKALOIDŮ, KAPALNÉ, J.N.	6.1	T1	I	6.1	43 274	0	E5	P001		MP8 MP17		
3140	ALKALOIDY, KAPALNÉ, J.N. nebo SOLI ALKALOIDŮ, KAPALNÉ, J.N.	6.1	T1	II	6.1	43 274	100 ml	E4	P001 IBC02		MP15		
3140	ALKALOIDY, KAPALNÉ, J.N. nebo SOLI ALKALOIDŮ, KAPALNÉ, J.N.	6.1	T1	III	6.1	43 274	5 L	E1	P001 IBC03 LP01 R001		MP19		
3141	SLOUČENINA ANTIMONU, ANORGANICKÁ, KAPALNÁ, J.N.	6.1	T4	III	6.1	45 274 512	5 L	E1	P001 IBC03 LP01 R001		MP19		
3142	PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, TOXICKÝ, J.N.	6.1	T1	I	6.1	274	0	E5	P001		MP8 MP17		
3142	PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, TOXICKÝ, J.N.	6.1	T1	II	6.1	274	100 ml	E4	P001 IBC02		MP15		
3142	PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, TOXICKÝ, J.N.	6.1	T1	III	6.1	274	5 L	E1	P001 IBC03 LP01 R001		MP19		
3143	BARVIVO, TUHÉ, TOXICKÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, TOXICKÝ, J.N.	6.1	T2	I	6.1	274	0	E5	P002 IBC07		MP18	T6	TP33
3143	BARVIVO, TUHÉ, TOXICKÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, TOXICKÝ, J.N.	6.1	T2	II	6.1	274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3143	BARVIVO, TUHÉ, TOXICKÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, TOXICKÝ, J.N.	6.1	T2	III	6.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3144	SLOUČENINA NIKOTINU, KAPALNÁ, J.N. nebo PŘÍPRAVKY NIKOTINOVÉ, KAPALNÉ, J.N.	6.1	T1	I	6.1	43 274	0	E5	P001		MP8 MP17		
3144	SLOUČENINA NIKOTINU, KAPALNÁ, J.N. nebo PŘÍPRAVKY NIKOTINOVÉ, KAPALNÉ, J.N.	6.1	T1	II	6.1	43 274	100 ml	E4	P001 IBC02		MP15		
3144	SLOUČENINA NIKOTINU, KAPALNÁ, J.N. nebo PŘÍPRAVKY NIKOTINOVÉ, KAPALNÉ, J.N.	6.1	T1	III	6.1	43 274	5 L	E1	P001 IBC03 LP01 R001		MP19		
3145	ALKYL FENOLY, KAPALNÉ, J.N. (včetně homologů C2-C12)	8	C3	I	8		0	E0	P001		MP8 MP17	T14	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	3136	TRIFLUORMETHAN, HLUBOCE ZCHLAZENÝ, KAPALNÝ
PŘEPRAVA ZAKÁZÁNA										
RxBN	TU18 TA4 TT9	FL	2 (B/D)	V5		CV9 CV11 CV36	S2 S17	223	3138	LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, HOŘLAVÁ, J.N.
			1 (E)			CV24	S20		3139	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, J.N.
			2 (E)			CV24			3139	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, J.N.
			3 (E)			CV24			3139	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, J.N.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3140	ALKALOIDY, KAPALNÉ, J.N. nebo SOLI ALKALOIDŮ, KAPALNÉ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3140	ALKALOIDY, KAPALNÉ, J.N. nebo SOLI ALKALOIDŮ, KAPALNÉ, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3140	ALKALOIDY, KAPALNÉ, J.N. nebo SOLI ALKALOIDŮ, KAPALNÉ, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3141	SLOUČENINA ANTIMONU, ANORGANICKÁ, KAPALNÁ, J.N.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3142	PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, TOXICKÝ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3142	PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, TOXICKÝ, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3142	PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, TOXICKÝ, J.N.
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3143	BARVIVO, TUHÉ, TOXICKÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, TOXICKÝ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3143	BARVIVO, TUHÉ, TOXICKÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, TOXICKÝ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3143	BARVIVO, TUHÉ, TOXICKÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, TOXICKÝ, J.N.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3144	SLOUČENINA NIKOTINU, KAPALNÁ, J.N. nebo PŘÍPRAVKY NIKOTINOVÉ, KAPALNÉ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3144	SLOUČENINA NIKOTINU, KAPALNÁ, J.N. nebo PŘÍPRAVKY NIKOTINOVÉ, KAPALNÉ, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3144	SLOUČENINA NIKOTINU, KAPALNÁ, J.N. nebo PŘÍPRAVKY NIKOTINOVÉ, KAPALNÉ, J.N.
L10BH		AT	1 (E)				S20	88	3145	ALKYL FENOLY, KAPALNÉ, J.N. (včetně homologů C2-C12)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
3145	ALKYLFENOLY, KAPALNÉ, J.N. (včetně homologů C2-C12)	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
3145	ALKYLFENOLY, KAPALNÉ, J.N. (včetně homologů C2-C12)	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3146	SLOUČENINA CÍNU, ORGANICKÁ, TUHÁ, J.N.	6.1	T3	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33
3146	SLOUČENINA CÍNU, ORGANICKÁ, TUHÁ, J.N.	6.1	T3	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3146	SLOUČENINA CÍNU, ORGANICKÁ, TUHÁ, J.N.	6.1	T3	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3147	BARVIVO, TUHÉ, ŽÍRAVÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, ŽÍRAVÝ, J.N.	8	C10	I	8	274	0	E0	P002 IBC07		MP18	T6	TP33
3147	BARVIVO, TUHÉ, ŽÍRAVÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, ŽÍRAVÝ, J.N.	8	C10	II	8	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3147	BARVIVO, TUHÉ, ŽÍRAVÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, ŽÍRAVÝ, J.N.	8	C10	III	8	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3148	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, J.N.	4.3	W1	I	4.3	274	0	E0	P402	RR8	MP2	T13	TP2 TP7 TP38
3148	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, J.N.	4.3	W1	II	4.3	274	500 ml	E2	P402 IBC01	RR8	MP15	T7	TP2 TP7
3148	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, J.N.	4.3	W1	III	4.3	274	1 L	E1	P001 IBC02 R001		MP15	T7	TP2 TP7
3149	PEROXID VODÍKU A KYSELINA PEROCTOVÁ, SMĚS, s kyselinou (kyselinami), vodou a nejvýše 5 % kyseliny peroctové, STABILIZOVANÁ	5.1	OC1	II	5.1+8	196 553	1 L	E2	P504 IBC02	PP10 B5	MP15	T7	TP2 TP6 TP24
3150	PŘÍSTROJE MALÉ, POHÁNĚNÉ PLYNNÝM UHLOVODÍKEM nebo NÁDOBKY S PLYNNÝM UHLOVODÍKEM, OPAKOVANĚ PLNITELNÉ, PRO MALÉ PŘÍSTROJE, s odběrním ventilem	2	6F		2.1		0	E0	P208		MP9		
3151	BIFENYLY POLYHALOGENOVANÉ, KAPALNÉ nebo TERFENYLY POLYHALOGENOVANÉ, KAPALNÉ	9	M2	II	9	203 305	1 L	E2	P906 IBC02		MP15		
3152	BIFENYLY POLYHALOGENOVANÉ, TUHÉ nebo TERFENYLY POLYHALOGENOVANÉ, TUHÉ	9	M2	II	9	203 305	1 kg	E2	P906 IBC08	B4	MP10	T3	TP33
3153	PERFLUORMETHYLVINYLETHER	2	2F		2.1		0	E0	P200		MP9	(M) T50	
3154	PERFLUORETHYLVINYLETHER	2	2F		2.1		0	E0	P200		MP9	(M)	
3155	PENTACHLORFENOL	6.1	T2	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3156	PLYN STLAČENÝ, PODPORUJÍCÍ HOŘENÍ, J.N.	2	1O		2.2+5.1	274 655	0	E0	P200		MP9	(M)	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BN		AT	2 (E)					80	3145	ALKYL FENOLY, KAPALNÉ, J.N. (včetně homologů C2-C12)
L4BN		AT	3 (E)	V12				80	3145	ALKYL FENOLY, KAPALNÉ, J.N. (včetně homologů C2-C12)
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3146	SLOUČENINA CÍNU, ORGANICKÁ, TUHÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3146	SLOUČENINA CÍNU, ORGANICKÁ, TUHÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3146	SLOUČENINA CÍNU, ORGANICKÁ, TUHÁ, J.N.
S10AN L10BH		AT	1 (E)	V10			S20	88	3147	BARVIVO, TUHÉ, ŽÍRAVÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, ŽÍRAVÝ, J.N.
SGAN L4BN		AT	2 (E)	V11				80	3147	BARVIVO, TUHÉ, ŽÍRAVÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, ŽÍRAVÝ, J.N.
SGAV L4BN		AT	3 (E)		VV9			80	3147	BARVIVO, TUHÉ, ŽÍRAVÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, ŽÍRAVÝ, J.N.
L10DH	TU14 TE21 TM2	AT	0 (B/E)	V1		CV23	S20	X323	3148	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, J.N.
L4DH	TU14 TE21 TM2	AT	0 (D/E)	V1		CV23		323	3148	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, J.N.
L4DH	TU14 TE21 TM2	AT	0 (E)	V1		CV23		323	3148	LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, J.N.
L4BV(+)	TU3 TC2 TE8 TE11 TT1	AT	2 (E)			CV24		58	3149	PEROXID VODÍKU A KYSELINA PEROCTOVÁ, SMĚS, s kyselinou (kyselinami), vodou a nejvýše 5 % kyseliny peroctové, STABILIZOVANÁ
			2 (D)			CV9	S2		3150	PŘÍSTROJE MALÉ, POHÁNĚNÉ PLYNNÝM UHLOVODÍKEM nebo NÁDOBKY S PLYNNÝM UHLOVODÍKEM, OPAKOVANÉ PLNITELNÉ, PRO MALÉ PŘÍSTROJE, s odběrním ventilem
L4BH	TU15	AT	0 (D/E)		VV15	CV1 CV13 CV28	S19	90	3151	BIFENYLY POLYHALOGENOVANÉ, KAPALNÉ nebo TERFENYLY POLYHALOGENOVANÉ, KAPALNÉ
S4AH L4BH	TU15	AT	0 (D/E)	V11	VV15	CV1 CV13 CV28	S19	90	3152	BIFENYLY POLYHALOGENOVANÉ, TUHÉ nebo TERFENYLY POLYHALOGENOVANÉ, TUHÉ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	3153	PERFLUORMETHYL VINYLETHER
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	3154	PERFLUORETHYL VINYLETHER
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3155	PENTACHLORFENOL
CxBN(M)	TA4 TT9	AT	3 (E)			CV9 CV10 CV36		25	3156	PLYN STLAČENÝ, PODPORUJÍCÍ HOŘENÍ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřátá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
3157	PLYN ZKAPALNĚNÝ, PODPORUJÍCÍ HOŘENÍ, J.N.	2	2O		2.2+5.1	274	0	E0	P200		MP9	(M)	
3158	PLYN HLUBOCE ZCHLAZENÝ, KAPALNÝ, J.N.	2	3A		2.2	274 593	120 ml	E1	P203		MP9	T75	TP5
3159	1,1,1,2-TETRAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 134a)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50	
3160	PLYN ZKAPALNĚNÝ, TOXICKÝ, HOŘLAVÝ, J.N.	2	2TF		2.3+2.1	274	0	E0	P200		MP9	(M)	
3161	PLYN ZKAPALNĚNÝ, HOŘLAVÝ, J.N.	2	2F		2.1	274	0	E0	P200		MP9	(M) T50	
3162	PLYN ZKAPALNĚNÝ, TOXICKÝ, J.N.	2	2T		2.3	274	0	E0	P200		MP9	(M)	
3163	PLYN ZKAPALNĚNÝ, J.N.	2	2A		2.2	274	120 ml	E1	P200		MP9	(M) T50	
3164	PŘEDMĚTY POD PNEUMATICKÝM TLAKEM nebo PŘEDMĚTY POD HYDRAULICKÝM TLAKEM (s nehořlavým plynem)	2	6A		2.2	283 594	120 ml	E0	P003		MP9		
3165	NÁDRŽ PALIVOVÁ PRO HYDRAULICKÉ AGREGÁTY LETADEL (obsahující směs bezvodého hydrazinu a metylhydrazinu) (Palivo M86)	3	FTC	I	3+6.1+8		0	E0	P301		MP7		
3166	Motor spalovací nebo vozidlo poháněné hořlavým plynem nebo vozidlo poháněné hořlavou kapalinou nebo motor, palivové články poháněné hořlavým plynem nebo motor, palivové články poháněné hořlavou kapalinou nebo vozidlo, palivové články poháněné hořlavým plynem nebo vozidlo, palivové články poháněné hořlavou kapalinou	9	M11			NEJÍ PŘEDMĚTEM PRO ADR							
3167	VZOREK PLYNU, NESTLAČENÝ, HOŘLAVÝ, J.N., který není hluboce zchlazený	2	7F		2.1		0	E0	P201		MP9		
3168	VZOREK PLYNU, NESTLAČENÝ, TOXICKÝ, HOŘLAVÝ, J.N., který není hluboce zchlazený	2	7TF		2.3+2.1		0	E0	P201		MP9		
3169	VZOREK PLYNU, NESTLAČENÝ, TOXICKÝ, J.N., který není hluboce zchlazený	2	7T		2.3		0	E0	P201		MP9		
3170	PRODUKTY VEDLEJŠÍ Z VÝROBY HLINÍKU nebo PRODUKTY VEDLEJŠÍ Z TAVENÍ HLINÍKU	4.3	W2	II	4.3	244	500 g	E2	P410 IBC07		MP14	T3 BK1 BK2	TP33
3170	PRODUKTY VEDLEJŠÍ Z VÝROBY HLINÍKU nebo PRODUKTY VEDLEJŠÍ Z TAVENÍ HLINÍKU	4.3	W2	III	4.3	244	1 kg	E1	P002 IBC08 R001	B4	MP14	T1 BK1 BK2	TP33
3171	Vozidlo na akumulátorový pohon nebo přístroj na akumulátorový pohon	9	M11			NEJÍ PŘEDMĚTEM PRO ADR, viz též zvláštní ustanovení 240 v kapitole 3.3							
3172	TOXINY, ZÍSKANÉ Z ŽIVÝCH ORGANISMŮ, KAPALNÉ, J.N.	6.1	T1	I	6.1	210 274	0	E5	P001		MP8 MP17		
3172	TOXINY, ZÍSKANÉ Z ŽIVÝCH ORGANISMŮ, KAPALNÉ, J.N.	6.1	T1	II	6.1	210 274	100 ml	E4	P001 IBC02		MP15		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		25	3157	PLYN ZKAPALNĚNÝ, PODPORUJÍCÍ HOŘENÍ, J.N.
RxBN	TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	22	3158	PLYN HLUBOCE ZCHLAZENÝ, KAPALNÝ, J.N.
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3159	1,1,1,2-TETRAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 134a)
PxBH(M)	TU6 TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	3160	PLYN ZKAPALNĚNÝ, TOXICKÝ, HOŘLAVÝ, J.N.
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	3161	PLYN ZKAPALNĚNÝ, HOŘLAVÝ, J.N.
PxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	26	3162	PLYN ZKAPALNĚNÝ, TOXICKÝ, J.N.
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3163	PLYN ZKAPALNĚNÝ, J.N.
			3 (E)			CV9			3164	PŘEDMĚTY POD PNEUMATICKÝM TLAKEM nebo PŘEDMĚTY POD HYDRAULICKÝM TLAKEM (s nehořlavým plynem)
			1 (E)			CV13 CV28	S2 S19		3165	NÁDRŽ PALIVOVÁ PRO HYDRAULICKÉ AGREGÁTY LETADEL (obsahující směs bezvodého hydrazinu a methylhydrazinu) (Palivo M86)
NENÍ PŘEDMĚTEM PRO ADR									3166	Motor spalovací nebo vozidlo poháněné hořlavým plynem nebo vozidlo poháněné hořlavou kapalinou nebo motor, palivové články poháněné hořlavým plynem nebo motor, palivové články poháněné hořlavou kapalinou nebo vozidlo, palivové články poháněné hořlavým plynem nebo vozidlo, palivové články poháněné hořlavou kapalinou
			2 (D)			CV9	S2		3167	VZOREK PLYNU, NESTLAČENÝ, HOŘLAVÝ, J.N., který není hluboce zchlazený
			1 (D)			CV9	S2		3168	VZOREK PLYNU, NESTLAČENÝ, TOXICKÝ, HOŘLAVÝ, J.N., který není hluboce zchlazený
			1 (D)			CV9			3169	VZOREK PLYNU, NESTLAČENÝ, TOXICKÝ, J.N., který není hluboce zchlazený
SGAN		AT	2 (D/E)	V1	VV3	CV23		423	3170	PRODUKTY VEDLEJŠÍ Z VÝROBY HLINÍKU nebo PRODUKTY VEDLEJŠÍ Z TAVENÍ HLINÍKU
SGAN		AT	3 (E)	V1	VV1 VV5	CV23		423	3170	PRODUKTY VEDLEJŠÍ Z VÝROBY HLINÍKU nebo PRODUKTY VEDLEJŠÍ Z TAVENÍ HLINÍKU
NENÍ PŘEDMĚTEM PRO ADR, viz též zvláštní ustanovení 240 v kapitole 3.3									3171	Vozidlo na akumulátorový pohon nebo přístroj na akumulátorový pohon
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3172	TOXINY, ZÍSKANÉ Z ŽIVÝCH ORGANISMŮ, KAPALNÉ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3172	TOXINY, ZÍSKANÉ Z ŽIVÝCH ORGANISMŮ, KAPALNÉ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
3172	TOXINY, ZÍSKANÉ Z ŽIVÝCH ORGANISMŮ, KAPALNÉ, J.N.	6.1	T1	III	6.1	210 274	5 L	E1	P001 IBC03 LP01 R001		MP19		
3174	SULFID TITANIČITÝ	4.2	S4	III	4.2		0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
3175	LÁTKY TUHÉ nebo směsi tuhých látek (jako přípravky a odpady), OBSAHUJÍCÍ HOŘLAVÉ KAPALNÉ LÁTKY, J.N., s bodem vzplanutí nejvýše 60 °C	4.1	F1	II	4.1	216 274 601	1 kg	E2	P002 IBC06 R001	PP9	MP11	T3 BK1 BK2	TP33
3176	LÁTKA HOŘLAVÁ, TUHÁ, ORGANICKÁ, ROZTAVENÁ, J.N.	4.1	F2	II	4.1	274	0	E0				T3	TP3 TP26
3176	LÁTKA HOŘLAVÁ, TUHÁ, ORGANICKÁ, ROZTAVENÁ, J.N.	4.1	F2	III	4.1	274	0	E0				T1	TP3 TP26
3178	LÁTKA HOŘLAVÁ, TUHÁ, ANORGANICKÁ, J.N.	4.1	F3	II	4.1	274	1 kg	E2	P002 IBC08	B4	MP11	T3	TP33
3178	LÁTKA HOŘLAVÁ, TUHÁ, ANORGANICKÁ, J.N.	4.1	F3	III	4.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33
3179	LÁTKA HOŘLAVÁ, TUHÁ, TOXICKÁ, ANORGANICKÁ, J.N.	4.1	FT2	II	4.1+6.1	274	1 kg	E2	P002 IBC06		MP10	T3	TP33
3179	LÁTKA HOŘLAVÁ, TUHÁ, TOXICKÁ, ANORGANICKÁ, J.N.	4.1	FT2	III	4.1+6.1	274	5 kg	E1	P002 IBC06 R001		MP10	T1	TP33
3180	LÁTKA HOŘLAVÁ, TUHÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.	4.1	FC2	II	4.1+8	274	1 kg	E2	P002 IBC06		MP10	T3	TP33
3180	LÁTKA HOŘLAVÁ, TUHÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.	4.1	FC2	III	4.1+8	274	5 kg	E1	P002 IBC06 R001		MP10	T1	TP33
3181	SOLI ORGANICKÝCH SLOUČENIN, KOVOVÉ, HOŘLAVÉ, J.N.	4.1	F3	II	4.1	274	1 kg	E2	P002 IBC08	B4	MP11	T3	TP33
3181	SOLI ORGANICKÝCH SLOUČENIN, KOVOVÉ, HOŘLAVÉ, J.N.	4.1	F3	III	4.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP11	T1	TP33
3182	HYDRIDY KOVŮ, HOŘLAVÉ, J.N.	4.1	F3	II	4.1	274 554	1 kg	E2	P410 IBC04	PP40	MP11	T3	TP33
3182	HYDRIDY KOVŮ, HOŘLAVÉ, J.N.	4.1	F3	III	4.1	274 554	5 kg	E1	P002 IBC04 R001		MP11	T1	TP33
3183	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ORGANICKÁ, J.N.	4.2	S1	II	4.2	274	0	E2	P001 IBC02		MP15		
3183	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ORGANICKÁ, J.N.	4.2	S1	III	4.2	274	0	E1	P001 IBC02 R001		MP15		
3184	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, TOXICKÁ, ORGANICKÁ, J.N.	4.2	ST1	II	4.2+6.1	274	0	E2	P402 IBC02		MP15		
3184	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, TOXICKÁ, ORGANICKÁ, J.N.	4.2	ST1	III	4.2+6.1	274	0	E1	P001 IBC02 R001		MP15		
3185	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	4.2	SC1	II	4.2+8	274	0	E2	P402 IBC02		MP15		
3185	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	4.2	SC1	III	4.2+8	274	0	E1	P001 IBC02 R001		MP15		
3186	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ANORGANICKÁ, J.N.	4.2	S3	II	4.2	274	0	E2	P001 IBC02		MP15		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3172	TOXINY, ZÍSKANÉ Z ŽIVÝCH ORGANISMŮ, KAPALNÉ, J.N.
SGAN		AT	3 (E)	V1				40	3174	SULFID TITANIČITÝ
		AT	2 (E)	V11	VV3			40	3175	LÁTKY TUHÉ nebo směsi tuhých látek (jako přípravky a odpady), OBSAHUJÍCÍ HOŘLAVÉ KAPALNÉ LÁTKY, J.N., s bodem vzplanutí nejvýše 60 °C
LGBV	TU27 TE4 TE6	AT	2 (E)					44	3176	LÁTKA HOŘLAVÁ, TUHÁ, ORGANICKÁ, ROZTAVENÁ, J.N.
LGBV	TU27 TE4 TE6	AT	3 (E)					44	3176	LÁTKA HOŘLAVÁ, TUHÁ, ORGANICKÁ, ROZTAVENÁ, J.N.
SGAN		AT	2 (E)	V11				40	3178	LÁTKA HOŘLAVÁ, TUHÁ, ANORGANICKÁ, J.N.
SGAV		AT	3 (E)		VV1			40	3178	LÁTKA HOŘLAVÁ, TUHÁ, ANORGANICKÁ, J.N.
SGAN		AT	2 (E)	V11		CV28		46	3179	LÁTKA HOŘLAVÁ, TUHÁ, TOXICKÁ, ANORGANICKÁ, J.N.
SGAN		AT	3 (E)			CV28		46	3179	LÁTKA HOŘLAVÁ, TUHÁ, TOXICKÁ, ANORGANICKÁ, J.N.
SGAN		AT	2 (E)	V11				48	3180	LÁTKA HOŘLAVÁ, TUHÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.
SGAN		AT	3 (E)					48	3180	LÁTKA HOŘLAVÁ, TUHÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.
SGAN		AT	2 (E)	V11				40	3181	SOLI ORGANICKÝCH SLOUČENIN, KOVOVÉ, HOŘLAVÉ, J.N.
SGAV		AT	3 (E)		VV1			40	3181	SOLI ORGANICKÝCH SLOUČENIN, KOVOVÉ, HOŘLAVÉ, J.N.
SGAN		AT	2 (E)					40	3182	HYDRIDY KOVŮ, HOŘLAVÉ, J.N.
SGAV		AT	3 (E)		VV1			40	3182	HYDRIDY KOVŮ, HOŘLAVÉ, J.N.
L4DH	TU14 TE21	AT	2 (D/E)	V1				30	3183	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ORGANICKÁ, J.N.
L4DH	TU14 TE21	AT	3 (E)	V1				30	3183	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ORGANICKÁ, J.N.
L4DH	TU14 TE21	AT	2 (D/E)	V1		CV28		36	3184	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, TOXICKÁ, ORGANICKÁ, J.N.
L4DH	TU14 TE21	AT	3 (E)	V1		CV28		36	3184	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, TOXICKÁ, ORGANICKÁ, J.N.
L4DH	TU14 TE21	AT	2 (D/E)	V1				38	3185	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.
L4DH	TU14 TE21	AT	3 (E)	V1				38	3185	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.
L4DH	TU14 TE21	AT	2 (D/E)	V1				30	3186	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ANORGANICKÁ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
3186	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ANORGANICKÁ, J.N.	4.2	S3	III	4.2	274	0	E1	P001 IBC02 R001		MP15		
3187	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, TOXICKÁ, ANORGANICKÁ, J.N.	4.2	ST3	II	4.2+6.1	274	0	E2	P402 IBC02		MP15		
3187	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, TOXICKÁ, ANORGANICKÁ, J.N.	4.2	ST3	III	4.2+6.1	274	0	E1	P001 IBC02 R001		MP15		
3188	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ŽIRAVÁ, ANORGANICKÁ, J.N.	4.2	SC3	II	4.2+8	274	0	E2	P402 IBC02		MP15		
3188	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ŽIRAVÁ, ANORGANICKÁ, J.N.	4.2	SC3	III	4.2+8	274	0	E1	P001 IBC02 R001		MP15		
3189	PRÁŠEK KOVOVÝ, SCHOPNÝ SAMOOHŘEVU, J.N.	4.2	S4	II	4.2	274 555	0	E2	P410 IBC06		MP14	T3	TP33
3189	PRÁŠEK KOVOVÝ, SCHOPNÝ SAMOOHŘEVU, J.N.	4.2	S4	III	4.2	274 555	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
3190	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ANORGANICKÁ, J.N.	4.2	S4	II	4.2	274	0	E2	P410 IBC06		MP14	T3	TP33
3190	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ANORGANICKÁ, J.N.	4.2	S4	III	4.2	274	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
3191	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, TOXICKÁ, ANORGANICKÁ, J.N.	4.2	ST4	II	4.2+6.1	274	0	E2	P410 IBC05		MP14	T3	TP33
3191	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, TOXICKÁ, ANORGANICKÁ, J.N.	4.2	ST4	III	4.2+6.1	274	0	E1	P002 IBC08 R001	B3	MP14	T1	TP33
3192	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ŽIRAVÁ, ANORGANICKÁ, J.N.	4.2	SC4	II	4.2+8	274	0	E2	P410 IBC05		MP14	T3	TP33
3192	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ŽIRAVÁ, ANORGANICKÁ, J.N.	4.2	SC4	III	4.2+8	274	0	E1	P002 IBC08 R001	B3	MP14	T1	TP33
3194	LÁTKA PYROFORNÍ, KAPALNÁ, ANORGANICKÁ, J.N.	4.2	S3	I	4.2	274	0	E0	P400		MP2		
3200	LÁTKA PYROFORNÍ, TUHÁ, ANORGANICKÁ, J.N.	4.2	S4	I	4.2	274	0	E0	P404		MP13	T21	TP7 TP33
3205	ALKOHOLÁTY KOVŮ ALKALICKÝCH ZEMIN, J.N.	4.2	S4	II	4.2	183 274	0	E2	P410 IBC06		MP14	T3	TP33
3205	ALKOHOLÁTY KOVŮ ALKALICKÝCH ZEMIN, J.N.	4.2	S4	III	4.2	183 274	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
3206	ALKOHOLÁTY ALKALICKÝCH KOVŮ, SCHOPNÉ SAMOOHŘEVU, ŽIRAVÉ, J.N.	4.2	SC4	II	4.2+8	182 274	0	E2	P410 IBC05		MP14	T3	TP33
3206	ALKOHOLÁTY ALKALICKÝCH KOVŮ, SCHOPNÉ SAMOOHŘEVU, ŽIRAVÉ, J.N.	4.2	SC4	III	4.2+8	182 274	0	E1	P002 IBC08 R001	B3	MP14	T1	TP33
3208	LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, J.N.	4.3	W2	I	4.3	274 557	0	E0	P403 IBC99		MP2		
3208	LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, J.N.	4.3	W2	II	4.3	274 557	500 g	E2	P410 IBC07		MP14	T3	TP33
3208	LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, J.N.	4.3	W2	III	4.3	274 557	1 kg	E1	P410 IBC08 R001	B4	MP14	T1	TP33
3209	LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.	4.3	WS	I	4.3+4.2	274 558	0	E0	P403		MP2		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4DH	TU14 TE21	AT	3 (E)	V1				30	3186	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ANORGANICKÁ, J.N.
L4DH	TU14 TE21	AT	2 (D/E)	V1		CV28		36	3187	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, TOXICKÁ, ANORGANICKÁ, J.N.
L4DH	TU14 TE21	AT	3 (E)	V1		CV28		36	3187	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, TOXICKÁ, ANORGANICKÁ, J.N.
L4DH	TU14 TE21	AT	2 (D/E)	V1				38	3188	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.
L4DH	TU14 TE21	AT	3 (E)	V1				38	3188	LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.
SGAN		AT	2 (D/E)	V1				40	3189	PRÁŠEK KOVOVÝ, SCHOPNÝ SAMOOHŘEVU, J.N.
SGAN		AT	3 (E)	V1	VV4			40	3189	PRÁŠEK KOVOVÝ, SCHOPNÝ SAMOOHŘEVU, J.N.
SGAN		AT	2 (D/E)	V1				40	3190	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ANORGANICKÁ, J.N.
SGAN		AT	3 (E)	V1	VV4			40	3190	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ANORGANICKÁ, J.N.
SGAN		AT	2 (D/E)	V1		CV28		46	3191	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, TOXICKÁ, ANORGANICKÁ, J.N.
SGAN		AT	3 (E)	V1		CV28		46	3191	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, TOXICKÁ, ANORGANICKÁ, J.N.
SGAN		AT	2 (D/E)	V1				48	3192	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.
SGAN		AT	3 (E)	V1				48	3192	LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.
L21DH	TU14 TC1 TE21 TM1	AT	0 (B/E)	V1			S20	333	3194	LÁTKA PYROFORNÍ, KAPALNÁ, ANORGANICKÁ, J.N.
		AT	0 (B/E)	V1			S20	43	3200	LÁTKA PYROFORNÍ, TUHÁ, ANORGANICKÁ, J.N.
SGAN		AT	2 (D/E)	V1				40	3205	ALKOHOLÁTY KOVŮ ALKALICKÝCH ZEMIN, J.N.
SGAN		AT	3 (E)	V1				40	3205	ALKOHOLÁTY KOVŮ ALKALICKÝCH ZEMIN, J.N.
SGAN		AT	2 (D/E)	V1				48	3206	ALKOHOLÁTY ALKALICKÝCH KOVŮ, SCHOPNÉ SAMOOHŘEVU, ŽÍRAVÉ, J.N.
SGAN		AT	3 (E)	V1				48	3206	ALKOHOLÁTY ALKALICKÝCH KOVŮ, SCHOPNÉ SAMOOHŘEVU, ŽÍRAVÉ, J.N.
			1 (E)	V1		CV23	S20		3208	LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, J.N.
SGAN		AT	2 (D/E)	V1		CV23		423	3208	LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, J.N.
SGAN		AT	3 (E)	V1	VV5	CV23		423	3208	LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, J.N.
			1 (E)	V1		CV23	S20		3209	LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky		
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
3209	LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.	4.3	WS	II	4.3+4.2	274 558	0	E2	P410 IBC05		MP14	T3	TP33	
3209	LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.	4.3	WS	III	4.3+4.2	274 558	0	E1	P410 IBC08 R001	B4	MP14	T1	TP33	
3210	CHLOREČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	5.1	O1	II	5.1	274 351	1 L	E2	P504 IBC02		MP2	T4	TP1	
3210	CHLOREČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	5.1	O1	III	5.1	274 351	5 L	E1	P504 IBC02 R001		MP2	T4	TP1	
3211	CHLORISTANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	5.1	O1	II	5.1		1 L	E2	P504 IBC02		MP2	T4	TP1	
3211	CHLORISTANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	5.1	O1	III	5.1		5 L	E1	P504 IBC02 R001		MP2	T4	TP1	
3212	CHLORNANY, ANORGANICKÉ, J.N.	5.1	O2	II	5.1	274 349	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33	
3213	BROMIČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	5.1	O1	II	5.1	274 350	1 L	E2	P504 IBC02		MP2	T4	TP1	
3213	BROMIČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	5.1	O1	III	5.1	274 350	5 L	E1	P504 IBC02 R001		MP15	T4	TP1	
3214	MANGANISTANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	5.1	O1	II	5.1	274 353	1 L	E2	P504 IBC02		MP2	T4	TP1	
3215	PERSÍRANY, ANORGANICKÉ, J.N.	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
3216	PERSÍRANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	5.1	O1	III	5.1		5 L	E1	P504 IBC02 R001		MP15	T4	TP1 TP29	
3218	DUSIČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	5.1	O1	II	5.1	270 511	1 L	E2	P504 IBC02		MP15	T4	TP1	
3218	DUSIČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	5.1	O1	III	5.1	270 511	5 L	E1	P504 IBC02 R001		MP15	T4	TP1	
3219	DUSITANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	5.1	O1	II	5.1	103 274	1 L	E2	P504 IBC01		MP15	T4	TP1	
3219	DUSITANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	5.1	O1	III	5.1	103 274	5 L	E1	P504 IBC02 R001		MP15	T4	TP1	
3220	PENTAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 125)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50		
3221	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP B	4.1	SR1		4.1+1	181 194 274	25 ml	E0	P520	PP21	MP2			
3222	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP B	4.1	SR1		4.1+1	181 194 274	100 g	E0	P520	PP21	MP2			
3223	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP C	4.1	SR1		4.1	194 274	25 ml	E0	P520	PP21	MP2			
3224	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP C	4.1	SR1		4.1	194 274	100 g	E0	P520	PP21	MP2			
3225	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP D	4.1	SR1		4.1	194 274	125 ml	E0	P520		MP2			
3226	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP D	4.1	SR1		4.1	194 274	500 g	E0	P520		MP2			
3227	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP E	4.1	SR1		4.1	194 274	125 ml	E0	P520		MP2			
3228	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP E	4.1	SR1		4.1	194 274	500 g	E0	P520		MP2			

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN		AT	2 (D/E)	V1		CV23		423	3209	LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.
SGAN		AT	3 (E)	V1	VV5	CV23		423	3209	LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.
L4BN	TU3	AT	2 (E)			CV24		50	3210	CHLOREČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
LGBV	TU3	AT	3 (E)			CV24		50	3210	CHLOREČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
L4BN	TU3	AT	2 (E)			CV24		50	3211	CHLORISTANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
LGBV	TU3	AT	3 (E)			CV24		50	3211	CHLORISTANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
SGAN	TU3	AT	2 (E)	V11		CV24		50	3212	CHLORNANY, ANORGANICKÉ, J.N.
L4BN	TU3	AT	2 (E)			CV24		50	3213	BROMIČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
LGBV	TU3	AT	3 (E)			CV24		50	3213	BROMIČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
L4BN	TU3	AT	2 (E)			CV24		50	3214	MANGANISTANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
SGAV	TU3	AT	3 (E)		VV8	CV24		50	3215	PERSÍRANY, ANORGANICKÉ, J.N.
LGBV	TU3	AT	3 (E)			CV24		50	3216	PERSÍRANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
L4BN	TU3	AT	2 (E)			CV24		50	3218	DUSIČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
LGBV	TU3	AT	3 (E)			CV24		50	3218	DUSIČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
L4BN	TU3	AT	2 (E)			CV24		50	3219	DUSITANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
LGBV	TU3	AT	3 (E)			CV24		50	3219	DUSITANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3220	PENTAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 125)
			1 (B)	V1		CV15 CV20 CV22	S9 S17		3221	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP B
			1 (B)	V1		CV15 CV20 CV22	S9 S17		3222	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP B
			1 (D)	V1		CV15 CV20 CV22	S8 S18		3223	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP C
			1 (D)	V1		CV15 CV20 CV22	S8 S18		3224	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP C
			2 (D)	V1		CV15 CV22	S19		3225	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP D
			2 (D)	V1		CV15 CV22	S19		3226	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP D
			2 (D)	V1		CV15 CV22			3227	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP E
			2 (D)	V1		CV15 CV22			3228	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP E

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
3229	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP F	4.1	SR1		4.1	194 274	125 ml	E0	P520 IBC99		MP2	T23	
3230	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP F	4.1	SR1		4.1	194 274	500 g	E0	P520 IBC99		MP2	T23	
3231	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP B, S ŘÍZENÍM TEPLoty	4.1	SR2		4.1+1	181 194 274	0	E0	P520	PP21	MP2		
3232	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP B, S ŘÍZENÍM TEPLoty	4.1	SR2		4.1+1	181 194 274	0	E0	P520	PP21	MP2		
3233	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP C, S ŘÍZENÍM TEPLoty	4.1	SR2		4.1	194 274	0	E0	P520	PP21	MP2		
3234	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP C, S ŘÍZENÍM TEPLoty	4.1	SR2		4.1	194 274	0	E0	P520	PP21	MP2		
3235	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP D, S ŘÍZENÍM TEPLoty	4.1	SR2		4.1	194 274	0	E0	P520		MP2		
3236	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP D, S ŘÍZENÍM TEPLoty	4.1	SR2		4.1	194 274	0	E0	P520		MP2		
3237	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP E, S ŘÍZENÍM TEPLoty	4.1	SR2		4.1	194 274	0	E0	P520		MP2		
3238	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP E, S ŘÍZENÍM TEPLoty	4.1	SR2		4.1	194 274	0	E0	P520		MP2		
3239	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP F, S ŘÍZENÍM TEPLoty	4.1	SR2		4.1	194 274	0	E0	P520		MP2	T23	
3240	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP F, S ŘÍZENÍM TEPLoty	4.1	SR2		4.1	194 274	0	E0	P520		MP2	T23	
3241	2-BROM-2-NITROPROPAN-1,3-DIOL	4.1	SR1	III	4.1	638	5 kg	E1	P520 IBC08	PP22 B3	MP2		
3242	AZODIKARBONAMID	4.1	SR1	II	4.1	215 638	1 kg	E2	P409		MP2	T3	TP33
3243	LÁTKY TUHÉ, OBSAHUJÍCÍ TOXICKOU KAPALNOU LÁTKU, J.N.	6.1	T9	II	6.1	217 274 601	500 g	E4	P002 IBC02	PP9	MP10	T3 BK1 BK2	TP33
3244	LÁTKY TUHÉ, OBSAHUJÍCÍ ŽÍRAVOU KAPALNOU LÁTKU, J.N.	8	C10	II	8	218 274	1 kg	E2	P002 IBC05	PP9	MP10	T3 BK1 BK2	TP33
3245	GENETICKY ZMĚNĚNÉ MIKROORGANISMY nebo GENETICKY ZMĚNĚNÉ ORGANISMY	9	M8		9	219 637	0	E0	P904 IBC08		MP6		
3245	GENETICKY ZMĚNĚNÉ MIKROORGANISMY nebo GENETICKY ZMĚNĚNÉ ORGANISMY, ve zmraženém kapalném dusíku	9	M8		9+2.2	219 637	0	E0	P904 IBC08		MP6		
3246	METHANSULFONYLCHLORID	6.1	TC1	I	6.1+8	354	0	E0	P602		MP8 MP17	T20	TP2 TP37
3247	PERBORITAN SODNÝ, BEZVODÝ	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP2	T3	TP33
3248	LÉČIVA, KAPALNÁ, HOŘLAVÁ, TOXICKÁ, J.N.	3	FT1	II	3+6.1	220 221 601	1 L	E2	P001		MP19		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	(4.3.5, 6.8.4)	(9.1.1.2)	(1.1.3.6 (8.6))	(7.2.4)	(7.3.3)	(7.5.11)	(8.5)	(5.3.2.3)		(3.1.2)
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
		AT	2 (D)	V1		CV15 CV22		40	3229	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP F
		AT	2 (D)	V1		CV15 CV22		40	3230	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP F
			1 (B)	V8		CV15 CV20 CV21 CV22	S4 S9 S16		3231	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP B, S ŘÍZENÍM TEPLoty
			1 (B)	V8		CV15 CV20 CV21 CV22	S4 S9 S16		3232	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP B, S ŘÍZENÍM TEPLoty
			1 (D)	V8		CV15 CV20 CV21 CV22	S4 S8 S17		3233	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP C, S ŘÍZENÍM TEPLoty
			1 (D)	V8		CV15 CV20 CV21 CV22	S4 S8 S17		3234	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP C, S ŘÍZENÍM TEPLoty
			1 (D)	V8		CV15 CV21 CV22	S4 S18		3235	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP D, S ŘÍZENÍM TEPLoty
			1 (D)	V8		CV15 CV21 CV22	S4 S18		3236	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP D, S ŘÍZENÍM TEPLoty
			1 (D)	V8		CV15 CV21 CV22	S4 S19		3237	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP E, S ŘÍZENÍM TEPLoty
			1 (D)	V8		CV15 CV21 CV22	S4 S19		3238	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP E, S ŘÍZENÍM TEPLoty
		AT	1 (D)	V8		CV15 CV21 CV22	S4	40	3239	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP F, S ŘÍZENÍM TEPLoty
		AT	1 (D)	V8		CV15 CV21 CV22	S4	40	3240	LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP F, S ŘÍZENÍM TEPLoty
			3 (D)			CV14	S24		3241	2-BROM-2-NITROPROPAN-1,3-DIOL
		AT	2 (D)			CV14	S24	40	3242	AZODIKARBONAMID
SGAH	TU15 TE19	AT	2 (D/E)		VV10	CV13 CV28	S9 S19	60	3243	LÁTKY TUHÉ, OBSAHUJÍCÍ TOXICKOU KAPALNOU LÁTKU, J.N.
SGAV		AT	2 (E)		VV10			80	3244	LÁTKY TUHÉ, OBSAHUJÍCÍ ŽÍRAVOU KAPALNOU LÁTKU, J.N.
			2 (E)			CV1 CV13 CV26 CV27 CV28	S17		3245	GENETICKY ZMĚNĚNÉ MIKROORGANISMY nebo GENETICKY ZMĚNĚNÉ ORGANISMY
			2 (E)			CV1 CV13 CV26 CV27 CV28	S17		3245	GENETICKY ZMĚNĚNÉ MIKROORGANISMY nebo GENETICKY ZMĚNĚNÉ ORGANISMY, ve zmraženém kapalném dusíku
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	668	3246	METHANSULFONYLCHLORID
SGAN	TU3	AT	2 (E)	V11		CV24		50	3247	PERBORITAN SODNÝ, BEZVODÝ
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	3248	LÉČIVA, KAPALNÁ, HOŘLAVÁ, TOXICKÁ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
3248	LÉČIVA, KAPALNÁ, HOŘLAVÁ, TOXICKÁ, J.N.	3	FT1	III	3+6.1	220 221 601	5 L	E1	P001 R001		MP19		
3249	LÉČIVA, TUHÁ, TOXICKÁ, J.N.	6.1	T2	II	6.1	221 601	500 g	E4	P002		MP10	T3	TP33
3249	LÉČIVA, TUHÁ, TOXICKÁ, J.N.	6.1	T2	III	6.1	221 601	5 kg	E1	P002 LP02 R001		MP10	T1	TP33
3250	KYSELINA CHLOROCTOVÁ, ROZTAVENÁ	6.1	TC1	II	6.1+8		0	E0				T7	TP3 TP28
3251	ISOSORBID-5-MONONITRÁT	4.1	SR1	III	4.1	226 638	5 kg	E1	P409		MP2		
3252	DIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 32)	2	2F		2.1		0	E0	P200		MP9	(M) T50	
3253	ORTHOKREMIČITAN SODNÝ	8	C6	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3254	TRIBUTYLFOSEFAN	4.2	S1	I	4.2		0	E0	P400		MP2	T21	TP2 TP7
3255	terc-BUTYLHYPOCHLORIT	4.2	SC1				PŘEPRAVA ZAKÁZÁNA						
3256	LÁTKA ZAHŘÁTÁ, KAPALNÁ, HOŘLAVÁ, J.N., s bodem vzplanutí více než 60 °C, při teplotě rovnající se bodu vzplanutí nebo vyšší a pod 100 °C	3	F2	III	3	274 560	0	E0	P099 IBC99		MP2	T3	TP3 TP29
3256	LÁTKA ZAHŘÁTÁ, KAPALNÁ, HOŘLAVÁ, J.N., s bodem vzplanutí více než 60 °C, při teplotě rovnající se bodu vzplanutí nebo vyšší a při 100 °C nebo výše	3	F2	III	3	274 560 580	0	E0	P099 IBC99		MP2	T3	TP3 TP29
3257	LÁTKA ZAHŘÁTÁ, KAPALNÁ, J.N., při teplotě 100 °C nebo vyšší a nižší než je její bod vzplanutí (včetně roztavených kovů, roztavených solí atd.), plněná při teplotě vyšší než 190 °C	9	M9	III	9	274 580 643	0	E0	P099 IBC99			T3	TP3 TP29
3257	LÁTKA ZAHŘÁTÁ, KAPALNÁ, J.N., při teplotě 100 °C nebo vyšší a nižší než je její bod vzplanutí (včetně roztavených kovů, roztavených solí atd.), plněná při teplotě nižší než 190 °C	9	M9	III	9	274 580 643	0	E0	P099 IBC99			T3	TP3 TP29
3258	LÁTKA ZAHŘÁTÁ, TUHÁ, J.N., při teplotě 240 °C nebo vyšší	9	M10	III	9	274 580 643	0	E0	P099 IBC99				
3259	AMINY, TUHÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY, TUHÉ, ŽÍRAVÉ, J.N.	8	C8	I	8	274	0	E0	P002 IBC07		MP18	T6	TP33
3259	AMINY, TUHÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY, TUHÉ, ŽÍRAVÉ, J.N.	8	C8	II	8	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3259	AMINY, TUHÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY, TUHÉ, ŽÍRAVÉ, J.N.	8	C8	III	8	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3260	LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ANORGANICKÁ, J.N.	8	C2	I	8	274	0	E0	P002 IBC07		MP18	T6	TP33
3260	LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ANORGANICKÁ, J.N.	8	C2	II	8	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3260	LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ANORGANICKÁ, J.N.	8	C2	III	8	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3261	LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ORGANICKÁ, J.N.	8	C4	I	8	274	0	E0	P002 IBC07		MP18	T6	TP33

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15	FL	3 (D/E)			CV13 CV28	S2	36	3248	LÉČIVA, KAPALNÁ, HOŘLAVÁ, TOXICKÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3249	LÉČIVA, TUHÁ, TOXICKÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3249	LÉČIVA, TUHÁ, TOXICKÁ, J.N.
L4BH	TU15 TC4 TE19	AT	0 (D/E)			CV13	S9 S19	68	3250	KYSELINA CHLOROCTOVÁ, ROZTAVENÁ
			3 (D)			CV14	S24		3251	ISOSORBID-5-MONONITRÁT
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	3252	DIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 32)
SGAV		AT	3 (E)		VV9			80	3253	ORTHOKŘEMIČITAN SODNÝ
		AT	0 (B/E)	V1			S20	333	3254	TRIBUTYLFOSFAN
PŘEPRAVA ZAKÁZANA									3255	terc-BUTYLHYPOCHLORIT
LGAV	TU35 TE24	FL	3 (D/E)				S2	30	3256	LÁTKA ZAHŘÁTÁ, KAPALNÁ, HOŘLAVÁ, J.N., s bodem vzplanutí více než 60 °C, při teplotě rovnající se bodu vzplanutí nebo vyšší a pod 100 °C
LGAV	TU35 TE24	FL	3 (D/E)				S2	30	3256	LÁTKA ZAHŘÁTÁ, KAPALNÁ, HOŘLAVÁ, J.N., s bodem vzplanutí více než 60 °C, při teplotě rovnající se bodu vzplanutí nebo vyšší a při 100 °C nebo výše
LGAV	TU35 TC7 TE6 TE14 TE18 TE24	AT	3 (D)		VV12			99	3257	LÁTKA ZAHŘÁTÁ, KAPALNÁ, J.N., při teplotě 100 °C nebo vyšší a nižší než je její bod vzplanutí (včetně roztavených kovů, roztavených solí atd.), plněná při teplotě vyšší než 190 °C
LGAV	TU35 TC7 TE6 TE14 TE24	AT	3 (D)		VV12			99	3257	LÁTKA ZAHŘÁTÁ, KAPALNÁ, J.N., při teplotě 100 °C nebo vyšší a nižší než je její bod vzplanutí (včetně roztavených kovů, roztavených solí atd.), plněná při teplotě nižší než 190 °C
			3 (D)		VV13			99	3258	LÁTKA ZAHŘÁTÁ, TUHÁ, J.N., při teplotě 240 °C nebo vyšší
S10AN L10BH		AT	1 (E)	V10			S20	88	3259	AMINY, TUHÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY, TUHÉ, ŽÍRAVÉ, J.N.
SGAN L4BN		AT	2 (E)	V11				80	3259	AMINY, TUHÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY, TUHÉ, ŽÍRAVÉ, J.N.
SGAV L4BN		AT	3 (E)		VV9			80	3259	AMINY, TUHÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY, TUHÉ, ŽÍRAVÉ, J.N.
S10AN		AT	1 (E)	V10			S20	88	3260	LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ANORGANICKÁ, J.N.
SGAN		AT	2 (E)	V11				80	3260	LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ANORGANICKÁ, J.N.
SGAV		AT	3 (E)		VV9			80	3260	LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ANORGANICKÁ, J.N.
S10AN L10BH		AT	1 (E)	V10			S20	88	3261	LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ORGANICKÁ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
3261	LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ORGANICKÁ, J.N.	8	C4	II	8	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3261	LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ORGANICKÁ, J.N.	8	C4	III	8	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3262	LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ANORGANICKÁ, J.N.	8	C6	I	8	274	0	E0	P002 IBC07		MP18	T6	TP33
3262	LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ANORGANICKÁ, J.N.	8	C6	II	8	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3262	LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ANORGANICKÁ, J.N.	8	C6	III	8	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3263	LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ORGANICKÁ, J.N.	8	C8	I	8	274	0	E0	P002 IBC07		MP18	T6	TP33
3263	LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ORGANICKÁ, J.N.	8	C8	II	8	274	1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3263	LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ORGANICKÁ, J.N.	8	C8	III	8	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3264	LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ANORGANICKÁ, J.N.	8	C1	I	8	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
3264	LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ANORGANICKÁ, J.N.	8	C1	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
3264	LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ANORGANICKÁ, J.N.	8	C1	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3265	LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ORGANICKÁ, J.N.	8	C3	I	8	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
3265	LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ORGANICKÁ, J.N.	8	C3	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
3265	LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ORGANICKÁ, J.N.	8	C3	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3266	LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ANORGANICKÁ, J.N.	8	C5	I	8	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
3266	LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ANORGANICKÁ, J.N.	8	C5	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
3266	LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ANORGANICKÁ, J.N.	8	C5	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3267	LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ORGANICKÁ, J.N.	8	C7	I	8	274	0	E0	P001		MP8 MP17	T14	TP2 TP27
3267	LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ORGANICKÁ, J.N.	8	C7	II	8	274	1 L	E2	P001 IBC02		MP15	T11	TP2 TP27
3267	LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ORGANICKÁ, J.N.	8	C7	III	8	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3268	PLYNOVÉ GENERÁTORY AIRBAGŮ nebo MODULY AIRBAGŮ nebo PŘEDPÍNAČE BEZPEČNOSTNÍCH PÁSŮ	9	M5	III	9	280 289	0	E0	P902 LP902				
3269	PRYSKYŘICE POLYESTEROVÉ, VÍCESLOŽKOVÉ	3	F3	II	3	236 340	5 L	E0	P302 R001				
3269	PRYSKYŘICE POLYESTEROVÉ, VÍCESLOŽKOVÉ	3	F3	III	3	236 340	5 L	E0	P302 R001				
3270	FILTRY MEMBRÁNOVÉ Z NITROCELULÓZY, s nejvýše 12,6 % hm. dusíku v sušině	4.1	F1	II	4.1	237 286	1 kg	E2	P411		MP11		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	(4.3.5, 6.8.4)	(9.1.1.2)	(1.1.3.6 (8.6))	(7.2.4)	(7.3.3)	(7.5.11)	(8.5)	(5.3.2.3)	(1)	(2)
SGAN L4BN		AT	2 (E)	V11				80	3261	LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ORGANICKÁ, J.N.
SGAV L4BN		AT	3 (E)		VV9			80	3261	LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ORGANICKÁ, J.N.
S10AN L10BH		AT	1 (E)	V10			S20	88	3262	LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ANORGANICKÁ, J.N.
SGAN L4BN		AT	2 (E)	V11				80	3262	LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ANORGANICKÁ, J.N.
SGAV L4BN		AT	3 (E)		VV9			80	3262	LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ANORGANICKÁ, J.N.
S10AN L10BH		AT	1 (E)	V10			S20	88	3263	LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ORGANICKÁ, J.N.
SGAN L4BN		AT	2 (E)	V11				80	3263	LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ORGANICKÁ, J.N.
SGAV L4BN		AT	3 (E)		VV9			80	3263	LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ORGANICKÁ, J.N.
L10BH		AT	1 (E)				S20	88	3264	LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ANORGANICKÁ, J.N.
L4BN		AT	2 (E)					80	3264	LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ANORGANICKÁ, J.N.
L4BN		AT	3 (E)	V12				80	3264	LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ANORGANICKÁ, J.N.
L10BH		AT	1 (E)				S20	88	3265	LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ORGANICKÁ, J.N.
L4BN		AT	2 (E)					80	3265	LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ORGANICKÁ, J.N.
L4BN		AT	3 (E)	V12				80	3265	LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ORGANICKÁ, J.N.
L10BH		AT	1 (E)				S20	88	3266	LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ANORGANICKÁ, J.N.
L4BN		AT	2 (E)					80	3266	LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ANORGANICKÁ, J.N.
L4BN		AT	3 (E)	V12				80	3266	LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ANORGANICKÁ, J.N.
L10BH		AT	1 (E)				S20	88	3267	LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ORGANICKÁ, J.N.
L4BN		AT	2 (E)					80	3267	LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ORGANICKÁ, J.N.
L4BN		AT	3 (E)	V12				80	3267	LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ORGANICKÁ, J.N.
			4 (E)						3268	PLYNOVÉ GENERÁTORY AIRBAGŮ nebo MODULY AIRBAGŮ nebo PŘEDPÍNAČE BEZPEČNOSTNÍCH PÁSŮ
			2 (E)				S2 S20		3269	PRYSKYŘICE POLYESTEROVÉ, VÍCESLOŽKOVÉ
			3 (E)				S2		3269	PRYSKYŘICE POLYESTEROVÉ, VÍCESLOŽKOVÉ
			2 (E)						3270	FILTRY MEMBRÁNOVÉ Z NITROCELULÓZY, s nejvýše 12,6 % hm. dusíku v sušině

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
3271	ETHERY, J.N.	3	F1	II	3	274	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28
3271	ETHERY, J.N.	3	F1	III	3	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
3272	ESTERY, J.N.	3	F1	II	3	274 601	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28
3272	ESTERY, J.N.	3	F1	III	3	274 601	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29
3273	NITRILY, HOŘLAVÉ, TOXICKÉ, J.N.	3	FT1	I	3+6.1	274	0	E0	P001		MP7 MP17	T14	TP2 TP27
3273	NITRILY, HOŘLAVÉ, TOXICKÉ, J.N.	3	FT1	II	3+6.1	274	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27
3274	ALKOHOLÁTY, ROZTOKY v alkoholu, J.N.	3	FC	II	3+8	274	1 L	E2	P001 IBC02		MP19		
3275	NITRILY, TOXICKÉ, HOŘLAVÉ, J.N.	6.1	TF1	I	6.1+3	274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27
3275	NITRILY, TOXICKÉ, HOŘLAVÉ, J.N.	6.1	TF1	II	6.1+3	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3276	NITRILY, KAPALNÉ, TOXICKÉ, J.N.	6.1	T1	I	6.1	274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27
3276	NITRILY, KAPALNÉ, TOXICKÉ, J.N.	6.1	T1	II	6.1	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3276	NITRILY, KAPALNÉ, TOXICKÉ, J.N.	6.1	T1	III	6.1	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3277	CHLORFORMIÁTY, TOXICKÉ, ŽÍRAVÉ, J.N.	6.1	TC1	II	6.1+8	274 561	100 ml	E4	P001 IBC02		MP15	T8	TP2 TP28
3278	SLOUČENINA FOSFORU, ORGANICKÁ, KAPALNÁ, TOXICKÁ, J.N.	6.1	T1	I	6.1	43 274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27
3278	SLOUČENINA FOSFORU, ORGANICKÁ, KAPALNÁ, TOXICKÁ, J.N.	6.1	T1	II	6.1	43 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3278	SLOUČENINA FOSFORU, ORGANICKÁ, KAPALNÁ, TOXICKÁ, J.N.	6.1	T1	III	6.1	43 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28
3279	SLOUČENINA FOSFORU, ORGANICKÁ, TOXICKÁ, HOŘLAVÁ, J.N.	6.1	TF1	I	6.1+3	43 274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27
3279	SLOUČENINA FOSFORU, ORGANICKÁ, TOXICKÁ, HOŘLAVÁ, J.N.	6.1	TF1	II	6.1+3	43 274	100 ml	E4	P001		MP15	T11	TP2 TP27
3280	SLOUČENINA ARSENU, ORGANICKÁ, KAPALNÁ, J.N.	6.1	T3	I	6.1	274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27
3280	SLOUČENINA ARSENU, ORGANICKÁ, KAPALNÁ, J.N.	6.1	T3	II	6.1	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3280	SLOUČENINA ARSENU, ORGANICKÁ, KAPALNÁ, J.N.	6.1	T3	III	6.1	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
LGBF		FL	2 (D/E)				S2 S20	33	3271	ETHERY, J.N.
LGBF		FL	3 (D/E)	V12			S2	30	3271	ETHERY, J.N.
LGBF		FL	2 (D/E)				S2 S20	33	3272	ESTERY, J.N.
LGBF		FL	3 (D/E)	V12			S2	30	3272	ESTERY, J.N.
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	3273	NITRILY, HOŘLAVÉ, TOXICKÉ, J.N.
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	3273	NITRILY, HOŘLAVÉ, TOXICKÉ, J.N.
L4BH		FL	2 (D/E)				S2 S20	338	3274	ALKOHOLÁTY, ROZTOKY v alkoholu, J.N.
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3275	NITRILY, TOXICKÉ, HOŘLAVÉ, J.N.
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3275	NITRILY, TOXICKÉ, HOŘLAVÉ, J.N.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3276	NITRILY, KAPALNÉ, TOXICKÉ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3276	NITRILY, KAPALNÉ, TOXICKÉ, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3276	NITRILY, KAPALNÉ, TOXICKÉ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	3277	CHLORFORMIÁTY, TOXICKÉ, ŽIRAVÉ, J.N.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3278	SLOUČENINA FOSFORU, ORGANICKÁ, KAPALNÁ, TOXICKÁ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3278	SLOUČENINA FOSFORU, ORGANICKÁ, KAPALNÁ, TOXICKÁ, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3278	SLOUČENINA FOSFORU, ORGANICKÁ, KAPALNÁ, TOXICKÁ, J.N.
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3279	SLOUČENINA FOSFORU, ORGANICKÁ, TOXICKÁ, HOŘLAVÁ, J.N.
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3279	SLOUČENINA FOSFORU, ORGANICKÁ, TOXICKÁ, HOŘLAVÁ, J.N.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3280	SLOUČENINA ARSENU, ORGANICKÁ, KAPALNÁ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3280	SLOUČENINA ARSENU, ORGANICKÁ, KAPALNÁ, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3280	SLOUČENINA ARSENU, ORGANICKÁ, KAPALNÁ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky		
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
3281	KARBONYLY KOVŮ, KAPALNÉ, J.N.	6.1	T3	I	6.1	274 315 562	0	E5	P601		MP8 MP17	T14	TP2 TP27	
3281	KARBONYLY KOVŮ, KAPALNÉ, J.N.	6.1	T3	II	6.1	274 562	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3281	KARBONYLY KOVŮ, KAPALNÉ, J.N.	6.1	T3	III	6.1	274 562	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28	
3282	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, TOXICKÁ, J.N.	6.1	T3	I	6.1	274 562	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3282	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, TOXICKÁ, J.N.	6.1	T3	II	6.1	274 562	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3282	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, TOXICKÁ, J.N.	6.1	T3	III	6.1	274 562	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28	
3283	SLOUČENINA SELENU, TUHÁ, J.N.	6.1	T5	I	6.1	274 563	0	E5	P002 IBC07		MP18	T6	TP33	
3283	SLOUČENINA SELENU, TUHÁ, J.N.	6.1	T5	II	6.1	274 563	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
3283	SLOUČENINA SELENU, TUHÁ, J.N.	6.1	T5	III	6.1	274 563	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
3284	SLOUČENINA TELLURU, J.N.	6.1	T5	I	6.1	274	0	E5	P002 IBC07		MP18	T6	TP33	
3284	SLOUČENINA TELLURU, J.N.	6.1	T5	II	6.1	274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
3284	SLOUČENINA TELLURU, J.N.	6.1	T5	III	6.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
3285	SLOUČENINA VANADU, J.N.	6.1	T5	I	6.1	274 564	0	E5	P002 IBC07		MP18	T6	TP33	
3285	SLOUČENINA VANADU, J.N.	6.1	T5	II	6.1	274 564	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
3285	SLOUČENINA VANADU, J.N.	6.1	T5	III	6.1	274 564	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
3286	LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, ŽÍRAVÁ, J.N.	3	FTC	I	3+6.1+8	274	0	E0	P001		MP7 MP17	T14	TP2 TP27	
3286	LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, ŽÍRAVÁ, J.N.	3	FTC	II	3+6.1+8	274	1 L	E2	P001 IBC02		MP19	T11	TP2 TP27	
3287	LÁTKA TOXICKÁ, KAPALNÁ, ANORGANICKÁ, J.N.	6.1	T4	I	6.1	274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3287	LÁTKA TOXICKÁ, KAPALNÁ, ANORGANICKÁ, J.N.	6.1	T4	II	6.1	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3287	LÁTKA TOXICKÁ, KAPALNÁ, ANORGANICKÁ, J.N.	6.1	T4	III	6.1	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP1 TP28	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3281	KARBONYLY KOVŮ, KAPALNÉ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3281	KARBONYLY KOVŮ, KAPALNÉ, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3281	KARBONYLY KOVŮ, KAPALNÉ, J.N.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3282	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, TOXICKÁ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3282	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, TOXICKÁ, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3282	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, TOXICKÁ, J.N.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3283	SLOUČENINA SELENU, TUHÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3283	SLOUČENINA SELENU, TUHÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3283	SLOUČENINA SELENU, TUHÁ, J.N.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3284	SLOUČENINA TELLURU, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3284	SLOUČENINA TELLURU, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3284	SLOUČENINA TELLURU, J.N.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3285	SLOUČENINA VANADU, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3285	SLOUČENINA VANADU, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3285	SLOUČENINA VANADU, J.N.
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	368	3286	LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, ŽÍRAVÁ, J.N.
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	368	3286	LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, ŽÍRAVÁ, J.N.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3287	LÁTKA TOXICKÁ, KAPALNÁ, ANORGANICKÁ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3287	LÁTKA TOXICKÁ, KAPALNÁ, ANORGANICKÁ, J.N.
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3287	LÁTKA TOXICKÁ, KAPALNÁ, ANORGANICKÁ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky		
							(7a)	(7b)	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3	
3288	LÁTKA TOXICKÁ, TUHÁ, ANORGANICKÁ, J.N.	6.1	T5	I	6.1	274	0	E5	P002 IBC07		MP18	T6	TP33	
3288	LÁTKA TOXICKÁ, TUHÁ, ANORGANICKÁ, J.N.	6.1	T5	II	6.1	274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33	
3288	LÁTKA TOXICKÁ, TUHÁ, ANORGANICKÁ, J.N.	6.1	T5	III	6.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33	
3289	LÁTKA TOXICKÁ, KAPALNÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.	6.1	TC3	I	6.1+8	274 315	0	E5	P001		MP8 MP17	T14	TP2 TP27	
3289	LÁTKA TOXICKÁ, KAPALNÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.	6.1	TC3	II	6.1+8	274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27	
3290	LÁTKA TOXICKÁ, TUHÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.	6.1	TC4	I	6.1+8	274	0	E5	P002 IBC05		MP18	T6	TP33	
3290	LÁTKA TOXICKÁ, TUHÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.	6.1	TC4	II	6.1+8	274	500 g	E4	P002 IBC06		MP10	T3	TP33	
3291	ODPAD KLINICKÝ NESPECIFIKOVANÝ, J.N. nebo ODPAD (BIO)MEDICÍNSKÝ, J.N. nebo ODPAD MEDICÍNSKÝ REGULOVANÝ, J.N.	6.2	I3	II	6.2	565	0	E0	P621 IBC620 LP621		MP6	BK2		
3291	ODPAD KLINICKÝ NESPECIFIKOVANÝ, J.N. nebo ODPAD (BIO)MEDICÍNSKÝ, J.N. nebo ODPAD MEDICÍNSKÝ REGULOVANÝ, J.N., ve zmráženém kapalném dusíku	6.2	I3	II	6.2+2.2	565	0	E0	P621 IBC620 LP621		MP6			
3292	AKUMULÁTORY SODÍKOVÉ nebo ČLÁNKY AKUMULÁTORU SODÍKOVÉ	4.3	W3	II	4.3	239 295	0	E0	P408					
3293	HYDRAZIN, VODNÝ ROZTOK, s nejvýše 37 % hm. hydrazinu	6.1	T4	III	6.1	566	5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1	
3294	KYANOVOĐÍK, ROZTOK V ALKOHOLU, obsahující nejvýše 45 % kyanovodíku	6.1	TF1	I	6.1+3	610	0	E5	P601		MP8 MP17	T14	TP2	
3295	UHLOVOĐÍKY, KAPALNÉ, J.N.	3	F1	I	3		500 ml	E3	P001		MP7 MP17	T11	TP1 TP8 TP28	
3295	UHLOVOĐÍKY, KAPALNÉ, J.N. (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	640C	1 L	E2	P001		MP19	T7	TP1 TP8 TP28	
3295	UHLOVOĐÍKY, KAPALNÉ, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)	3	F1	II	3	640D	1 L	E2	P001 IBC02 R001		MP19	T7	TP1 TP8 TP28	
3295	UHLOVOĐÍKY, KAPALNÉ, J.N.	3	F1	III	3		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1 TP29	
3296	HEPTAFLUORPROPAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 227)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50		
3297	ETHYLENOXID A CHLORTETRAFLUORETHAN, SMĚS, s nejvýše 8,8 % ethylenoxidu	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50		
3298	ETHYLENOXID A PENTAFLUORETHAN, SMĚS, s nejvýše 7,9 % ethylenoxidu	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50		
3299	ETHYLENOXID A TETRAFLUORETHAN, SMĚS, s nejvýše 5,6 % ethylenoxidu	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3288	LÁTKA TOXICKÁ, TUHÁ, ANORGANICKÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3288	LÁTKA TOXICKÁ, TUHÁ, ANORGANICKÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3288	LÁTKA TOXICKÁ, TUHÁ, ANORGANICKÁ, J.N.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	668	3289	LÁTKA TOXICKÁ, KAPALNÁ, ŽIRAVÁ, ANORGANICKÁ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	3289	LÁTKA TOXICKÁ, KAPALNÁ, ŽIRAVÁ, ANORGANICKÁ, J.N.
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	668	3290	LÁTKA TOXICKÁ, TUHÁ, ŽIRAVÁ, ANORGANICKÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	68	3290	LÁTKA TOXICKÁ, TUHÁ, ŽIRAVÁ, ANORGANICKÁ, J.N.
S4AH L4BH	TU15 TE19	AT	2 (-)	V1	VV11	CV13 CV25 CV28	S3	606	3291	ODPAD KLINICKÝ NESPECIFIKOVANÝ, J.N. nebo ODPAD (BIO)MEDICÍNSKÝ, J.N. nebo ODPAD MEDICÍNSKÝ REGULOVANÝ, J.N.
			2 (-)	V1		CV13 CV25 CV28	S3		3291	ODPAD KLINICKÝ NESPECIFIKOVANÝ, J.N. nebo ODPAD (BIO)MEDICÍNSKÝ, J.N. nebo ODPAD MEDICÍNSKÝ REGULOVANÝ, J.N., ve zmrazeném kapalném dusíku
			2 (E)	V1		CV23			3292	AKUMULÁTORY SODÍKOVÉ nebo ČLÁNKY AKUMULÁTORU SODÍKOVÉ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3293	HYDRAZIN, VODNÝ ROZTOK, s nejvýše 37 % hm. hydrazinu
L15DH(+)	TU14 TU15 TE19 TE21	FL	0 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3294	KYANOVODÍK, ROZTOK V ALKOHOLU, obsahující nejvýše 45 % kyanovodíku
L4BN		FL	1 (D/E)				S2 S20	33	3295	UHLOVODÍKY, KAPALNÉ, J.N.
L1,5BN		FL	2 (D/E)				S2 S20	33	3295	UHLOVODÍKY, KAPALNÉ, J.N. (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)				S2 S20	33	3295	UHLOVODÍKY, KAPALNÉ, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)
LGBF		FL	3 (D/E)	V12			S2	30	3295	UHLOVODÍKY, KAPALNÉ, J.N.
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3296	HEPTAFLUORPROPAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 227)
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3297	ETHYLENOXID A CHLORTETRAFLUORETHAN, SMĚS, s nejvýše 8,8 % ethylenoxidu
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3298	ETHYLENOXID A PENTAFLUORETHAN, SMĚS, s nejvýše 7,9 % ethylenoxidu
PxBN(M)	TA4 TT9	AT	3 (C/E)			CV9 CV10 CV36		20	3299	ETHYLENOXID A TETRAFLUORETHAN, SMĚS, s nejvýše 5,6 % ethylenoxidu

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřaditelná množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
3300	ETHYLENOXID A OXID UHLÍČITÝ, SMĚS, s více než 87 % ethylenoxidu	2	2TF		2.3+2.1		0	E0	P200		MP9	(M)	
3301	LÁTKA ŽÍRAVÁ, KAPALNÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	8	CS1	I	8+4.2	274	0	E0	P001		MP8 MP17		
3301	LÁTKA ŽÍRAVÁ, KAPALNÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	8	CS1	II	8+4.2	274	0	E2	P001		MP15		
3302	2-DIMETHYLAMINOETHYLAKRYLÁT (2-DIMETHYLAMINOETHYLAKRYLÁT)	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
3303	PLYN STLAČENÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, J.N.	2	1TO		2.3+5.1	274	0	E0	P200		MP9	(M)	
3304	PLYN STLAČENÝ, TOXICKÝ, ŽÍRAVÝ, J.N.	2	1TC		2.3+8	274	0	E0	P200		MP9	(M)	
3305	PLYN STLAČENÝ, TOXICKÝ, HOŘLAVÝ, ŽÍRAVÝ, J.N.	2	1TFC		2.3+2.1+8	274	0	E0	P200		MP9	(M)	
3306	PLYN STLAČENÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, ŽÍRAVÝ, J.N.	2	1TOC		2.3+5.1+8	274	0	E0	P200		MP9	(M)	
3307	PLYN ZKAPALNĚNÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, J.N.	2	2TO		2.3+5.1	274	0	E0	P200		MP9	(M)	
3308	PLYN ZKAPALNĚNÝ, TOXICKÝ, ŽÍRAVÝ, J.N.	2	2TC		2.3+8	274	0	E0	P200		MP9	(M)	
3309	PLYN ZKAPALNĚNÝ, TOXICKÝ, HOŘLAVÝ, ŽÍRAVÝ, J.N.	2	2TFC		2.3+2.1+8	274	0	E0	P200		MP9	(M)	
3310	PLYN ZKAPALNĚNÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, ŽÍRAVÝ, J.N.	2	2TOC		2.3+5.1+8	274	0	E0	P200		MP9	(M)	
3311	PLYN HLUBOCE ZCHLAZENÝ, KAPALNÝ, PODPORUJÍCÍ HOŘENÍ, J.N.	2	3O		2.2+5.1	274	0	E0	P203		MP9	T75	TP5 TP22
3312	PLYN HLUBOCE ZCHLAZENÝ, KAPALNÝ, HOŘLAVÝ, J.N.	2	3F		2.1	274	0	E0	P203		MP9	T75	TP5
3313	PIGMENTY SCHOPNÉ SAMOOHŘEVU, ORGANICKÉ	4.2	S2	II	4.2		0	E2	P002 IBC08	B4	MP14	T3	TP33
3313	PIGMENTY SCHOPNÉ SAMOOHŘEVU, ORGANICKÉ	4.2	S2	III	4.2		0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
3314	PLASTY, SMĚS LISOVACÍ, ve formě těsta, desek nebo tyčí, uvolňující hořlavé páry	9	M3	III	není	207 633	5 kg	E1	P002 IBC08 R001	PP14 B3 B6	MP10		
3315	VZOREK CHEMICKÝ, TOXICKÝ	6.1	T8	I	6.1	250	0	E5	P099		MP8 MP17		
3316	SOUPRAVA TESTOVACÍ, CHEMICKÁ nebo SOUPRAVA PRVNÍ POMOCI	9	M11	II	9	251 340	0	E0	P901				
3316	SOUPRAVA TESTOVACÍ, CHEMICKÁ nebo SOUPRAVA PRVNÍ POMOCI	9	M11	III	9	251 340	0	E1	P901				
3317	2-AMINO-4,6-DINITROFENOL, VLNĚNÝ nejméně 20 % hm. vody	4.1	D	I	4.1		0	E0	P406	PP26	MP2		
3318	AMONIAK (ČPAVEK), ROZTOK, vodný, s hustotou menší než 0,880 kg/l při 15 °C, s více než 50 % amoniaku (čpavku)	2	4TC		2.3+8	23	0	E0	P200		MP9	(M) T50	

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
PxBH(M)	TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	3300	ETHYLENOXID A OXID UHLIČITÝ, SMĚS, s více než 87 % ethylenoxidu
L10BH		AT	1 (E)				S14	884	3301	LÁTKA ŽÍRAVÁ, KAPALNÁ, SCHOPNÁ SAMOOHŘEVU, J.N.
L4BN		AT	2 (E)					84	3301	LÁTKA ŽÍRAVÁ, KAPALNÁ, SCHOPNÁ SAMOOHŘEVU, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3302	2-DIMETHYLAMINOETHYLAKRYLÁT (2-DIMETHYLAMINOETHYL-AKRYLÁT)
CxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	3303	PLYN STLAČENÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, J.N.
CxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	3304	PLYN STLAČENÝ, TOXICKÝ, ŽÍRAVÝ, J.N.
CxBH(M)	TU6 TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	3305	PLYN STLAČENÝ, TOXICKÝ, HOŘLAVÝ, ŽÍRAVÝ, J.N.
CxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	3306	PLYN STLAČENÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, ŽÍRAVÝ, J.N.
PxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	3307	PLYN ZKAPALNĚNÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, J.N.
PxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	268	3308	PLYN ZKAPALNĚNÝ, TOXICKÝ, ŽÍRAVÝ, J.N.
PxBH(M)	TU6 TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	3309	PLYN ZKAPALNĚNÝ, TOXICKÝ, HOŘLAVÝ, ŽÍRAVÝ, J.N.
PxBH(M)	TU6 TA4 TT9	AT	1 (C/D)			CV9 CV10 CV36	S14	265	3310	PLYN ZKAPALNĚNÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, ŽÍRAVÝ, J.N.
RxBN	TU7 TU19 TA4 TT9	AT	3 (C/E)	V5		CV9 CV11 CV36	S20	225	3311	PLYN HLUBOCE ZCHLAZENÝ, KAPALNÝ, PODPORUJÍCÍ HOŘENÍ, J.N.
RxBN	TU18 TA4 TT9	FL	2 (B/D)	V5		CV9 CV11 CV36	S2 S17	223	3312	PLYN HLUBOCE ZCHLAZENÝ, KAPALNÝ, HOŘLAVÝ, J.N.
SGAV		AT	2 (D/E)	V1				40	3313	PIGMENTY SCHOPNÉ SAMOOHŘEVU, ORGANICKÉ
SGAV		AT	3 (E)	V1				40	3313	PIGMENTY SCHOPNÉ SAMOOHŘEVU, ORGANICKÉ
			3 (D/E)		VV3			90	3314	PLASTY, SMĚS LISOVACÍ, ve formě těsta, desek nebo tyčí, uvolňující hořlavé páry
			1 (C/E)			CV1 CV13 CV28	S9 S14		3315	VZOREK CHEMICKÝ, TOXICKÝ
			2 (E)						3316	SOUPRAVA TESTOVACÍ, CHEMICKÁ nebo SOUPRAVA PRVNÍ POMOCI
			3 (E)						3316	SOUPRAVA TESTOVACÍ, CHEMICKÁ nebo SOUPRAVA PRVNÍ POMOCI
			1 (B)				S14		3317	2-AMINO-4,6-DINITROFENOL, VLNĚNÝ nejméně 20 % hm. vody
PxBH(M)	TA4 TT9	AT	1 (C/D)			CV9 CV10	S14	268	3318	AMONIAK (ČPAVEK), ROZTOK, vodný, s hustotou menší než 0,880 kg/l při 15 °C, s více než 50 % amoniaku (čpavku)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
3319	NITROGLYCERIN, SMĚS, ZNECITLIVĚNÁ, TUHÁ, J.N., s více než 2 % hm., ale nejvýše 10 % hm. nitroglycerinu	4.1	D	II	4.1	272 274	0	E0	P099 IBC99		MP2		
3320	TETRAHYDRIDOBORITAN SODNÝ A HYDROXID SODNÝ, ROZTOK, obsahující nejvýše 12 % hm. tetrahydridoboritanu sodného a nejvýše 40 % hm. hydroxidu sodného	8	C5	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
3320	TETRAHYDRIDOBORITAN SODNÝ A HYDROXID SODNÝ, ROZTOK, obsahující nejvýše 12 % hm. tetrahydridoboritanu sodného a nejvýše 40 % hm. hydroxidu sodného	8	C5	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP2
3321	LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-II), jiná než štěpná nebo vyjmutá štěpná	7			7X	172 317 325 336	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3		T5	TP4
3322	LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-III), jiná než štěpná nebo vyjmutá štěpná	7			7X	172 317 325 336	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3		T5	TP4
3323	LÁTKA RADIOAKTIVNÍ, KUS TYPU C, jiná než štěpná nebo vyjmutá štěpná	7			7X	172 317 325	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
3324	LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-II), ŠTĚPNÁ	7			7X+7E	172 326 336	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
3325	LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-III), ŠTĚPNÁ	7			7X+7E	172 326 336	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
3326	LÁTKA RADIOAKTIVNÍ, POVRCHOVĚ KONTAMINOVANÉ PŘEDMĚTY (SCO-I nebo SCO-II), ŠTĚPNÉ	7			7X+7E	172 336	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
3327	LÁTKA RADIOAKTIVNÍ, KUS TYPU A, ŠTĚPNÁ, jiné než zvláštní formy	7			7X+7E	172 326	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
3328	LÁTKA RADIOAKTIVNÍ, KUS TYPU B (U), ŠTĚPNÁ	7			7X+7E	172 326 337	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
3329	LÁTKA RADIOAKTIVNÍ, KUS TYPU B (M), ŠTĚPNÁ	7			7X+7E	172 326 337	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
3330	LÁTKA RADIOAKTIVNÍ, KUS TYPU C, ŠTĚPNÁ	7			7X+7E	172 326	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
3331	LÁTKA RADIOAKTIVNÍ, PŘEPRAVOVANÁ ZA ZVLÁŠTNÍCH PODMÍNEK, ŠTĚPNÁ	7			7X+7E	172 326	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
3332	LÁTKA RADIOAKTIVNÍ, KUS TYPU A, ZVLÁŠTNÍ FORMY, jiné než štěpná nebo vyjmutá štěpná	7			7X	172 317	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			
3333	LÁTKA RADIOAKTIVNÍ, KUS TYPU A, ZVLÁŠTNÍ FORMY, ŠTĚPNÁ	7			7X+7E	172	0	E0	viz 2.2.7 a 4.1.9	viz 4.1.9.1.3			

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
			2 (B)					S14	3319	NITROGLYCERIN, SMĚS, ZNECTLIVĚNÁ, TUHÁ, J.N., s více než 2 % hm., ale nejvýše 10 % hm. nitroglycerinu
L4BN		AT	2 (E)					80	3320	TETRAHYDRIDOBORITAN SODNÝ A HYDROXID SODNÝ, ROZTOK, obsahující nejvýše 12 % hm. tetrahydridoboritanu sodného a nejvýše 40 % hm. hydroxidu sodného
L4BN		AT	3 (E)	V12				80	3320	TETRAHYDRIDOBORITAN SODNÝ A HYDROXID SODNÝ, ROZTOK, obsahující nejvýše 12 % hm. tetrahydridoboritanu sodného a nejvýše 40 % hm. hydroxidu sodného
S2,65AN(+) L2,65CN(+)	TU36 TT7 TM7	AT	0 (E)			CV33	S6 S11 S13 S21	70	3321	LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-II), jiná než štěpná nebo vyjmutá štěpná
S2,65AN(+) L2,65CN(+)	TU36 TT7 TM7	AT	0 (E)			CV33	S6 S11 S13 S21	70	3322	LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-III), jiná než štěpná nebo vyjmutá štěpná
			0 (E)			CV33	S6 S11 S13 S21	70	3323	LÁTKA RADIOAKTIVNÍ, KUS TYPU C, jiná než štěpná nebo vyjmutá štěpná
			0 (E)			CV33	S6 S11 S13 S21	70	3324	LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-II), ŠTĚPNÁ
			0 (E)			CV33	S6 S11 S13 S21	70	3325	LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-III), ŠTĚPNÁ
			0 (E)			CV33	S6 S11 S13 S21	70	3326	LÁTKA RADIOAKTIVNÍ, POVRCHOVĚ KONTAMINOVANÉ PŘEDMĚTY (SCO-I nebo SCO-II), ŠTĚPNĚ
			0 (E)			CV33	S6 S11 S13 S21	70	3327	LÁTKA RADIOAKTIVNÍ, KUS TYPU A, ŠTĚPNÁ, jiné než zvláštní formy
			0 (E)			CV33	S6 S11 S13 S21	70	3328	LÁTKA RADIOAKTIVNÍ, KUS TYPU B (U), ŠTĚPNÁ
			0 (E)			CV33	S6 S11 S13 S21	70	3329	LÁTKA RADIOAKTIVNÍ, KUS TYPU B (M), ŠTĚPNÁ
			0 (E)			CV33	S6 S11 S13 S21	70	3330	LÁTKA RADIOAKTIVNÍ, KUS TYPU C, ŠTĚPNÁ
			0 (-)			CV33	S6 S11 S13 S21	70	3331	LÁTKA RADIOAKTIVNÍ, PŘEPRAVOVANÁ ZA ZVLÁŠTNÍCH PODMÍNEK, ŠTĚPNÁ
			0 (E)			CV33	S6 S11 S12 S13 S21	70	3332	LÁTKA RADIOAKTIVNÍ, KUS TYPU A, ZVLÁŠTNÍ FORMY, jiné než štěpná nebo vyjmutá štěpná
			0 (E)			CV33	S6 S11 S13 S21	70	3333	LÁTKA RADIOAKTIVNÍ, KUS TYPU A, ZVLÁŠTNÍ FORMY, ŠTĚPNÁ

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky		
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2		4.2.5.3
3334	Látka kapalná, která podléhá předpisům platným pro leteckou dopravu, j.n.	9	M11	NEJÍ PŘEDMĚTEM PRO ADR										
3335	Látka tuhá, která podléhá předpisům platným pro leteckou dopravu, j.n.	9	M11	NEJÍ PŘEDMĚTEM PRO ADR										
3336	THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, J.N. nebo SMĚS THIOLŮ (merkaptanů), KAPALNÁ, HOŘLAVÁ, J.N.	3	F1	I	3	274	0	E3	P001		MP7 MP17	T11		TP2
3336	THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, J.N. nebo SMĚS THIOLŮ (merkaptanů), KAPALNÁ, HOŘLAVÁ, J.N. (tenze par při 50 °C je vyšší než 110 kPa)	3	F1	II	3	274 640C	1 L	E2	P001		MP19	T7		TP1 TP8 TP28
3336	THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, J.N. nebo SMĚS THIOLŮ (merkaptanů), KAPALNÁ, HOŘLAVÁ, J.N. (tenze par při 50 °C nepřesáhne 110 kPa)	3	F1	II	3	274 640D	1 L	E2	P001 IBC02 R001		MP19	T7		TP1 TP8 TP28
3336	THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, J.N. nebo SMĚS THIOLŮ (merkaptanů), KAPALNÁ, HOŘLAVÁ, J.N.	3	F1	III	3	274	5 L	E1	P001 IBC03 LP01 R001		MP19	T4		TP1 TP29
3337	PLYN JAKO CHLADICÍ PROSTŘEDEK R 404A (pentafluorethan, 1,1,1-trifluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 44 % pentafluorethanu a 52 % 1,1,1-trifluorethanu)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50		
3338	PLYN JAKO CHLADICÍ PROSTŘEDEK R 407A (difluormethan, pentafluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 20 % difluormethanu a 40 % pentafluorethanu)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50		
3339	PLYN JAKO CHLADICÍ PROSTŘEDEK R 407B (difluormethan, pentafluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 10 % difluormethanu a 70 % pentafluorethanu)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50		
3340	PLYN JAKO CHLADICÍ PROSTŘEDEK R 407C (difluormethan, pentafluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 23 % difluormethanu a 25 % pentafluorethanu)	2	2A		2.2		120 ml	E1	P200		MP9	(M) T50		
3341	DIOXID THIOMOČOVINY	4.2	S2	II	4.2		0	E2	P002 IBC06		MP14	T3		TP33
3341	DIOXID THIOMOČOVINY	4.2	S2	III	4.2		0	E1	P002 IBC08 LP02 R001	B3	MP14	T1		TP33
3342	XANTHÁTY	4.2	S2	II	4.2		0	E2	P002 IBC06		MP14	T3		TP33
3342	XANTHÁTY	4.2	S2	III	4.2		0	E1	P002 IBC08 LP02 R001	B3	MP14	T1		TP33
3343	NITROGLYCERIN, SMĚS, ZNECITLIVĚNÁ, KAPALNÁ, HOŘLAVÁ, J.N., s nejvýše 30 % hm. nitroglycerinu	3	D		3	274 278	0	E0	P099		MP2			

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3	3.1.2	
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
NENÍ PŘEDMĚTEM PRO ADR									3334	Látka kapalná, která podléhá předpisům platným pro leteckou dopravu, j.n.
NENÍ PŘEDMĚTEM PRO ADR									3335	Látka tuhá, která podléhá předpisům platným pro leteckou dopravu, j.n.
L4BN		FL	1 (D/E)					S2 S20	33	3336 THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, J.N. nebo SMĚS THIOLŮ (merkaptanů), KAPALNÁ, HOŘLAVÁ, J.N.
L1,5BN		FL	2 (D/E)					S2 S20	33	3336 THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, J.N. nebo SMĚS THIOLŮ (merkaptanů), KAPALNÁ, HOŘLAVÁ, J.N. (tenze par při 50 °C je vyšší než 110 kPa)
LGBF		FL	2 (D/E)					S2 S20	33	3336 THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, J.N. nebo SMĚS THIOLŮ (merkaptanů), KAPALNÁ, HOŘLAVÁ, J.N. (tenze par při 50 °C nepřesáhne 110 kPa)
LGBF		FL	3 (D/E)	V12				S2	30	3336 THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, J.N. nebo SMĚS THIOLŮ (merkaptanů), KAPALNÁ, HOŘLAVÁ, J.N.
PxBN(M)	TA4 TT9	AT	3 (C/E)					CV9 CV10 CV36	20	3337 PLYN JAKO CHLADICÍ PROSTŘEDEK R 404A (pentafluorethan, 1,1,1-trifluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 44 % pentafluorethanu a 52 % 1,1,1-trifluorethanu)
PxBN(M)	TA4 TT9	AT	3 (C/E)					CV9 CV10 CV36	20	3338 PLYN JAKO CHLADICÍ PROSTŘEDEK R 407A (difluormethan, pentafluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 20 % difluormethanu a 40 % pentafluorethanu)
PxBN(M)	TA4 TT9	AT	3 (C/E)					CV9 CV10 CV36	20	3339 PLYN JAKO CHLADICÍ PROSTŘEDEK R 407B (difluormethan, pentafluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 10 % difluormethanu a 70 % pentafluorethanu)
PxBN(M)	TA4 TT9	AT	3 (C/E)					CV9 CV10 CV36	20	3340 PLYN JAKO CHLADICÍ PROSTŘEDEK R 407C (difluormethan, pentafluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 23 % difluormethanu a 25 % pentafluorethanu)
SGAV		AT	2 (D/E)	V1					40	3341 DIOXID THIOMOČOVINY
SGAV		AT	3 (E)	V1					40	3341 DIOXID THIOMOČOVINY
SGAV		AT	2 (D/E)	V1					40	3342 XANTHÁTY
SGAV		AT	3 (E)	V1					40	3342 XANTHÁTY
			0 (B)					S2 S14	3343	NITROGLYCERIN, SMĚS, ZNECTLIVĚNÁ, KAPALNÁ, HOŘLAVÁ, J.N., s nejvýše 30 % hm. nitroglycerinu

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
3344	PENTAERYTHRITETETRANITRÁT (PENTAERYTHRITOLTETRANITRÁT; PENTAERYTHRIT-TETRANITRÁT; PENTAERYTHRITOL-TETRANITRÁT; PETN) SMĚS, ZNECITLIVĚNÁ, TUHÁ, J.N., s více než 10 % hm., ale nejvýše 20 % hm. PETN	4.1	D	II	4.1	272 274	0	E0	P099		MP2		
3345	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, TUHÝ, TOXICKÝ	6.1	T7	I	6.1	61 648 274	0	E5	P002 IBC07		MP18	T6	TP33
3345	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, TUHÝ, TOXICKÝ	6.1	T7	II	6.1	61 648 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3345	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, TUHÝ, TOXICKÝ	6.1	T7	III	6.1	61 648 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3346	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	I	3+6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27
3346	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	II	3+6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
3347	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	I	6.1+3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
3347	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	II	6.1+3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3347	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	III	6.1+3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
3348	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ	6.1	T6	I	6.1	61 648 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
3348	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ	6.1	T6	II	6.1	61 648 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3348	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ	6.1	T6	III	6.1	61 648 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
3349	PESTICID - PYRETHROID, TUHÝ, TOXICKÝ	6.1	T7	I	6.1	61 648 274	0	E5	P002 IBC07		MP18	T6	TP33
3349	PESTICID - PYRETHROID, TUHÝ, TOXICKÝ	6.1	T7	II	6.1	61 648 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3349	PESTICID - PYRETHROID, TUHÝ, TOXICKÝ	6.1	T7	III	6.1	61 648 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3350	PESTICID - PYRETHROID, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	I	3+6.1	61 274	0	E0	P001		MP7 MP17	T14	TP2 TP27

Cisterny ADR		Vozidla pro přepravu v cisternách	Přeprovací kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(4.3)	(4.3.5, 6.8.4)	(9.1.1.2)	(1.1.3.6 (8.6))	(7.2.4)	(7.3.3)	(7.5.11)	(8.5)	(5.3.2.3)	(1)	(2)
			2 (B)				S14		3344	PENTAERYTHRITETRANITRÁT (PENTAERYTHRITOLTETRANITRÁT; PENTAERYTHRIT-TETRANITRÁT; PENTAERYTHRITOL-TETRANITRÁT; PETN) SMĚS, ZNECITLIVĚNÁ, TUHÁ, J.N., s více než 10 % hm., ale nejvýše 20 % hm. PETN
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3345	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3345	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3345	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, TUHÝ, TOXICKÝ
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	3346	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	3346	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3347	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3347	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3347	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3348	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3348	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3348	PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3349	PESTICID - PYRETHROID, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3349	PESTICID - PYRETHROID, TUHÝ, TOXICKÝ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3349	PESTICID - PYRETHROID, TUHÝ, TOXICKÝ
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	3350	PESTICID - PYRETHROID, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
3350	PESTICID - PYRETHROID, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3	FT2	II	3+6.1	61 274	1 L	E2	P001 IBC02 R001		MP19	T11	TP2 TP27
3351	PESTICID - PYRETHROID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	I	6.1+3	61 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
3351	PESTICID - PYRETHROID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	II	6.1+3	61 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3351	PESTICID - PYRETHROID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	6.1	TF2	III	6.1+3	61 274	5 L	E1	P001 IBC03 R001		MP19	T7	TP2 TP28
3352	PESTICID - PYRETHROID, KAPALNÝ, TOXICKÝ	6.1	T6	I	6.1	61 648 274	0	E5	P001		MP8 MP17	T14	TP2 TP27
3352	PESTICID - PYRETHROID, KAPALNÝ, TOXICKÝ	6.1	T6	II	6.1	61 648 274	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3352	PESTICID - PYRETHROID, KAPALNÝ, TOXICKÝ	6.1	T6	III	6.1	61 648 274	5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
3354	INSEKTICID, PLYNNÝ, HOŘLAVÝ, J.N.	2	2F		2.1	274	0	E0	P200		MP9	(M)	
3355	INSEKTICID, PLYNNÝ, TOXICKÝ, HOŘLAVÝ, J.N.	2	2TF		2.3+2.1	274	0	E0	P200		MP9	(M)	
3356	GENERÁTOR KYSLÍKOVÝ, CHEMICKÝ	5.1	O3	II	5.1	284	0	E0	P500		MP2		
3357	NITROGLYCERIN, SMĚS, ZNECITLIVĚNÁ, KAPALNÁ, J.N., s nejvýše 30 % hm. nitroglycerinu	3	D	II	3	274 288	0	E0	P099		MP2		
3358	CHLADÍRENSKÉ STROJE s hořlavým, netoxickým, zkapalněným plynem	2	6F		2.1	291	0	E0	P003	PP32	MP9		
3359	ZAPLYNOVANÁ NÁKLADNÍ DOPRAVNÍ JEDNOTKA	9	M11			302							
3360	Vlákna, rostlinného původu, suchá	4.1	F1										
NEJÍ PŘEDMĚTEM PRO ADR													
3361	CHLORSILANY, TOXICKÉ, ŽÍRAVÉ, J.N.	6.1	TC1	II	6.1+8	274	0	E0	P010		MP15	T14	TP2 TP27 TP7
3362	CHLORSILANY, TOXICKÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N.	6.1	TFC	II	6.1+3+8	274	0	E0	P010		MP15	T14	TP2 TP27 TP7
NEJÍ PŘEDMĚTEM PRO ADR (viz také 1.1.3.1.(b))													
3363	Nebezpečné věci ve strojích nebo nebezpečné věci v přístrojích	9	M11										
3364	TRINITROFENOL (Kyselina PIKROVÁ), VLHČENÝ(A) nejméně 10 % hm. vody	4.1	D	I	4.1		0	E0	P406	PP24	MP2		
3365	TRINITROCHLOROBENZEN (PIKRYLCHLORID), VLHČENÝ nejméně 10 % hm. vody	4.1	D	I	4.1		0	E0	P406	PP24	MP2		
3366	TRINITROTOLUEN (TNT), VLHČENÝ nejméně 10 % hm. vody	4.1	D	I	4.1		0	E0	P406	PP24	MP2		
3367	TRINITROBENZEN, VLHČENÝ, nejméně 10 % hm. vody	4.1	D	I	4.1		0	E0	P406	PP24	MP2		
3368	Kyselina TRINITROBENZOOVÁ, VLHČENÁ nejméně 10 % hm. vody	4.1	D	I	4.1		0	E0	P406	PP24	MP2		
3369	DINITRO-o-KRESOLAT SODNÝ, VLHČENÝ nejméně 10 % hm. vody	4.1	DT	I	4.1+6.1		0	E0	P406	PP24	MP2		
3370	DUSIČNAN MOČOVINÝ, VLHČENÝ nejméně 10 % hm. vody	4.1	D	I	4.1		0	E0	P406	PP78	MP2		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S22	336	3350	PESTICID - PYRETHROID, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/E)			CV1 CV13 CV28	S2 S9 S14	663	3351	PESTICID - PYRETHROID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	63	3351	PESTICID - PYRETHROID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L4BH	TU15 TE19	FL	2 (D/E)	V12		CV13 CV28	S2 S9	63	3351	PESTICID - PYRETHROID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3352	PESTICID - PYRETHROID, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3352	PESTICID - PYRETHROID, KAPALNÝ, TOXICKÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3352	PESTICID - PYRETHROID, KAPALNÝ, TOXICKÝ
PxBN(M)	TA4 TT9	FL	2 (B/D)			CV9 CV10 CV36	S2 S20	23	3354	INSEKTICID, PLYNNÝ, HOŘLAVÝ, J.N.
PxBH(M)	TU6 TA4 TT9	FL	1 (B/D)			CV9 CV10 CV36	S2 S14	263	3355	INSEKTICID, PLYNNÝ, TOXICKÝ, HOŘLAVÝ, J.N.
			2 (E)			CV24			3356	GENERÁTOR KYSLÍKOVÝ, CHEMICKÝ
			2 (B)				S2 S14		3357	NITROGLYCERIN, SMĚS, ZNECITLIVĚNÁ, KAPALNÁ, J.N., s nejvýše 30 % hm. nitroglycerinu
			2 (D)			CV9	S2		3358	CHLADĚRENSKÉ STROJE s hořlavým, netoxickým, zkapalněným plynem
			(-)						3359	ZAPLYNOVANÁ NÁKLADNÍ DOPRAVNÍ JEDNOTKA
NENÍ PŘEDMĚTEM PRO ADR									3360	Vláčna, rostlinného původu, suchá
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	68	3361	CHLORSILANY, TOXICKÉ, ŽÍRAVÉ, J.N.
L4BH	TU15 TE19	FL	2 (D/E)			CV13 CV28	S2 S9 S19	638	3362	CHLORSILANY, TOXICKÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N.
NENÍ PŘEDMĚTEM PRO ADR (viz také 1.1.3.1.(b))									3363	Nebezpečné věci ve strojích nebo nebezpečné věci v přístrojích
			1 (B)				S14		3364	TRINITROFENOL (Kyselina pikrova), Vlhčený (Á) nejméně 10 % hm. vody
			1 (B)				S14		3365	TRINITROCHLORBENZEN (PIKRYLCHLORID), Vlhčený nejméně 10 % hm. vody
			1 (B)				S14		3366	TRINITROTOLUEN (TNT), Vlhčený nejméně 10 % hm. vody
			1 (B)				S14		3367	TRINITROBENZEN, Vlhčený, nejméně 10 % hm. vody
			1 (B)				S14		3368	Kyselina trinitrobenzoová, Vlhčená nejméně 10 % hm. vody
			1 (B)			CV13 CV28	S14		3369	Dinitro-o-kresolat sodný, Vlhčený nejméně 10 % hm. vody
			1 (B)				S14		3370	Dusičnan močoviny, Vlhčený nejméně 10 % hm. vody

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
3371	2-METHYLBUTANAL	3	F1	II	3		1 L	E2	P001 IBC02 R001		MP19	T4	TP1
3373	BIOLOGICKÁ LÁTKA, KATEGORIE B	6.2	I4		6.2	319	0	E0	P650			T1	TP1
3373	BIOLOGICKÁ LÁTKA, KATEGORIE B (pouze zvířecí materiál)	6.2	I4		6.2	319	0	E0	P650			T1 BK1 BK2	TP1
3374	ACETYLÉN, BEZ ROZPOUŠTĚDLA	2	2F		2.1		0	E0	P200		MP9		
3375	DUSIČNAN AMONNÝ, EMULZE nebo SUSPENZE nebo GEL, meziprodukt při výrobě trhavin, kapalný	5.1	O1	II	5.1	309	0	E2	P099 IBC99		MP2	T1	TP1 TP9 TP17 TP32
3375	DUSIČNAN AMONNÝ, EMULZE nebo SUSPENZE nebo GEL, meziprodukt při výrobě trhavin, tuhý	5.1	O2	II	5.1	309	0	E2	P099 IBC99		MP2	T1	TP1 TP9 TP17 TP32
3376	4-NITROFENYLHYDRAZIN, s nejméně 30 % hm. vody	4.1	D	I	4.1		0	E0	P406	PP26	MP2		
3377	PERBORITAN SODNÝ, MONOHYDRÁT	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
3378	UHĹÍČITAN SODNÝ, PEROXYHYDRÁT	5.1	O2	II	5.1		1 kg	E2	P002 IBC08	B4	MP10	T3 BK1 BK2	TP33
3378	UHĹÍČITAN SODNÝ, PEROXYHYDRÁT	5.1	O2	III	5.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1 BK1 BK2	TP33
3379	LÁTKA ZNECITLIVĚNÁ, VÝBUŠNÁ, KAPALNÁ, J.N.	3	D	I	3	274 311	0	E0	P099		MP2		
3380	LÁTKA ZNECITLIVĚNÁ, VÝBUŠNÁ, TUHÁ, J.N.	4.1	D	I	4.1	274 311	0	E0	P099		MP2		
3381	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, J.N., s LC50 nejvýše 200 ml/m3 a nasycenou koncentrací par nejméně 500 LC50	6.1	T1 nebo T4	I	6.1	274	0	E0	P601		MP8 MP17	T22	TP2
3382	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, J.N., s LC50 nejvýše 1000 ml/m3 a nasycenou koncentrací par nejméně 10 LC50	6.1	T1 nebo T4	I	6.1	274	0	E0	P602		MP8 MP17	T20	TP2
3383	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, J.N., s LC50 nejvýše 200 ml/m3 a nasycenou koncentrací par nejméně 500 LC50	6.1	TF1	I	6.1+3	274	0	E0	P601		MP8 MP17	T22	TP2
3384	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, J.N., s LC50 nejvýše 1000 ml/m3 a nasycenou koncentrací par nejméně 10 LC50	6.1	TF1	I	6.1+3	274	0	E0	P602		MP8 MP17	T20	TP2
3385	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N., s LC50 nejvýše 200 ml/m3 a nasycenou koncentrací par nejméně 500 LC50	6.1	TW1	I	6.1+4.3	274	0	E0	P601		MP8 MP17	T22	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
LGBF		FL	2 (D/E)				S2 S20	33	3371	2-METHYLBUTANAL
L4BH	TU15 TU37 TE19	AT	(-)				S3	606	3373	BIOLOGICKÁ LÁTKA, KATEGORIE B
L4BH	TU15 TU37 TE19	AT	- (-)				S3	606	3373	BIOLOGICKÁ LÁTKA, KATEGORIE B (pouze zvířecí materiál)
			2 (D)			CV9 CV10 CV36	S2 S20		3374	ACETYLÉN, BEZ ROZPOUŠTĚDLA
LGAV(+)	TU3 TU12 TU39 TE10 TE23 TA1 TA3	AT	2 (E)			CV24	S9 S23	50	3375	DUSIČNAN AMONNÝ, EMULZE nebo SUSPENZE nebo GEL, meziprodukt při výrobě trhavin, kapalný
SGAV(+)	TU3 TU12 TU39 TE10 TE23 TA1 TA3	AT	2 (E)			CV24	S9 S23	50	3375	DUSIČNAN AMONNÝ, EMULZE nebo SUSPENZE nebo GEL, meziprodukt při výrobě trhavin, tuhý
			1 (B)	V1			S14		3376	4-NITROFENYLHYDRAZIN, s nejméně 30 % hm. vody
SGAV	TU3	AT	3 (E)		VV8	CV24		50	3377	PERBORITAN SODNÝ, MONOHYDRÁT
SGAV	TU3	AT	2 (E)	V11	VV8	CV24		50	3378	UHLIČITAN SODNÝ, PEROXYHYDRÁT
SGAV	TU3	AT	3 (E)		VV8	CV24		50	3378	UHLIČITAN SODNÝ, PEROXYHYDRÁT
			1 (B)				S2 S14		3379	LÁTKA ZNECITLIVĚNÁ, VÝBUŠNÁ, KAPALNÁ, J.N.
			1 (B)				S14		3380	LÁTKA ZNECITLIVĚNÁ, VÝBUŠNÁ, TUHÁ, J.N.
L15CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	3381	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, J.N., s LC50 nejvýše 200 ml/m3 a nasycenou koncentrací par nejméně 500 LC50
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	66	3382	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, J.N., s LC50 nejvýše 1000 ml/m3 a nasycenou koncentrací par nejméně 10 LC50
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3383	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, J.N., s LC50 nejvýše 200 ml/m3 a nasycenou koncentrací par nejméně 500 LC50
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3384	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, J.N., s LC50 nejvýše 1000 ml/m3 a nasycenou koncentrací par nejméně 10 LC50
L15CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	623	3385	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N., s LC50 nejvýše 200 ml/m3 a nasycenou koncentrací par nejméně 500 LC50

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky		
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2		4.2.5.3
3386	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N., s LC50 nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC50	6.1	TW1	I	6.1+4.3	274	0	E0	P602		MP8 MP17	T20		TP2
3387	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N., s LC50 nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC50	6.1	TO1	I	6.1+5.1	274	0	E0	P601		MP8 MP17	T22		TP2
3388	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N., s LC50 nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC50	6.1	TO1	I	6.1+5.1	274	0	E0	P602		MP8 MP17	T20		TP2
3389	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, ŽÍRAVÁ, J.N., s LC50 nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC50	6.1	TO1 nebo TC3	I	6.1+8	274	0	E0	P601		MP8 MP17	T22		TP2
3390	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, ŽÍRAVÁ, J.N., s LC50 nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC50	6.1	TO1 nebo TC3	I	6.1+8	274	0	E0	P602		MP8 MP17	T20		TP2
3391	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, PYROFORNÍ, J.N.	4.2	S5	I	4.2	274	0	E0	P404	PP86	MP2	T21		TP7 TP33 TP36
3392	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, PYROFORNÍ, J.N.	4.2	S5	I	4.2	274	0	E0	P400	PP86	MP2	T21		TP2 TP7 TP36
3393	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, PYROFORNÍ, REAGUJÍCÍ S VODOU, J.N.	4.2	SW	I	4.2+4.3	274	0	E0	P404	PP86	MP2	T21		TP7 TP33 TP36
3394	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, PYROFORNÍ, REAGUJÍCÍ S VODOU, J.N.	4.2	SW	I	4.2+4.3	274	0	E0	P400	PP86	MP2	T21		TP2 TP7 TP36
3395	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.	4.3	W2	I	4.3	274	0	E0	P403		MP2	T9		TP7 TP33 TP36
3395	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.	4.3	W2	II	4.3	274	500 g	E2	P410 IBC04		MP14	T3		TP33 TP36
3395	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.	4.3	W2	III	4.3	274	1 kg	E1	P410 IBC06		MP14	T1		TP33 TP36
3396	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.	4.3	WF2	I	4.3+4.1	274	0	E0	P403		MP2	T9		TP7 TP33 TP36

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	623	3386	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N., s LC50 nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC50
L15CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	665	3387	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N., s LC50 nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC50
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	665	3388	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N., s LC50 nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC50
L15CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	668	3389	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, ŽÍRAVÁ, J.N., s LC50 nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC50
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/D)			CV1 CV13 CV28	S9 S14	668	3390	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, ŽÍRAVÁ, J.N., s LC50 nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC50
L21DH	TU4 TU14 TU22 TC1 TE21 TM1	AT	0 (B/E)	V1			S20	43	3391	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, PYROFORNÍ, J.N.
L21DH	TU4 TU14 TU22 TC1 TE21 TM1	AT	0 (B/E)	V1			S20	333	3392	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, PYROFORNÍ, J.N.
L21DH	TU4 TU14 TU22 TC1 TE21 TM1	AT	0 (B/E)	V1			S20	X432	3393	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, PYROFORNÍ, REAGUJÍCÍ S VODOU, J.N.
L21DH	TU4 TU14 TU22 TC1 TE21 TM1	AT	0 (B/E)	V1			S20	X333	3394	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, PYROFORNÍ, REAGUJÍCÍ S VODOU, J.N.
S10AN L10DH	TU4 TU14 TU22 TE21 TM2	AT	1 (B/E)	V1		CV23	S20	X423	3395	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.
SGAN L4DH	TU14 TE21 TM2	AT	2 (D/E)	V1		CV23		423	3395	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.
SGAN L4DH	TU14 TE21 TM2	AT	3 (E)	V1		CV23		423	3395	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.
S10AN L10DH	TU4 TU14 TU22 TE21 TM2	AT	0 (B/E)	V1		CV23	S20	X423	3396	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
3396	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.	4.3	WF2	II	4.3+4.1	274	500 g	E2	P410 IBC04		MP14	T3	TP33 TP36
3396	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.	4.3	WF2	III	4.3+4.1	274	1 kg	E1	P410 IBC06		MP14	T1	TP33 TP36
3397	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.	4.3	WS	I	4.3+4.2	274	0	E0	P403		MP2	T9	TP7 TP33 TP36
3397	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.	4.3	WS	II	4.3+4.2	274	500 g	E2	P410 IBC04		MP14	T3	TP33 TP36
3397	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.	4.3	WS	III	4.3+4.2	274	1 kg	E1	P410 IBC06		MP14	T1	TP33 TP36
3398	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.	4.3	W1	I	4.3	274	0	E0	P402		MP2	T13	TP2 TP7 TP36
3398	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.	4.3	W1	II	4.3	274	500 ml	E2	P001 IBC01		MP15	T7	TP2 TP7 TP36
3398	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.	4.3	W1	III	4.3	274	1 L	E1	P001 IBC02		MP15	T7	TP2 TP7 TP36
3399	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.	4.3	WF1	I	4.3+3	274	0	E0	P402		MP2	T13	TP2 TP7 TP36
3399	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.	4.3	WF1	II	4.3+3	274	500 ml	E2	P001 IBC01		MP15	T7	TP2 TP7 TP36
3399	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.	4.3	WF1	III	4.3+3	274	1 L	E1	P001 IBC02 R001		MP15	T7	TP2 TP7 TP36
3400	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	4.2	S5	II	4.2	274	500 g	E2	P410 IBC06		MP14	T3	TP33 TP36
3400	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	4.2	S5	III	4.2	274	1 kg	E1	P002 IBC08		MP14	T1	TP33 TP36
3401	AMALGAM ALKALICKÝCH KOVŮ, TUHÝ	4.3	W2	I	4.3	182	0	E0	P403		MP2	T9	TP7 TP33
3402	AMALGAM KOVŮ ALKALICKÝCH ZEMIN, TUHÝ	4.3	W2	I	4.3	183 506	0	E0	P403		MP2	T9	TP7 TP33
3403	SLITINY DRASLÍKU, KOVOVÉ, TUHÉ	4.3	W2	I	4.3		0	E0	P403		MP2	T9	TP7 TP33
3404	SLITINY DRASLÍKU A SODIKU, TUHÉ	4.3	W2	I	4.3		0	E0	P403		MP2	T9	TP7 TP33
3405	CHLOREČNAN BARNATÝ, ROZTOK	5.1	OT1	II	5.1+6.1		1 L	E2	P504 IBC02		MP2	T4	TP1

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
SGAN L4DH	TU14 TE21 TM2	AT	0 (D/E)	V1		CV23		423	3396	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.
SGAN L4DH	TU14 TE21 TM2	AT	0 (E)	V1		CV23		423	3396	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.
S10AN L10DH	TU14 TE21 TM2	AT	1 (B/E)	V1		CV23	S20	X423	3397	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.
SGAN L4DH		AT	2 (D/E)	V1		CV23		423	3397	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.
SGAN L4DH		AT	3 (E)	V1		CV23		423	3397	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.
L10DH	TU4 TU14 TU22 TE21 TM2	AT	0 (B/E)	V1		CV23	S20	X323	3398	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.
L4DH	TU14 TE21 TM2	AT	0 (D/E)	V1		CV23		323	3398	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.
L4DH	TU14 TE21 TM2	AT	0 (E)	V1		CV23		323	3398	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.
L10DH	TU4 TU14 TU22 TE21 TM2	FL	0 (B/E)	V1		CV23	S2 S20	X323	3399	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.
L4DH	TU4 TU14 TU22 TE21 TM2	FL	0 (D/E)	V1		CV23	S2	323	3399	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.
L4DH	TU14 TE21 TM2	FL	0 (E)	V1		CV23	S2	323	3399	SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.
SGAN L4BN		AT	2 (D/E)	V1				40	3400	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.
SGAN L4BN		AT	3 (E)	V1				40	3400	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	3401	AMALGAM ALKALICKÝCH KOVŮ, TUHÝ
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	3402	AMALGAM KOVŮ ALKALICKÝCH ZEMIN, TUHÝ
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	3403	SLITINÝ DRASLÍKU, KOVOVÉ, TUHÉ
L10BN(+)	TU1 TE5 TT3 TM2	AT	1 (B/E)	V1		CV23	S20	X423	3404	SLITINÝ DRASLÍKU A SODÍKU, TUHÉ
L4BN	TU3	AT	2 (E)			CV24 CV28		56	3405	CHLOREČNAN BARNATÝ, ROZTOK

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
3405	CHLORÉČNAN BARNATÝ, ROZTOK	5.1	OT1	III	5.1+6.1		5 L	E1	P001 IBC02		MP2	T4	TP1
3406	CHLORISTAN BARNATÝ, ROZTOK	5.1	OT1	II	5.1+6.1		1 L	E2	P504 IBC02		MP2	T4	TP1
3406	CHLORISTAN BARNATÝ, ROZTOK	5.1	OT1	III	5.1+6.1		5 L	E1	P001 IBC02		MP2	T4	TP1
3407	CHLORÉČNANY A CHLORID HOŘEČNATÝ, SMĚS, ROZTOK	5.1	O1	II	5.1		1 L	E2	P504 IBC02		MP2	T4	TP1
3407	CHLORÉČNANY A CHLORID HOŘEČNATÝ, SMĚS, ROZTOK	5.1	O1	III	5.1		5 L	E1	P504 IBC02		MP2	T4	TP1
3408	CHLORISTAN OLOVNATÝ, ROZTOK	5.1	OT1	II	5.1+6.1		1 L	E2	P504 IBC02		MP2	T4	TP1
3408	CHLORISTAN OLOVNATÝ, ROZTOK	5.1	OT1	III	5.1+6.1		5 L	E1	P001 IBC02		MP2	T4	TP1
3409	CHLORNITROBENZENY, KAPALNÉ	6.1	T1	II	6.1	279	100 ml	E4	P001 IBC02		MP15	T7	TP2
3410	HYDROCHLORID 4-CHLOR-OTOLUIDINU, ROZTOK	6.1	T1	III	6.1		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
3411	2-NAFTYLAMIN (beta-naftylamin), ROZTOK	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
3411	2-NAFTYLAMIN (beta-naftylamin), ROZTOK	6.1	T1	III	6.1		5 L	E1	P001 IBC02		MP19	T7	TP2
3412	KYSELINA MRAVENČÍ s více než 10 % ale nejvíce 85 % hm. kyseliny	8	C3	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
3412	KYSELINA MRAVENČÍ s více než 5 %, ale nejvíce 10 % hm. kyseliny	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3413	KYANID DRASELNÝ, ROZTOK	6.1	T4	I	6.1		0	E5	P001		MP8 MP17	T14	TP2
3413	KYANID DRASELNÝ, ROZTOK	6.1	T4	II	6.1		100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3413	KYANID DRASELNÝ, ROZTOK	6.1	T4	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
3414	KYANID SODNÝ, ROZTOK	6.1	T4	I	6.1		0	E5	P001		MP8 MP17	T14	TP2
3414	KYANID SODNÝ, ROZTOK	6.1	T4	II	6.1		100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27
3414	KYANID SODNÝ, ROZTOK	6.1	T4	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T7	TP2 TP28
3415	FLUORID SODNÝ, ROZTOK	6.1	T4	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3416	CHLORACETOFENON, KAPALNÝ	6.1	T1	II	6.1		0	E4	P001 IBC02		MP15	T7	TP2
3417	XYLILBROMID, TUHÝ	6.1	T2	II	6.1		0	E4	P002 IBC08	B4	MP10	T3	TP33
3418	2,4-TOLUYLENDIAMIN, ROZTOK	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3419	FLUORID BORITÝ / KYSELINA OCTOVÁ, KOMPLEX, TUHÝ	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3420	FLUORID BORITÝ / KYSELINA PROPIONOVÁ, KOMPLEX, TUHÝ	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3421	HYDROGENFLUORID DRASELNÝ, ROZTOK	8	CT1	II	8+6.1		1 L	E2	P001 IBC02		MP15	T7	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravení kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
LGBV	TU3	AT	3 (E)			CV24 CV28		56	3405	CHLOREČNAN BARNATÝ, ROZTOK
L4BN	TU3	AT	2 (E)			CV24 CV28		56	3406	CHLORISTAN BARNATÝ, ROZTOK
LGBV	TU3	AT	3 (E)			CV24 CV28		56	3406	CHLORISTAN BARNATÝ, ROZTOK
L4BN	TU3	AT	2 (E)			CV24		50	3407	CHLOREČNANY A CHLORID HOŘEČNATÝ, SMĚS, ROZTOK
LGBV	TU3	AT	3 (E)			CV24		50	3407	CHLOREČNANY A CHLORID HOŘEČNATÝ, SMĚS, ROZTOK
L4BN	TU3	AT	2 (E)			CV24 CV28		56	3408	CHLORISTAN OLOVNATÝ, ROZTOK
LGBV	TU3	AT	3 (E)			CV24 CV28		56	3408	CHLORISTAN OLOVNATÝ, ROZTOK
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3409	CHLORNITROBENZENY, KAPALNÉ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3410	HYDROCHLORID 4-CHLOR-o-TOLUIDINU, ROZTOK
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3411	2-NAFTYLAMIN (beta-naftylamin), ROZTOK
L4BH	TU15 TE19	AT	2 (E)			CV13 CV28	S9	60	3411	2-NAFTYLAMIN (beta-naftylamin), ROZTOK
L4BN		AT	2 (E)					80	3412	KYSELINA MRAVENČÍ s více než 10 %, ale nejvíce 85 % hm. kyseliny
L4BN		AT	3 (E)	V12				80	3412	KYSELINA MRAVENČÍ s více než 5 %, ale nejvíce 10 % hm. kyseliny
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3413	KYANID DRASELNÝ, ROZTOK
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3413	KYANID DRASELNÝ, ROZTOK
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3413	KYANID DRASELNÝ, ROZTOK
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3414	KYANID SODNÝ, ROZTOK
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3414	KYANID SODNÝ, ROZTOK
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3414	KYANID SODNÝ, ROZTOK
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3415	FLUORID SODNÝ, ROZTOK
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3416	CHLORACETOFENON, KAPALNÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3417	XYLYLBROMID, TUHÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3418	2,4-TOLUYLENDIAMIN, ROZTOK
SGAN L4BN		AT	2 (E)	V11				80	3419	FLUORID BORITÝ / KYSELINA OCTOVÁ, KOMPLEX, TUHÝ
SGAN L4BN		AT	2 (E)	V11				80	3420	FLUORID BORITÝ / KYSELINA PROPIONOVÁ, KOMPLEX, TUHÝ
L4DH	TU14 TE21	AT	2 (E)			CV13 CV28		86	3421	HYDROGENFLUORID DRASELNÝ, ROZTOK

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
3421	HYDROGENFLUORID DRASELNÝ, ROZTOK	8	CT1	III	8+6.1		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
3422	FLUORID DRASELNÝ, ROZTOK	6.1	T4	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3423	TETRAMETHYLAMONIUM-HYDROXID, TUHÝ (TETRAMETHYLAMONIUMHYDROXID, TUHÝ)	8	C8	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3424	AMMONIUMDINITRO-o-KRESOLÁT, ROZTOK	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
3424	AMMONIUMDINITRO-o-KRESOLÁT, ROZTOK	6.1	T1	III	6.1		5 L	E1	P001 IBC02		MP19	T7	TP2
3425	KYSELINA BROMOCTOVÁ, TUHÁ	8	C4	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3426	AKRYLAMID, ROZTOK	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3427	CHLORBENZYLCHLORIDY, TUHÉ	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3428	3-CHLOR-4-METHYLFENYLISOKYANÁT, TUHÝ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3429	CHLORTOLUIDINY, KAPALNÉ	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3430	XYLENOLY, KAPALNÉ	6.1	T1	II	6.1		100 ml	E4	P001 IBC02		MP15	T7	TP2
3431	NITROBENZOTRIFLUORIDY, TUHÉ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3432	BIFENYLY POLYCHLOROVANÉ, TUHÉ	9	M2	II	9	305	1 kg	E2	P906 IBC08	B4	MP10	T3	TP33
3434	NITROKRESOLY, KAPALNÉ	6.1	T1	III	6.1		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3436	HEXAFLUORACETON, HYDRÁT, TUHÝ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3437	CHLORKRESOLY, TUHÉ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3438	alfa-METHYLBENZYLALKOHOL, TUHÝ	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3439	NITRILY, TUHÉ, TOXICKÉ, J.N.	6.1	T2	I	6.1	274	0	E5	P002 IBC07		MP18	T6	TP33
3439	NITRILY, TUHÉ, TOXICKÉ, J.N.	6.1	T2	II	6.1	274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3439	NITRILY, TUHÉ, TOXICKÉ, J.N.	6.1	T2	III	6.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3440	SLOUČENINA SELENU, KAPALNÁ, J.N.	6.1	T4	I	6.1	274 563	0	E5	P001		MP8 MP17	T14	TP2 TP27
3440	SLOUČENINA SELENU, KAPALNÁ, J.N.	6.1	T4	II	6.1	274 563	100 ml	E4	P001 IBC02		MP15	T11	TP2 TP27

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4DH	TU14 TE21	AT	3 (E)	V12		CV13 CV28		86	3421	HYDROGENFLUORID DRASELNÝ, ROZTOK
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3422	FLUORID DRASELNÝ, ROZTOK
SGAN L4BN		AT	2 (E)	V11				80	3423	TETRAMETHYLAMONIUM-HYDROXID, TUHÝ (TETRAMETHYLAMONIUMHYDROXID, TUHÝ)
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3424	AMMONIUMDINITRO- <i>o</i> -KRESOLÁT, ROZTOK
L4BH	TU15 TE19	AT	2 (E)			CV13 CV28	S9	60	3424	AMMONIUMDINITRO- <i>o</i> -KRESOLÁT, ROZTOK
SGAN L4BN		AT	2 (E)	V11				80	3425	KYSELINA BROMOCTOVÁ, TUHÁ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3426	AKRYLAMID, ROZTOK
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3427	CHLORBENZYLCHLORIDY, TUHÉ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3428	3-CHLOR-4-METHYLFENYLISOKYANÁT, TUHÝ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3429	CHLORTOLUIDINY, KAPALNÉ
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3430	XYLENOLY, KAPALNÉ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3431	NITROBENZOTRIFLUORIDY, TUHÉ
S4AH L4BH	TU15	AT	0 (D/E)	V11	VV15	CV1 CV13 CV28	S19	90	3432	BIFENYLY POLYCHLOROVANÉ, TUHÉ
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3434	NITROKRESOLY, KAPALNÉ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3436	HEXAFLUORACETON, HYDRÁT, TUHÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3437	CHLORKRESOLY, TUHÉ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3438	alfa-METHYLBENZYLALKOHOL, TUHÝ
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3439	NITRILY, TUHÉ, TOXICKÉ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3439	NITRILY, TUHÉ, TOXICKÉ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3439	NITRILY, TUHÉ, TOXICKÉ, J.N.
L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3440	SLOUČENINA SELENU, KAPALNÁ, J.N.
L4BH	TU15 TE19	AT	2 (D/E)			CV13 CV28	S9 S19	60	3440	SLOUČENINA SELENU, KAPALNÁ, J.N.

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
3440	SLOUČENINA SELENU, KAPALNÁ, J.N.	6.1	T4	III	6.1	274 563	5 L	E1	P001 IBC03 R001		MP19	T7	TP1 TP28
3441	CHLORDINITROBENZENY, TUHÉ	6.1	T2	II	6.1	279	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3442	DICHLORANILÍNÝ, TUHÉ	6.1	T2	II	6.1	279	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3443	DINITROBENZENY, TUHÉ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3444	HYDROCHLORID NIKOTINU, TUHÝ	6.1	T2	II	6.1	43	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3445	SÍRAN NIKOTINU, TUHÝ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3446	NITROTOLUENY, TUHÉ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3447	NITROXYLENY, TUHÉ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3448	LÁTKA PRO PŘÍPRAVU SLZNEHO PLYNU, TUHÁ, J.N.	6.1	T2	I	6.1	274	0	E5	P002		MP18	T6	TP33
3448	LÁTKA PRO PŘÍPRAVU SLZNEHO PLYNU, TUHÁ, J.N.	6.1	T2	II	6.1	274	0	E4	P002 IBC08	B4	MP10	T3	TP33
3449	BROMBENZYLKYANID, TUHÝ	6.1	T2	I	6.1	138	0	E5	P002		MP18	T6	TP33
3450	DIFENYLCHLORARSIN, TUHÝ	6.1	T3	I	6.1		0	E5	P002 IBC07		MP18	T6	TP33
3451	TOLUIDINY, TUHÉ	6.1	T2	II	6.1	279	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3452	XYLIDINY, TUHÉ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3453	KYSELINA FOSFOREČNÁ, TUHÁ	8	C2	III	8		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3454	DINITROTOLUENY, TUHÉ	6.1	T2	II	6.1		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3455	KRESOLY, TUHÉ	6.1	TC2	II	6.1+8		500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3456	KYSELINA NITROSYLSÍROVÁ, TUHÁ	8	C2	II	8		1 kg	E2	P002 IBC08	B4	MP10	T3	TP33
3457	CHLORNITROTOLUENY, TUHÉ	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3458	NITROANISOLY, TUHÉ	6.1	T2	III	6.1	279	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3459	NITROBROMBENZENY, TUHÉ	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3460	N-ETHYLBENZYL TOLUIDIN, TUHÝ	6.1	T2	III	6.1		5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3462	TOXINY, ZISKANÉ Z ŽIVÝCH ORGANISMŮ, TUHÉ, J.N.	6.1	T2	I	6.1	210 274	0	E5	P002 IBC07		MP18	T6	TP33
3462	TOXINY, ZISKANÉ Z ŽIVÝCH ORGANISMŮ, TUHÉ, J.N.	6.1	T2	II	6.1	210 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3462	TOXINY, ZISKANÉ Z ŽIVÝCH ORGANISMŮ, TUHÉ, J.N.	6.1	T2	III	6.1	210 274	5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33
3463	KYSELINA PROPIONOVÁ s více než 90 % hm. kyseliny	8	CF1	II	8+3		1 L	E2	P001 IBC02		MP15	T7	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L4BH	TU15 TE19	AT	2 (E)	V12		CV13 CV28	S9	60	3440	SLOUČENINA SELENU, KAPALNÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3441	CHLORDINITROBENZENY, TUHÉ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3442	DICHLORANILINY, TUHÉ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3443	DINITROBENZENY, TUHÉ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3444	HYDROCHLORID NIKOTINU, TUHÝ
SGAH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3445	SÍRAN NIKOTINU, TUHÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3446	NITROTOLUENY, TUHÉ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3447	NITROXYLENY, TUHÉ
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3448	LÁTKA PRO PŘÍPRAVU SLZNEHO PLYNU, TUHÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3448	LÁTKA PRO PŘÍPRAVU SLZNEHO PLYNU, TUHÁ, J.N.
S10AH L10CH	TU15 TE19	AT	1 (C/E)			CV1 CV13 CV28	S9 S14	66	3449	BROMBENZYLKYANID, TUHÝ
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3450	DIFENYLCHLORARSIN, TUHÝ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3451	TOLUIDINY, TUHÉ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3452	XYLIDINY, TUHÉ
SGAV L4BN		AT	3 (E)		VV9			80	3453	KYSELINA FOSFOREČNÁ, TUHA
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3454	DINITROTOLUENY, TUHÉ
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	68	3455	KRESOLY, TUHÉ
SGAN L4BN		AT	2 (E)	V11				X80	3456	KYSELINA NITROSYLSÍROVÁ, TUHA
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3457	CHLORNITROTOLUENY, TUHÉ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3458	NITROANISOLY, TUHÉ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3459	NITROBROMBENZENY, TUHÉ
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3460	N-ETHYLBENZYL TOLUIDIN, TUHÝ
S10AH L10CH	TU15 TE19	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3462	TOXINY, ZISKANÉ Z ŽIVÝCH ORGANISMŮ, TUHÉ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3462	TOXINY, ZISKANÉ Z ŽIVÝCH ORGANISMŮ, TUHÉ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3462	TOXINY, ZISKANÉ Z ŽIVÝCH ORGANISMŮ, TUHÉ, J.N.
L4BN		FL	2 (D/E)				S2	83	3463	KYSELINA PROPIONOVÁ s více než 90 % hm. kyseliny

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
3464	SLOUČENINA FOSFORU, ORGANICKÁ, TUHÁ, TOXICKÁ, J.N.	6.1	T2	I	6.1	43 274	0	E5	P002 IBC07		MP18	T6	TP33
3464	SLOUČENINA FOSFORU, ORGANICKÁ, TUHÁ, TOXICKÁ, J.N.	6.1	T2	II	6.1	43 274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3464	SLOUČENINA FOSFORU, ORGANICKÁ, TUHÁ, TOXICKÁ, J.N.	6.1	T2	III	6.1	43 274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3465	SLOUČENINA ARSENU, ORGANICKÁ, TUHÁ, J.N.	6.1	T3	I	6.1	274	0	E5	P002 IBC07		MP18	T6	TP33
3465	SLOUČENINA ARSENU, ORGANICKÁ, TUHÁ, J.N.	6.1	T3	II	6.1	274	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3465	SLOUČENINA ARSENU, ORGANICKÁ, TUHÁ, J.N.	6.1	T3	III	6.1	274	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3466	KARBONYLY KOVŮ, TUHÉ, J.N.	6.1	T3	I	6.1	274 562	0	E5	P002 IBC07		MP18	T6	TP33
3466	KARBONYLY KOVŮ, TUHÉ, J.N.	6.1	T3	II	6.1	274 562	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3466	KARBONYLY KOVŮ, TUHÉ, J.N.	6.1	T3	III	6.1	274 562	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3467	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, TOXICKÁ, J.N.	6.1	T3	I	6.1	274 562	0	E5	P002 IBC07		MP18	T6	TP33
3467	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, TOXICKÁ, J.N.	6.1	T3	II	6.1	274 562	500 g	E4	P002 IBC08	B4	MP10	T3	TP33
3467	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, TOXICKÁ, J.N.	6.1	T3	III	6.1	274 562	5 kg	E1	P002 IBC08 LP02 R001	B3	MP10	T1	TP33
3468	VODÍK V ZÁSObNÍKOVÉM SYSTÉMU HYDRIDU KOVU nebo VODÍK V ZÁSObNÍKOVÉM SYSTÉMU HYDRIDU KOVU OBSAŽENÝ V ZAŘÍZENÍ nebo VODÍK V ZÁSObNÍKOVÉM SYSTÉMU HYDRIDU KOVU BALENÝ SE ZAŘÍZENÍM	2	1F		2.1	321 356	0	E0	P205		MP9		
3469	BARVA, HOŘLAVÁ, ŽÍRAVÁ (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV, HOŘLAVÁ, ŽÍRAVÁ (včetně fedidel a složek odstraňovačů)	3	FC	I	3+8	163	0	E0	P001		MP7 MP17	T11	TP2 TP27
3469	BARVA, HOŘLAVÁ, ŽÍRAVÁ (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV, HOŘLAVÁ, ŽÍRAVÁ (včetně fedidel a složek odstraňovačů)	3	FC	II	3+8	163	1 L	E2	P001 IBC02		MP19	T7	TP2 TP8 TP28

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3464	SLOUČENINA FOSFORU, ORGANICKÁ, TUHÁ, TOXICKÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3464	SLOUČENINA FOSFORU, ORGANICKÁ, TUHÁ, TOXICKÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3464	SLOUČENINA FOSFORU, ORGANICKÁ, TUHÁ, TOXICKÁ, J.N.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3465	SLOUČENINA ARSENU, ORGANICKÁ, TUHÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3465	SLOUČENINA ARSENU, ORGANICKÁ, TUHÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3465	SLOUČENINA ARSENU, ORGANICKÁ, TUHÁ, J.N.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3466	KARBONYLY KOVŮ, TUHÉ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3466	KARBONYLY KOVŮ, TUHÉ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3466	KARBONYLY KOVŮ, TUHÉ, J.N.
S10AH L10CH	TU14 TU15 TE19 TE21	AT	1 (C/E)	V10		CV1 CV13 CV28	S9 S14	66	3467	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, TOXICKÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (D/E)	V11		CV13 CV28	S9 S19	60	3467	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, TOXICKÁ, J.N.
SGAH L4BH	TU15 TE19	AT	2 (E)		VV9	CV13 CV28	S9	60	3467	SLOUČENINA ORGANOKOVOVÁ, TUHÁ, TOXICKÁ, J.N.
			2 (D)			CV9 CV10 CV36	S2 S20		3468	VODÍK V ZÁSObNÍKOVÉM SYSTÉMU HYDRIDU KOVU nebo VODÍK V ZÁSObNÍKOVÉM SYSTÉMU HYDRIDU KOVU OBSAŽENÝ V ZAŘÍZENÍ nebo VODÍK V ZÁSObNÍKOVÉM SYSTÉMU HYDRIDU KOVU BALENÝ SE ZAŘÍZENÍM
L10CH	TU14 TE21	FL	1 (C/E)				S2 S20	338	3469	BARVA, HOŘLAVÁ, ŽÍRAVÁ (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV, HOŘLAVÁ, ŽÍRAVÁ (včetně ředidel a složek odstraňovačů)
L4BH		FL	2 (D/E)				S2 S20	338	3469	BARVA, HOŘLAVÁ, ŽÍRAVÁ (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV, HOŘLAVÁ, ŽÍRAVÁ (včetně ředidel a složek odstraňovačů)

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyřazená množství		Balení			Přemístitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
3469	BARVA, HOŘLAVÁ, ŽÍRAVÁ (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV, HOŘLAVÁ, ŽÍRAVÁ (včetně ředidel a složek odstraňovačů)	3	FC	III	3+8	163	5 L	E1	P001 IBC03 R001		MP19	T4	TP1 TP29
3470	BARVA, ŽÍRAVÁ, HOŘLAVÁ (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV, ŽÍRAVÁ, HOŘLAVÁ (včetně ředidel a složek odstraňovačů)	8	CF1	II	8+3	163	1 L	E2	P001 IBC02		MP15	T7	TP2 TP8 TP28
3471	HYDROGENFLUORIDY, ROZTOK, J.N.	8	CT1	II	8+6.1		1 L	E2	P001 IBC02		MP15	T7	TP2
3471	HYDROGENFLUORIDY, ROZTOK, J.N.	8	CT1	III	8+6.1		5 L	E1	P001 IBC03 R001		MP19	T4	TP1
3472	KYSELINA KROTONOVÁ, KAPALNÁ	8	C3	III	8		5 L	E1	P001 IBC03 LP01 R001		MP19	T4	TP1
3473	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZAŘÍZENÍ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZAŘÍZENÍM, obsahující hořlavé kapaliny	3	F3		3	328	1 L	E0	P004				
3474	1-HYDROXYBENZOTRIAZOL, MONOHYDRÁT	4.1	D	I	4.1		0	E0	P406	PP48	MP2		
3475	SMĚS ETHANOLU A BENZINU nebo SMĚS ETHANOLU A PALIVA PRO ZÁŽEHOVÉ MOTORY, s více než 10 % ethanolu	3	F1	II	3	333 363	1 L	E2	P001 IBC02		MP19	T4	TP1
3476	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZAŘÍZENÍ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZAŘÍZENÍM, obsahující látky reagující s vodou	4.3	W3		4.3	328 334	500 ml nebo 500 g	E0	P004				
3477	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZAŘÍZENÍ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZAŘÍZENÍM, obsahující žíravé látky	8	C11		8	328 334	1 L nebo 1 kg	E0	P004				
3478	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZAŘÍZENÍ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZAŘÍZENÍM, obsahující zkapalněný hořlavý plyn	2	6F		2.1	328 338	120 ml	E0	P004				

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
L4BN		FL	3 (D/E)	V12			S2	38	3469	BARVA, HOŘLAVÁ, ŽIRAVÁ (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV, HOŘLAVÁ, ŽIRAVÁ (včetně ředidel a složek odstraňovačů)
L4BN		FL	2 (D/E)				S2	83	3470	BARVA, ŽIRAVÁ, HOŘLAVÁ (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV, ŽIRAVÁ, HOŘLAVÁ (včetně ředidel a složek odstraňovačů)
L4DH	TU14 TE21	AT	2 (E)			CV13 CV28		86	3471	HYDROGENFLUORIDY, ROZTOK, J.N.
L4DH	TU14 TE21	AT	3 (E)	V12		CV13 CV28		86	3471	HYDROGENFLUORIDY, ROZTOK, J.N.
L4BN		AT	3 (E)	V12				80	3472	KYSELINA KROTONOVÁ, KAPALNÁ
			3 (E)				S2		3473	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZAŘÍZENÍ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZAŘÍZENÍM, obsahující hořlavé kapaliny
			1 (B)				S17		3474	1-HYDROXYBENZOTRIAZOL, MONOHYDRÁT
LGBF		FL	2 (D/E)				S2 S20	33	3475	SMĚS ETHANOLU A BENZINU nebo SMĚS ETHANOLU A PALIVA PRO ZÁŽEHOVÉ MOTORY, s více než 10 % ethanolu
			3 (E)	V1		CV23			3476	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZAŘÍZENÍ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZAŘÍZENÍM, obsahující látky reagující s vodou
			3 (E)						3477	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZAŘÍZENÍ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZAŘÍZENÍM, obsahující žíravé látky
			2 (B/D)			CV9 CV12	S2		3478	ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZAŘÍZENÍ nebo ZÁSOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZAŘÍZENÍM, obsahující zkapalněný hořlavý plyn

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
							3.4.6	3.5.1.2	Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2 (10)	4.2.5.3 (11)
3479	ZÁSObNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo ZÁSObNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZAŘÍZENÍ nebo ZÁSObNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZAŘÍZENÍM, obsahující vodík v hydridech kovů	2	6F		2.1	328 339	120 ml	E0	P004				
3480	BATERIE LITHIUM-IONTOVÉ (včetně baterií lithium-polymerových)	9	M4	II	9	188 230 310 348 636 661	0	E0	P903 P903a P903b				
3481	BATERIE LITHIUM-IONTOVÉ OBSAŽENÉ V ZAŘÍZENÍCH nebo BATERIE LITHIUM-IONTOVÉ BALENÉ SE ZAŘÍZENÍMI (včetně baterií lithium-polymerových)	9	M4	II	9	188 230 348 360 636 661	0	E0	P903 P903a P903b				
3482	DISPERZE ALKALICKÝCH KOVŮ, HOŘLAVÉ nebo DISPERZE KOVŮ ALKALICKÝCH ZEMIN, HOŘLAVÉ	4.3	WF1	I	4.3+3	182 183 506	0	E0	P402	RR8	MP2		
3483	ANTIDETONAČNÍ SMĚS PRO MOTOROVÉ PALIVO, HOŘLAVÁ	6.1	TF1	I	6.1+3		0	E5	P602		MP8 MP17	T14	TP2
3484	HYDRAZIN, VODNÝ ROZTOK, HOŘLAVÝ, obsahující více než 37 % hm. hydrazinu	8	CFT	I	8+3+6.1	530	0	E0	P001		MP8 MP17	T10	TP2
3485	CHLORNAN VÁPENATÝ, SUCHÝ, ŽÍRAVÝ nebo CHLORNAN VÁPENATÝ, SMĚS, SUCHÁ, ŽÍRAVÁ, s více než 39 % aktivního chlóru (8,8 % aktivního kyslíku)	5.1	OC2	II	5.1+8	314	1 kg	E2	P002 IBC08	B4 B13	MP2		
3486	CHLORNAN VÁPENATÝ, SMĚS, SUCHÁ, ŽÍRAVÁ, s více než 10 %, ale nejvýše 39 % aktivního chlóru	5.1	OC2	III	5.1+8	314	5 kg	E1	P002 IBC08 LP02 R001	B3 B13 L3	MP2		
3487	CHLORNAN VÁPENATÝ, HYDRATOVANÝ, ŽÍRAVÝ nebo CHLORNAN VÁPENATÝ, HYDRATOVANÁ SMĚS, ŽÍRAVÁ, s nejméně 5,5 %, ale nejvýše 16 % vody	5.1	OC2	II	5.1+8	314 322	1 kg	E2	P002 IBC08	B4 B13	MP2		
3487	CHLORNAN VÁPENATÝ, HYDRATOVANÝ, ŽÍRAVÝ nebo CHLORNAN VÁPENATÝ, HYDRATOVANÁ SMĚS, ŽÍRAVÁ, s nejméně 5,5 %, ale nejvýše 16 % vody	5.1	OC2	III	5.1+8	314	5 kg	E1	P002 IBC08 R001	B4 B13	MP2		
3488	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, ŽÍRAVÁ, J.N., s LC50 nejvýše 200 ml/m3 a nasycenou koncentrací par nejméně 500 LC50	6.1	TFC	I	6.1+3+8	274	0	E0	P601		MP8 MP17	T22	TP2
3489	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, ŽÍRAVÁ, J.N., s LC50 nejvýše 1000 ml/m3 a nasycenou koncentrací par nejméně 10 LC50	6.1	TFC	I	6.1+3+8	274	0	E0	P602		MP8 MP17	T20	TP2
3490	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N., s LC50 nejvýše 200 ml/m3 a nasycenou koncentrací par nejméně 500 LC50	6.1	TFW	I	6.1+3+4,3	274	0	E0	P601		MP8 MP17	T22	TP2

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepravní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
			2 (B/D)			CV9 CV12	S2		3479	ZÁSObNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo ZÁSObNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZAŘÍZENÍ nebo ZÁSObNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZAŘÍZENÍM, obsahující vodík v hydridech kovů
			2 (E)						3480	BATERIE LITHIUM-IONTOVÉ (včetně baterií lithium-polymerových)
			2 (E)						3481	BATERIE LITHIUM-IONTOVÉ OBSAŽENÉ V ZAŘÍZENÍCH nebo BATERIE LITHIUM-IONTOVÉ BALENÉ SE ZAŘÍZENÍMI (včetně baterií lithium-polymerových)
L10BN(+)	TU1 TE5 TT3 TM2	FL	1 (B/E)	V1		CV23	S2 S20	X323	3482	DISPERZE ALKALICKÝCH KOVŮ, HOŘLAVÉ nebo DISPERZE KOVŮ ALKALICKÝCH ZEMIN, HOŘLAVÉ
L10CH	TU14 TU15 TE19 TE21 TT6	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3483	ANTIDETONAČNÍ SMĚS PRO MOTOROVÉ PALIVO, HOŘLAVÁ
L10BH		FL	1 (C/D)			CV13 CV28	S2 S14	886	3484	HYDRAZIN, VODNÝ ROZTOK, HOŘLAVÝ, obsahující více než 37 % hm. hydrazinu
SGAN	TU3	AT	2 (E)	V11		CV24 CV35		58	3485	CHLORNAN VÁPENATÝ, SUCHÝ, ŽÍRAVÝ nebo CHLORNAN VÁPENATÝ, SMĚS, SUCHÁ, ŽÍRAVÁ, s více než 39 % aktivního chlóru (8,8 % aktivního kyslíku)
SGAN	TU3	AT	3 (E)			CV24 CV35		58	3486	CHLORNAN VÁPENATÝ, SMĚS, SUCHÁ, ŽÍRAVÁ, s více než 10 %, ale nejvýše 39 % aktivního chlóru
SGAN	TU3	AT	2 (E)	V11		CV24 CV35		58	3487	CHLORNAN VÁPENATÝ, HYDRATOVANÝ, ŽÍRAVÝ nebo CHLORNAN VÁPENATÝ, HYDRATOVANÁ SMĚS, ŽÍRAVÁ, s nejméně 5,5 %, ale nejvýše 16 % vody
SGAN	TU3	AT	3 (E)			CV24 CV35		58	3487	CHLORNAN VÁPENATÝ, HYDRATOVANÝ, ŽÍRAVÝ nebo CHLORNAN VÁPENATÝ, HYDRATOVANÁ SMĚS, ŽÍRAVÁ, s nejméně 5,5 %, ale nejvýše 16 % vody
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3488	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, ŽÍRAVÁ, J.N., s LC50 nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC50
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	663	3489	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, ŽÍRAVÁ, J.N., s LC50 nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC50
L15CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	623	3490	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N., s LC50 nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC50

UN číslo	Pojmenování a popis	Třída	Klasifikační kód	Obalová skupina	Bezpečnostní značky	Zvláštní ustanovení	Omezená a vyňatá množství		Balení			Přemísitelné cisterny a kontejnery pro volně ložené látky	
									Pokyny pro balení	Zvláštní ustanovení pro obaly	Ustanovení o společném balení	Pokyny	Zvláštní ustanovení
	3.1.2	2.2	2.2	2.1.1.3	5.2.2	3.3	3.4.6	3.5.1.2	4.1.4	4.1.4	4.1.10	4.2.5.2, 7.3.2	4.2.5.3
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9a)	(9b)	(10)	(11)
3491	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N., s LC50 nejvýše 1000 ml/m3 a nasycenou koncentrací par nejméně 10 LC50	6.1	TFW	I	6.1+3+4.3	274	0	E0	P602		MP8 MP17	T20	TP2
3494	ROPA SUROVÁ, KYSELÁ, HOŘLAVÁ, TOXICKÁ	3	FT1	I	3+6.1	343	0	E0	P001		MP7 MP17	T14	TP2
3494	ROPA SUROVÁ, KYSELÁ, HOŘLAVÁ, TOXICKÁ	3	FT1	II	3+6.1	343	1 L	E2	P001 IBC02		MP19	T7	TP2
3494	ROPA SUROVÁ, KYSELÁ, HOŘLAVÁ, TOXICKÁ	3	FT1	III	3+6.1	343	5 L	E1	P001 IBC03 R001		MP19	T4	TP1
3495	JÓD	8	CT2	III	8+6.1	279	5 kg	E1	P002 IBC08 R001	B3	MP10	T1	TP33
3496	BATERIE NIKL-METAL HYDRIDOVÉ	9	M11	NENÍ PŘEDMĚTEM PRO ADR									
3497	MOŘSKÝ KRIL	4.2	S2	II	4.2	300	0	E2	P410 IBC06		MP14	T3	TP33
3497	MOŘSKÝ KRIL	4.2	S2	III	4.2	300	0	E1	P002 IBC08 LP02 R001	B3	MP14	T1	TP33
3498	MONOCHLORID JÓDU, KAPALNÝ	8	C1	II	8		1 L	E2	P001 IBC02		MP15	T7	TP2
3499	KONDENZÁTOR, elektrická dvojrvtva (s akumulační kapacitou větší než 0,3 Wh)	9	M11		9	361	0	E0	P003				
3500	CHEMICKÁ LÁTKA POD TLAKEM, J.N.	2	8A		2.2	274 659	0	E0	P206		MP9	T50	TP4 TP40
3501	CHEMICKÁ LÁTKA POD TLAKEM, HOŘLAVÁ, J.N.	2	8F		2.1	274 659	0	E0	P206	PP89	MP9	T50	TP4 TP40
3502	CHEMICKÁ LÁTKA POD TLAKEM, TOXICKÁ, J.N.	2	8T		2.2+6.1	274 659	0	E0	P206	PP89	MP9	T50	TP4 TP40
3503	CHEMICKÁ LÁTKA POD TLAKEM, ŽÍRAVÁ, J.N.	2	8C		2.2+8	274 659	0	E0	P206	PP89	MP9	T50	TP4 TP40
3504	CHEMICKÁ LÁTKA POD TLAKEM, HOŘLAVÁ, TOXICKÁ, J.N.	2	8TF		2.1+6.1	274 659	0	E0	P206	PP89	MP9	T50	TP4 TP40
3505	CHEMICKÁ LÁTKA POD TLAKEM, HOŘLAVÁ, ŽÍRAVÁ, J.N.	2	8FC		2.1+8	274 659	0	E0	P206	PP89	MP9	T50	TP4 TP40
3506	RTUŤ OBSAŽENÁ VE VÝROBČÍCH	8	CT3	III	8+6.1	366	5 kg	E0	P003	PP90	MP15		

Cisterny ADR		Vozidla pro přepravu v cisternách	Přepavní kategorie (Kód omezení pro tunely)	Zvláštní ustanovení pro				Identifikační číslo nebezpečnosti	UN číslo	Pojmenování a popis
Kód cisterny	Zvláštní ustanovení			přepravu kusů	přepravu ve volně loženém stavu	nakládku, vykládku a manipulaci	provoz			
4.3	4.3.5, 6.8.4	9.1.1.2	1.1.3.6 (8.6)	7.2.4	7.3.3	7.5.11	8.5	5.3.2.3		3.1.2
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(1)	(2)
L10CH	TU14 TU15 TE19 TE21	FL	1 (C/D)			CV1 CV13 CV28	S2 S9 S14	623	3491	LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N., s LC50 nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC50
L10CH	TU14 TU15 TE21	FL	1 (C/E)			CV13 CV28	S2 S22	336	3494	ROPA SUROVÁ, KYSELÁ, HOŘLAVÁ, TOXICKÁ
L4BH	TU15	FL	2 (D/E)			CV13 CV28	S2 S19	336	3494	ROPA SUROVÁ, KYSELÁ, HOŘLAVÁ, TOXICKÁ
L4BH	TU15	FL	3 (D/E)	V12		CV13 CV28	S2	36	3494	ROPA SUROVÁ, KYSELÁ, HOŘLAVÁ, TOXICKÁ
SGAV L4BN		AT	3 (E)		VV9	CV13 CV28		86	3495	JÓD
NENÍ PŘEDMĚTEM PRO ADR									3496	BATERIE NIKL-METAL HYDRIDOVÉ
SGAN		AT	2 (D/E)	V1				40	3497	MOŘSKÝ KRIL
SGAV		AT	3 (E)	V1	VV4			40	3497	MOŘSKÝ KRIL
L4BN		AT	2 (E)					80	3498	MONOCHLORID JÓDU, KAPALNÝ
			4 (E)						3499	KONDENZÁTOR, elektrická dvojitva (s akumulační kapacitou větší než 0,3 Wh)
		AT	3 (C/E)			CV9 CV10 CV12 CV36		20	3500	CHEMICKÁ LÁTKA POD TLAKEM, J.N.
		FL	2 (B/D)			CV9 CV10 CV12 CV36	S2	23	3501	CHEMICKÁ LÁTKA POD TLAKEM, HOŘLAVÁ, J.N.
		AT	1 (C/D)			CV9 CV10 CV12 CV28 CV36		26	3502	CHEMICKÁ LÁTKA POD TLAKEM, TOXICKÁ, J.N.
		AT	1 (C/D)			CV9 CV10 CV12 CV36		28	3503	CHEMICKÁ LÁTKA POD TLAKEM, ŽÍRAVÁ, J.N.
		FL	1 (B/D)			CV9 CV10 CV12 CV28 CV36	S2	263	3504	CHEMICKÁ LÁTKA POD TLAKEM, HOŘLAVÁ, TOXICKÁ, J.N.
		FL	1 (B/D)			CV9 CV10 CV12 CV36	S2	238	3505	CHEMICKÁ LÁTKA POD TLAKEM, HOŘLAVÁ, ŽÍRAVÁ, J.N.
			3 (E)			CV13 CV28			3506	RTUŤ OBSAŽENÁ VE VÝROBCÍCH

3.2.2 Tabulka B: Abecední seznam látek a předmětů ADR

Tento seznam je abecedním seznamem látek a předmětů, které jsou vyjmenovány v pořadí UN čísel v tabulce A v 3.2.1 netvoří nedílnou část ADR. Nebyl postoupen Pracovní skupině pro přepravu nebezpečných věcí Výboru pro vnitrozemskou dopravu ke kontrole a schválení, ani smluvním stranám ADR k formálnímu schválení. Byl připraven s potřebným úsilím sekretariátem Evropské hospodářské komise OSN s pomocí Mezinárodní unie silniční dopravy (IRU) k účelům usnadnění konzultací příloh A a B, ale nemůže v žádném případě nahradit platná ustanovení uvedených příloh, které jediné jsou v případě sporu považovány za platné. POUZE ADR A JEJÍ DODÁTKY MAJÍ PŘÁVNÍ SILU (PLATNOST).

POZNÁMKA 1: Pro účel určení abecedního pořadí, byly následující informace ignorovány, přestože jsou součástí oficiálního pojmenování pro přepravu: čísla, řecká písmena, zkratky ".sec" a "terc", písmena "N" (nitrogen), "n" (normální), "o" (ortho), "p" (para), "m" (meta) a J.N. (jinde nejmenované).

POZNÁMKA 2: Pojmenování látky nebo předmětu uvedené velkými písmeny je platné oficiální pojmenování pro přepravu (viz 3.1.2).

POZNÁMKA 3: Pojmenování látky nebo předmětu uvedené velkými písmeny následované slovem "viz" určuje možné alternativní oficiální pojmenování pro přepravu nebo část oficiálního pojmenování pro přepravu (kromě PCB), (viz 3.1.2.1).

POZNÁMKA 4: Položka napsaná malými písmeny, následovaná slovem "viz" určuje, že tato položka není oficiálním pojmenováním pro přepravu; je to synonymum.

POZNÁMKA 5: Je-li položka částečně napsána velkými písmeny a částečně malými písmeny, druhá část položky se nepovažuje za součást oficiálního pojmenování pro přepravu.

POZNÁMKA 6: Oficiální pojmenování pro přepravu je možné použít v jednotném i množném čísle, jak je to vhodné, pro účely dokumentace a označování kusů (viz 3.1.2.3).

POZNÁMKA 7: K přesnému stanovení oficiálního pojmenování pro přepravu viz 3.1.2.

Pojmenování a popis	UN číslo	Třída	Poznámka
ACETAL	1088	3	
ACETALDEHYD	1089	3	
ACETALDEHYDOXIM	2332	3	
ACETANHYDRID	1715	8	
ACETOARSENITAN MĚDNATÝ	1585	6.1	
ACETON	1090	3	
ACETONITRIL	1648	3	
ACETONKYANHYDRIN, STABILIZOVANÝ	1541	6.1	
ACETONOVÉ OLEJE	1091	3	
ACETYLBROMID	1716	8	
ACETYLÉN, BEZ ROZPOUŠTĚDLA	3374	2	
ACETYLÉN, ROZPUŠTĚNÝ	1001	2	
ACETYLCHLORID	1717	3	
ACETYLIODID	1898	8	
ACETYLMETHYLKARBINOL	2621	3	
ADIPONITRIL	2205	6.1	
AEROSOLY, dusivé	1950	2	
AEROSOLY, hořlavé	1950	2	
AEROSOLY, hořlavé, žíravé	1950	2	
AEROSOLY, podporující hoření	1950	2	
AEROSOLY, toxické	1950	2	
AEROSOLY, toxické, hořlavé	1950	2	
AEROSOLY, toxické, hořlavé, žíravé	1950	2	
AEROSOLY, toxické, podporující hoření	1950	2	
AEROSOLY, toxické, podporující hoření, žíravé	1950	2	
AEROSOLY, toxické, žíravé	1950	2	
AEROSOLY, žíravé	1950	2	
AEROSOLY, žíravé, podporující hoření	1950	2	
AKRIDIN	2713	6.1	
AKROLEIN DIMER, STABILIZOVANÝ	2607	3	
AKROLEIN, STABILIZOVANÝ	1092	6.1	
AKRYLAMID, ROZTOK	3426	6.1	
AKRYLAMID, TUHÝ	2074	6.1	
AKRYLONITRIL, STABILIZOVANÝ	1093	3	
AKUMULÁTORY (BATERIE), JIŠTĚNÉ PROTI VYTEČENÍ NAPLNĚNÉ KAPALNÝM ELEKTROLYTEM	2800	8	
AKUMULÁTORY (BATERIE), NAPLNĚNÉ ALKALICKÝM KAPALNÝM ELEKTROLYTEM	2795	8	
AKUMULÁTORY (BATERIE), NAPLNĚNÉ KYSELÝM KAPALNÝM ELEKTROLYTEM	2794	8	
AKUMULÁTORY (BATERIE), SUCHÉ, OBSAHUJÍCÍ TUHÝ HYDROXID DRASELNÝ	3028	8	
AKUMULÁTORY SODÍKOVÉ nebo ČLÁNKY AKUMULÁTORU SODÍKOVÉ	3292	4.3	
ALDEHYDY, HOŘLAVÉ, TOXICKÉ, J.N.	1988	3	
ALDEHYDY, J.N.	1989	3	
ALDEHYDY, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)	1989	3	
ALDOL (3-HYDROXYBUTYRALDEHYD)	2839	6.1	
alfa-METHYLBENZYLALKOHOL, KAPALNÝ	2937	6.1	
alfa-METHYLBENZYLALKOHOL, TUHÝ	3438	6.1	
alfa-METHYLVALERALDEHYD	2367	3	
alfa-PINEN	2368	3	
ALKALOIDY, KAPALNÉ, J.N. nebo SOLI ALKALOIDŮ, KAPALNÉ, J.N.	3140	6.1	
ALKALOIDY, TUHÉ, J.N. nebo SOLI ALKALOIDŮ, TUHÉ, J.N.	1544	6.1	
ALKOHOLÁTY ALKALICKÝCH KOVŮ, SCHOPNÉ SAMOOHŘEVU, ŽÍRAVÉ, J.N.	3206	4.2	

Pojmenování a popis	UN číslo	Třída	Poznámka
ALKOHOLÁTY KOVŮ ALKALICKÝCH ZEMIN, J.N.	3205	4.2	
ALKOHOLÁTY, ROZTOKY v alkoholu, J.N.	3274	3	
ALKOHOLY, HOŘLAVÉ, TOXICKÉ, J.N.	1986	3	
ALKOHOLY, J.N.	1987	3	
ALKOHOLY, J.N. (tenze par při 50 °C je vyšší než 110 kPa)	1987	3	
ALKYLFENOLY, KAPALNÉ, J.N. (včetně homologů C2-C12)	3145	8	
ALKYLFENOLY, TUHÉ, J.N. (včetně homologů C2-C12)	2430	8	
ALLYLACETÁT	2333	3	
ALLYLALKOHOL	1098	6.1	
ALLYLAMIN	2334	6.1	
ALLYLBROMID	1099	3	
ALLYLETHYLETER	2335	3	
ALLYLFORMIÁT	2336	3	
ALLYLGLYCIDYLETER	2219	3	
ALLYLCHLORFORMIÁT (allylchlorcarbonát)	1722	6.1	
ALLYLCHLORID	1100	3	
ALLYLISOTHIOKYANÁT, STABILIZOVANÝ	1545	6.1	
ALLYLJODID	1723	3	
ALLYLTRICHLORSILAN, STABILIZOVANÝ	1724	8	
1-AMINOETHANOL (ACETALDEHYD AMONIAK)	1841	9	
2-(2-AMINOETHOXY)-ETHANOL	3055	8	
2-AMINO-4,6-DINITROFENOL, VHLČENÝ nejméně 20 % hm. vody	3317	4.1	
2-AMINO-4-CHLORFENOL	2673	6.1	
2-AMINO-5-DIETHYLAMINOPENTAN	2946	6.1	
AMALGAM ALKALICKÝCH KOVŮ, KAPALNÝ	1389	4.3	
AMALGAM ALKALICKÝCH KOVŮ, TUHÝ	3401	4.3	
AMALGAM KOVŮ ALKALICKÝCH ZEMIN, KAPALNÝ	1392	4.3	
AMALGAM KOVŮ ALKALICKÝCH ZEMIN, TUHÝ	3402	4.3	
AMID HOŘEČNATÝ	2004	4.2	
AMIDY ALKALICKÝCH KOVŮ	1390	4.3	
AMINOFENOLY (o-, m-, p-)	2512	6.1	
AMINOPYRIDINY (o-, m-, p-)	2671	6.1	
AMINY HOŘLAVÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY HOŘLAVÉ, ŽÍRAVÉ, J.N.	2733	3	
AMINY KAPALNÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N. nebo POLYAMINY KAPALNÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N.	2734	8	
AMINY KAPALNÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY KAPALNÉ, ŽÍRAVÉ, J.N.	2735	8	
AMINY, TUHÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY, TUHÉ, ŽÍRAVÉ, J.N.	3259	8	
AMMONIUMDINITRO-o-KRESOLÁT, ROZTOK	3424	6.1	
AMMONIUMDINITRO-o-KRESOLÁT, TUHÝ	1843	6.1	
AMONIAK (ČPAVEK), BEZVODÝ	1005	2	
AMONIAK (ČPAVEK), ROZTOK ve vodě, s hustotou menší než 0,880 kg/l při 15 °C, s více než 50 % amoniaku (čpavku)	3318	2	
AMONIAK (ČPAVEK), ROZTOK, vodný, s hustotou menší než 0,880 kg/l při 15 °C, s více než 35 %, ale nejvýše 50 % amoniaku (čpavku)	2073	2	
AMONIAK (ČPAVEK), ROZTOK, vodný, s hustotou mezi 0,880 a 0,957 kg/l při 15 °C, s více než 10 %, ale nejvíce 35 % amoniaku (čpavku)	2672	8	
AMYLACETÁTY	1104	3	
AMYLAMIN	1106	3	
AMYLBUTYRÁTY	2620	3	
AMYLFORMIÁTY	1109	3	
AMYLFOSFÁT	2819	8	

Pojmenování a popis	UN číslo	Třída	Poznámka
AMYLCHLORID	1107	3	
AMYLKAPTAN	1111	3	
AMYLNITRÁT	1112	3	
AMYLNITRIT	1113	3	
AMYLTRICHLORSILAN	1728	8	
ANHYDRID KYSELINY MÁSELNÉ	2739	8	
ANHYDRID KYSELINY PROPIONOVÉ	2496	8	
ANILÍN	1547	6.1	
ANISIDINY	2431	6.1	
ANISOL	2222	3	
ANISOYLCHLORID	1729	8	
ANTIDETONAČNÍ SMĚS PRO MOTOROVÉ PALIVO	1649	6.1	
ANTIMON, PRÁŠEK	2871	6.1	
ANTIMONOVODÍK (STIBIN)	2676	2	
ARGON, HLUBOCE ZCHLAZENÝ, KAPALNÝ	1951	2	
ARGON, STLAČENÝ	1006	2	
ARSANILÁT SODNÝ	2473	6.1	
ARSEN	1558	6.1	
ARSEN, PRACH	1562	6.1	
ARSENIČNAN AMONNÝ	1546	6.1	
ARSENIČNAN DRASELNÝ	1677	6.1	
ARSENIČNAN HOŘEČNATÝ	1622	6.1	
ARSENIČNAN RTUŤNATÝ	1623	6.1	
ARSENIČNAN SODNÝ	1685	6.1	
ARSENIČNAN VÁPENATÝ	1573	6.1	
ARSENIČNAN VÁPENATÝ A ARSENITAN VÁPENATÝ, SMĚS, TUHÁ	1574	6.1	
ARSENIČNAN ZINEČNATÝ nebo ARSENITAN ZINEČNATÝ nebo ARSENIČNAN ZINEČNATÝ A ARSENITAN ZINEČNATÝ, SMĚS	1712	6.1	
ARSENIČNAN ŽELEZITÝ	1606	6.1	
ARSENIČNAN ŽELEZNATÝ	1608	6.1	
ARSENIČNANY OLOVA	1617	6.1	
ARSENITAN DRASELNÝ	1678	6.1	
ARSENITAN MĚDNATÝ	1586	6.1	
ARSENITAN SODNÝ, TUHÝ	2027	6.1	
ARSENITAN SODNÝ, VODNÝ ROZTOK	1686	6.1	
ARSENITAN STRONTNATÝ	1691	6.1	
ARSENITAN STRÍBRNÝ	1683	6.1	
ARSENITAN ŽELEZITÝ	1607	6.1	
ARSENITANY OLOVA	1618	6.1	
ARSENOVODÍK (ARSIN)	2188	2	
AZBEST BILÝ (chrysotil, aktinolit, antofylit, tremolit)	2590	9	
AZBEST, MODRÝ (krokydolit) nebo AZBEST, HNĚDÝ (amosit, mysorit)	2212	9	
AZID BARNATÝ, suchý nebo vlhčený méně než 50 % hm. vody	0224	1	
AZID BARNATÝ, VLNĚNÝ nejméně 50 % hm. vody	1571	4.1	
AZID OLOVNATÝ, VLNĚNÝ nejméně 20 % hm. vody nebo směsí alkoholu s vodou	0129	1	
AZID SODNÝ	1687	6.1	
AZODIKARBONAMID	3242	4.1	
BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů)	1263	3	

Pojmenování a popis	UN číslo	Třída	Poznámka
BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOCNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	1263	3	
BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOCNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	1263	3	
BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOCNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	1263	3	
BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOCNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů) (tenze par při 50 °C je vyšší než 110 kPa)	1263	3	
BARVA (včetně barev, laků, emailů, mořidel, šelaku, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků) nebo LÁTKA POMOCNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů) (tenze par při 50 °C nepřesahuje 110 kPa)	1263	3	
BARVA (včetně laků, emailů, mořidel, šelaku a fermeží, leštidel a kapalných základových složek laků) nebo LÁTKA POMOCNÁ K VÝROBĚ BAREV (včetně ředidel a složek odstraňovačů)	3066	8	
BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOCNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel a rozpouštědel tiskařských barev), hořlavé	1210	3	
BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOCNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel a rozpouštědel tiskařských barev), hořlavé (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	1210	3	
BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOCNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel a rozpouštědel tiskařských barev), hořlavé (tenze par při 50 °C nepřesahuje 110 kPa)	1210	3	
BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOCNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel nebo rozpouštědel tiskařských barev), hořlavé	1210	3	
BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOCNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel nebo rozpouštědel tiskařských barev), hořlavé (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	1210	3	
BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOCNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel nebo rozpouštědel tiskařských barev), hořlavé (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	1210	3	
BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOCNÉ K VÝROBĚ TISKAŘSKÝCH BAREV (včetně ředidel nebo rozpouštědel tiskařských barev), hořlavé (tenze par při 50 °C je vyšší než 110 kPa)	1210	3	

Pojmenování a popis	UN číslo	Třída	Poznámka
BARVA, HOŘLAVÁ, ŽÍRAVÁ (včetně laků, emailů, mořidel, šelaku a fermeží, leštidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV, HOŘLAVÁ, ŽÍRAVÁ (včetně ředidel a složek odstraňovačů)	3469	3	
BARVA, ŽÍRAVÁ, HOŘLAVÁ (včetně laků, emailů, mořidel, šelaku a fermeží, leštidel a kapalných základových složek laků) nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV, ŽÍRAVÁ, HOŘLAVÁ (včetně ředidel a složek odstraňovačů)	3470	8	
BARVIVO, KAPALNÉ, TOXICKÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, TOXICKÝ, J.N.	1602	6.1	
BARVIVO, KAPALNÉ, ŽÍRAVÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, ŽÍRAVÝ, J.N.	2801	8	
BARVIVO, TUHÉ, TOXICKÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, TOXICKÝ, J.N.	3143	6.1	
BARVIVO, TUHÉ, ŽÍRAVÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, TUHÝ, ŽÍRAVÝ, J.N.	3147	8	
BARYUM	1400	4.3	
BATERIE LITHIOVÉ KOVOVÉ (včetně baterií ze slitin lithia)	3090	9	
BATERIE LITHIOVÉ KOVOVÉ OBSAŽENÉ V ZAŘÍZENÍ nebo BATERIE LITHIOVÉ KOVOVÉ BALENÉ SE ZAŘÍZENÍM (včetně baterií ze slitin lithia)	3091	9	
BATERIE LITHIUM-IONTOVÉ (včetně baterií lithium-polymerových)	3480	9	
BATERIE LITHIUM-IONTOVÉ OBSAŽENÉ V ZAŘÍZENÍCH nebo BATERIE LITHIUM-IONTOVÉ BALENÉ SE ZAŘÍZENÍMI (včetně baterií lithium-polymerových)	3481	9	
BATERIE NIKL-METAL HYDRIDOVÉ	3496	9	Není předmětem pro ADR
BAVLNA, VLHKÁ	1365	4.2	
BENZALDEHYD	1990	9	
BENZEN	1114	3	
BENZENSULFONYLCHLORID	2225	8	
BENZIDIN	1885	6.1	
BENZÍN LAKOVÝ	1300	3	
BENZÍN	1203	3	
BENZOÁT RTUŤNATÝ	1631	6.1	
BENZOCHINON	2587	6.1	
BENZONITRIL	2224	6.1	
BENZOTRIFLUORID	2338	3	
BENZOTRICHLORID	2226	8	
BENZOYLCHLORID	1736	8	
BENZYLBRMID	1737	6.1	
BENZYLDIMETHYLAMIN	2619	8	
BENZYLCHLORFORMIÁT (benzylchlorokarbonát)	1739	8	
BENZYLCHLORID	1738	6.1	
BENZYLIDENCHLORID	1886	6.1	
BENZYLJODID	2653	6.1	
BERYLLIUM, PRAŠEK	1567	6.1	
1,2-BIS(DIMETHYLAMINO)ETHAN	2372	3	
BICYKLO[2.2.1]HEPTA-2,5-DIEN, STABILIZOVANÝ (2,5-NORBORNADIEN, STABILIZOVANÝ)	2251	3	
BIFENYLY POLYHALOGENOVANÉ, KAPALNÉ nebo TERFENYLY POLYHALOGENOVANÉ, KAPALNÉ	3151	9	
BIFENYLY POLYHALOGENOVANÉ, TUHÉ nebo TERFENYLY POLYHALOGENOVANÉ, TUHÉ	3152	9	

Pojmenování a popis	UN číslo	Třída	Poznámka
BIFENYLY POLYCHLOROVANÉ, KAPALNÉ	2315	9	
BIFENYLY POLYCHLOROVANÉ, TUHÉ	3432	9	
BIOLOGICKÁ LÁTKA, KATEGORIE B	3373	6.2	
BIOLOGICKÁ LÁTKA, KATEGORIE B (pouze zvířecí materiál)	3373	6.2	
BIS(2-CHLOROISOPROPYL)ETHER	2490	6.1	
BLESKOVICE, ohebná	0065	1	
BLESKOVICE, ohebná	0289	1	
BLESKOVICE, s kovovým pláštěm	0102	1	
BLESKOVICE, s kovovým pláštěm	0290	1	
BLESKOVICE, S MALÝM ÚČINKEM, s kovovým pláštěm	0104	1	
BOBY RICINOVÉ nebo MOUČKA RICINOVÁ nebo KOLÁČ RICINOVÝ nebo VLOČKY RICINOVÉ	2969	9	
BOJOVÉ HLAVICE, RAKETA, s trhací náložkou nebo výmetnou náplní	0370	1	
BOJOVÉ HLAVICE, RAKETA, s trhací náložkou nebo výmetnou náplní	0371	1	
BOJOVÉ HLAVICE, RAKETA, s trhací náplní	0286	1	
BOJOVÉ HLAVICE, RAKETA, s trhací náplní	0287	1	
BOJOVÉ HLAVICE, RAKETA, s trhací náplní	0369	1	
BOJOVÉ HLAVICE, TORPÉDO, s trhací náplní	0221	1	
BORNEOL	1312	4.1	
1-BROM-3-CHLORPROPAN	2688	6.1	
1-BROM-3-METHYLBUTAN	2341	3	
1-BROMBUTAN	1126	3	
2-BROM-2-NITROPROPAN-1,3-DIOL	3241	4.1	
2-BROMBUTAN	2339	3	
2-BROMMETHYLETHYLETHER	2340	3	
2-BROMPENTAN	2343	3	
3-BROMPROPIN	2345	3	
BROM nebo BROM, ROZTOK	1744	8	
BROMACETON	1569	6.1	
BROMACETYLBROMID	2513	8	
BROMBENZEN	2514	3	
BROMBENZYLKYANID, KAPALNÝ	1694	6.1	
BROMBENZYLKYANID, TUHÝ	3449	6.1	
BROMCHLORDIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 12B1)	1974	2	
BROMCHLORMETHAN	1887	6.1	
BROMIČNAN BARNATÝ	2719	5.1	
BROMIČNAN DRASELNÝ	1484	5.1	
BROMIČNAN HOŘEČNATÝ	1473	5.1	
BROMIČNAN SODNÝ	1494	5.1	
BROMIČNAN ZINEČNATÝ	2469	5.1	
BROMIČNANY, ANORGANICKÉ, J.N.	1450	5.1	
BROMIČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	3213	5.1	
BROMID ARSENITÝ	1555	6.1	
BROMID BORITÝ	2692	8	
BROMID FOSFOREČNÝ	2691	8	
BROMID FOSFORITÝ	1808	8	
BROMID FOSFORYL (OXYBROMID FOSFOREČNÝ)	1939	8	
BROMID FOSFORYL, ROZTAVENÝ	2576	8	
BROMID HLINITÝ, BEZVODÝ	1725	8	
BROMID HLINITÝ, ROZTOK	2580	8	
BROMIDY RTUTI	1634	6.1	
BROMKYAN	1889	6.1	
BROMMETHAN (METHYLBROMID), s nejvýše 2 % chlorpikrinu	1062	2	

Pojmenování a popis	UN číslo	Třída	Poznámka
BROMMETHYLPROPANY	2342	3	
BROMOFORM	2515	6.1	
BROMOVODÍK, BEZVODÝ	1048	2	
BROMPROPANY	2344	3	
BROMTRIFLUORETHYLEN	2419	2	
BROMTRIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 13B1)	1009	2	
BRUCIN	1570	6.1	
1,2-BUTYLENOXID, STABILIZOVANÝ	3022	3	
5-terc-BUTYL-2,4,6-TRINITRO-m-XYLEN (XYLENOVÉ PIŽMO)	2956	4.1	
BUTADIENY, STABILIZOVANÉ nebo BUTADIENY, SMĚS S UHLOVODÍKY, STABILIZOVANÁ, které mají při 70 °C tenzi par nepřesahující 1,1 MPa (11 bar) a jejichž hustota při 50 °C není nižší než 0,525 kg/l	1010	2	
BUTAN	1011	2	
BUTANDION	2346	3	
BUTANOLY	1120	3	
BUTANTHIOL (butylmerkaptan)	2347	3	
BUTENY, SMĚS nebo 1-BUTEN nebo 2-BUTEN cis nebo 2-BUTEN trans	1012	2	
BUTIN-1,4-DIOL	2716	6.1	
BUTYLACETÁTY	1123	3	
BUTYLAKRYLÁTY, STABILIZOVANÉ	2348	3	
BUTYLBENZENY	2709	3	
BUTYLFOSFÁT	1718	8	
BUTYLMETHYLETHER	2350	3	
BUTYLNITRITY	2351	3	
BUTYLPROPIONÁTY	1914	3	
BUTYLTOLUENY	2667	6.1	
BUTYLTRICHLORSILAN	1747	8	
BUTYLVINYLETHER, STABILIZOVANÝ	2352	3	
BUTYRALDEHYD	1129	3	
BUTYRALDOXIM	2840	3	
BUTYRONITRIL	2411	3	
BUTYRYLCHLORID	2353	3	
CELULOID, ODPAD	2002	4.2	
CELULOID, v blocích, tyčích, deskách, trubkách atd., vyjma odpadu	2000	4.1	
CER, desky, ingoty, tyče	1333	4.1	
CER, třísky nebo krupice	3078	4.3	
CESIUM	1407	4.3	
1,5,9-CYKLODODEKATRIEN	2518	6.1	
CYKLOBUTAN	2601	2	
CYKLOBUTYLCHLORFORMIÁT (cyklobutylchlorkarbonát)	2744	6.1	
CYKLOHEPTAN	2241	3	
CYKLOHEPTATRIEN	2603	3	
CYKLOHEPTEN	2242	3	
CYKLOHEXAN	1145	3	
CYKLOHEXANON	1915	3	
CYKLOHEXANTHIOL (CYKLOHEXYLMEKAPTAN)	3054	3	
CYKLOHEXEN	2256	3	
CYKLOHEXENYLTRICHLORSILAN	1762	8	
CYKLOHEXYLACETÁT	2243	3	
CYKLOHEXYLAMIN	2357	8	
CYKLOHEXYLISOKYANÁT	2488	6.1	
CYKLOHEXYLTRICHLORSILAN	1763	8	
CYKLOOKTADIENY	2520	3	
CYKLOOKTATETRAEN	2358	3	

Pojmenování a popis	UN číslo	Třída	Poznámka
CYKLOPENTAN	1146	3	
CYKLOPENTANOL	2244	3	
CYKLOPENTANON	2245	3	
CYKLOPENTEN	2246	3	
CYKLOPROPAN	1027	2	
CYKLOTETRAMETHYLENTETRANITRAMIN (HMX; OKTOGEN), VLHČENÝ nejméně 15 % hm. vody	0226	1	
CYKLOTETRAMETHYLENTETRANITRAMIN (OKTOGEN; HMX), ZNECITLIVĚNÝ	0484	1	
CYKLOTETRAMETHYLENTRINITRAMIN (CYKLONIT; HEXOGEN; RDX) A CYKLOTETRAMETHYLENTETRANITRAMIN (HMX; OKTOGEN), SMĚS VLHČENÁ nejméně 15 % hm. vody nebo ZNECITLIVĚNÁ nejméně 10 % hm. flegmatizačního prostředku	0391	1	
CYKLOTETRAMETHYLENTRINITRAMIN (CYKLONIT; HEXOGEN; RDX), VLHČENÝ nejméně 15 % hm. vody	0072	1	
CYKLOTETRAMETHYLENTRINITRAMIN (CYKLONIT; HEXOGEN; RDX), ZNECITLIVĚNÝ	0483	1	
DEFLAGRUJÍCÍ KOVOVÉ SOLI AROMATICKÝCH NITROSLOUČENIN, J.N.	0132	1	
DEHTY, KAPALNÉ, včetně silničních olejů a ředěné živice	1999	3	
DEHTY, KAPALNÉ, včetně silničních olejů a ředěné živice (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	1999	3	
DEHTY, KAPALNÉ, včetně silničních olejů a ředěné živice (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	1999	3	
DEHTY, KAPALNÉ, včetně silničních olejů a ředěné živice (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	1999	3	
DEHTY, KAPALNÉ, včetně silničních olejů a ředěné živice (tenze par při 50 °C je vyšší než 110 kPa)	1999	3	
DEHTY, KAPALNÉ, včetně silničních olejů a ředěné živice (tenze par při 50 °C nepřesahuje 110 kPa)	1999	3	
DEKABORÁN	1868	4.1	
DEKAHYDRONAFTALEN	1147	3	
DESTILÁTY ROPNÉ, J.N. nebo PRODUKTY ROPNÉ, J.N.	1268	3	
DESTILÁTY ROPNÉ, J.N. nebo PRODUKTY ROPNÉ, J.N. (tenze par při 50 °C je vyšší než 110 kPa)	1268	3	
DESTILÁTY ROPNÉ, J.N. nebo PRODUKTY ROPNÉ, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)	1268	3	
DEUTERIUM, STLAČENÉ	1957	2	
1,1-DIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 152a)	1030	2	
1,1-DIFLUORETHYLEN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 1132a)	1959	2	
1,1-DICHLOR-1-NITROETHAN	2650	6.1	
1,1-DICHLORETHAN	2362	3	
1,1-DIMETHOXYETHAN	2377	3	
1,2-DIBROMBUTAN-3-ON	2648	6.1	
1,2-DICHLOR-1,1,2,2-TETRAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 114)	1958	2	
1,2-DICHLORETHYLEN	1150	3	
1,2-DICHLORPROPAN	1279	3	
1,2-DIMETHOXYETHAN	2252	3	
1,3-DICHLOR-2-PROPANOL	2750	6.1	
1,3-DICHLORACETON	2649	6.1	

Pojmenování a popis	UN číslo	Třída	Poznámka
1,3-DIMETHYLBUTYLAMIN	2379	3	
2-(DIMETHYLAMINO)-ETHANOL	2051	8	
2,2'-DICHLORDIETHYLETHER	1916	6.1	
2,2-DIMETHYLPROPAN	2044	2	
2,3-DIHYDROPYRAN	2376	3	
2,3-DIMETHYLBUTAN	2457	3	
2-DIETHYLAMINOETHANOL	2686	8	
2-DIMETHYLAMINOETHYLAKRYLÁT	3302	6.1	
2-DIMETHYLAMINOETHYLAKRYLÁT	2522	6.1	
3,3-DIETHOXYPROPEN	2374	3	
3-DIETHYLAMINOPROPYLAMIN	2684	3	
4,4'-DIAMINODIFENYLMETHAN	2651	6.1	
DIACETONALKOHOL	1148	3	
DIALLYLAMIN	2359	3	
DIALLYLETHER	2360	3	
DIAZONITROFENOL, VLHČENÝ nejméně 40 % hm. vody nebo směsi alkoholu s vodou	0074	1	
DIBENZYLDICHLORSILAN	2434	8	
DIBORAN	1911	2	
DIBROMDIFLUORMETHAN	1941	9	
DIBROMCHLORPROPANY	2872	6.1	
DIBROMMETHAN	2664	6.1	
DIBUTYLAMINOETHANOL	2873	6.1	
DIBUTYLETHERY	1149	3	
DICYKLOHEXYLAMIN	2565	8	
DICYKLOHEXYLAMONIUMNITRIT	2687	4.1	
DICYKLOPENTADIEN	2048	3	
DIETHOXYMETHAN	2373	3	
DIETHYLAMIN	1154	3	
DIETHYLBENZEN	2049	3	
DIETHYLDICHLORSILAN	1767	8	
DIETHYLENGLYKOLDINITRÁT, ZNECITLIVĚNÝ nejméně 25 % hm. netěkavého, ve vodě nerozpustného flegmatizačního prostředku	0075	1	
DIETHYLENTRIAMIN	2079	8	
DIETHYLETHER (ETHYLETHER)	1155	3	
DIETHYLETHERÁT FLUORIDU BORITÉHO	2604	8	
DIETHYLKARBONÁT	2366	3	
DIETHYLKETON	1156	3	
DIETHYLSULFÁT	1594	6.1	
DIETHYLSULFID	2375	3	
DIETHYLTHIOFOSFORYLCHLORID	2751	8	
DIFENYLAMINOCHLORARSIN	1698	6.1	
DIFENYLDICHLORSILAN	1769	8	
DIFENYLCHLORARSIN, KAPALNÝ	1699	6.1	
DIFENYLCHLORARSIN, TUHÝ	3450	6.1	
DIFENYLMETHYLBROMID	1770	8	
DIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 32)	3252	2	
DIHYDRID TITANU	1871	4.1	
DIHYDROGENFOSFIT OLOVNATÝ	2989	4.1	
DICHLORACETYLCHLORID	1765	8	
DICHLORANILÍNÝ, KAPALNÉ	1590	6.1	
DICHLORANILÍNÝ, TUHÉ	3442	6.1	
DICHLORDIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 12)	1028	2	

Pojmenování a popis	UN číslo	Třída	Poznámka
DICHLORDIFLUORMETHAN A 1,1-DIFLUORETHAN, AZEOTROPNÍ SMĚS s cca 74 % dichlordifluormethanu (PLYN JAKO CHLADICÍ PROSTŘEDEK R 500)	2602	2	
DICHLORDIMETHYLETHER, SYMETRICKÝ	2249	6.1	Přeprava zakázána
DICHLORFENYLFOSFIN (FENYLFOSFODICHLORID)	2798	8	
DICHLORFENYLISOKYANÁTY	2250	6.1	
DICHLORFENYLTRICHLORSILAN	1766	8	
DICHLORFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 21)	1029	2	
DICHLORMETHAN	1593	6.1	
DICHLORPENTANY	1152	3	
DICHLORPROPENY	2047	3	
DICHLORSILAN	2189	2	
DICHROMAN AMONNÝ	1439	5.1	
DIISOBUTYLAMIN	2361	3	
DIISOBUTYLEN, ISOMERNÍ SLOUČENINY	2050	3	
DIISOBUTYLKETON	1157	3	
DIISOOKTYLFOSFÁT	1902	8	
DIISOPROPYLAMIN	1158	3	
DIISOPROPYLETHER	1159	3	
DIKETEN, STABILIZOVANÝ	2521	6.1	
DIKYAN	1026	2	
DIKYANOMĚDNAN DRASELNÝ	1679	6.1	
DIKYANOMĚDNAN SODNÝ, ROZTOK	2317	6.1	
DIKYANOMĚDNAN SODNÝ, TUHÝ	2316	6.1	
DIMETHYLAMIN, BEZVODÝ	1032	2	
DIMETHYLAMIN, VODNÝ ROZTOK	1160	3	
DIMETHYLAMINOACETONITRIL	2378	3	
DIMETHYLCYKLOHEXANY	2263	3	
DIMETHYLDIETHOXSILAN	2380	3	
DIMETHYLDICHLORSILAN	1162	3	
DIMETHYLDIOXANY	2707	3	
DIMETHYLDISULFID	2381	3	
DIMETHYLETHER	1033	2	
DIMETHYLETHERÁT FLUORIDU BORITÉHO	2965	4.3	
DIMETHYLHYDRAZIN, ASYMETRICKÝ	1163	6.1	
DIMETHYLHYDRAZIN, SYMETRICKÝ	2382	6.1	
DIMETHYLKARBAMOYLCHLORID	2262	8	
DIMETHYLKARBONÁT	1161	3	
DIMETHYL-N-PROPYLAMIN	2266	3	
DIMETHYLSULFÁT	1595	6.1	
DIMETHYLSULFID	1164	3	
DIMETHYLTHIOFOSFORYLCHLORID	2267	6.1	
DI-n-AMYLAMIN	2841	3	
DI-n-BUTYLAMIN	2248	8	
DINITRÁT ISOSORBITOLU, SMĚS, s nejméně 60 % laktózy, mannosy, škrobu nebo hydrogenfosforečnanu vápenatého	2907	4.1	
DINITROANILÍNY	1596	6.1	
DINITROBENZEN	0406	1	
DINITROBENZENY, KAPALNÉ	1597	6.1	
DINITROBENZENY, TUHÉ	3443	6.1	
DINITROFENOL, ROZTOK	1599	6.1	
DINITROFENOL, suchý nebo vlhčený méně než 15 % hm. vody	0076	1	
DINITROFENOL, VLNĚNÝ nejméně 15 % hm. vody	1320	4.1	
DINITROFENOLÁTY alkalických kovů, suché nebo vlhčené méně než 15 % hm. vody	0077	1	

Pojmenování a popis	UN číslo	Třída	Poznámka
DINITROFENOLÁTY, VLNĚNÉ nejméně 15 % hm. vody	1321	4.1	
DINITROGLYKOLURIL (DINGU)	0489	1	
DINITRO-o-KRESOL	1598	6.1	
DINITRO-o-KRESOLÁT SODNÝ, suchý nebo vlněný méně než 15 % hm. vody	0234	1	
DINITRO-o-KRESOLÁT SODNÝ, VLNĚNÝ nejméně 10 % hm. vody	3369	4.1	
DINITRO-o-KRESOLÁT SODNÝ, VLNĚNÝ nejméně 15 % hm. vody	1348	4.1	
DINITRORESORCIN, suchý nebo vlněný méně než 15 % hm. vody	0078	1	
DINITRORESORCINOL, VLNĚNÝ nejméně 15 % hm. vody	1322	4.1	
DINITROTOLUENY, KAPALNÉ	2038	6.1	
DINITROTOLUENY, ROZTAVENÉ	1600	6.1	
DINITROTOLUENY, TUHÉ	3454	6.1	
DI-n-PROPYLETHER	2384	3	
DIOXAN	1165	3	
DIOXID THIOMOČOVINY	3341	4.2	
DIOXOLAN	1166	3	
DIPENTEN	2052	3	
DIPIKRYLSULFID, VLNĚNÝ nejméně 10 % hm. vody	2852	4.1	
DIPROPYLAMIN	2383	3	
DIPROPYLKETON	2710	3	
DISPERZE ALKALICKÝCH KOVŮ nebo DISPERZE KOVŮ ALKALICKÝCH ZEMIN	1391	4.3	
DISPERZE ALKALICKÝCH KOVŮ, HOŘLAVÉ nebo DISPERZE KOVŮ ALKALICKÝCH ZEMIN, HOŘLAVÉ	3482	4.3	
DITHIONIČITAN DRASELNÝ	1929	4.2	
DITHIONIČITAN SODNÝ	1384	4.2	
DITHIONIČITAN VÁPENATÝ	1923	4.2	
DITHIONIČITAN ZINEČNATÝ	1931	9	
DIVINYLETHER, STABILIZOVANÝ	1167	3	
DODECYLTRICHLORSILAN	1771	8	
DRASLÍK	2257	4.3	
DUSIČNAN AMONNÝ, EMULZE nebo SUSPENZE nebo GEL, meziprodukt při výrobě trhavín, kapalný	3375	5.1	
DUSIČNAN AMONNÝ, EMULZE nebo SUSPENZE nebo GEL, meziprodukt při výrobě trhavín, tuhý	3375	5.1	
DUSIČNAN AMONNÝ, KAPALNÝ, horký koncentrovaný roztok, v koncentraci vyšší než 80 %, ale nepřesahující 93 %	2426	5.1	
DUSIČNAN AMONNÝ, s nejvýše 0,2 % celkového množství hořlavých látek, včetně organických látek počítaných jako ekvivalentní uhlík a prostý ostatních přísad	1942	5.1	
DUSIČNAN AMONNÝ, s více než 0,2 % hořlavých látek, včetně všech organických látek započítaných jako uhlík, s vyloučením všech jiných přidaných látek	0222	1	
DUSIČNAN BARNATÝ	1446	5.1	
DUSIČNAN BERYLLNATÝ	2464	5.1	
DUSIČNAN CESNÝ	1451	5.1	
DUSIČNAN DIDYMIA	1465	5.1	
DUSIČNAN DRASELNÝ	1486	5.1	
DUSIČNAN DRASELNÝ A DUSITAN SODNÝ, SMĚS	1487	5.1	
DUSIČNAN GUANIDINU	1467	5.1	
DUSIČNAN HLINITÝ	1438	5.1	
DUSIČNAN HOŘEČNATÝ	1474	5.1	
DUSIČNAN CHROMITÝ	2720	5.1	
DUSIČNAN LITHNÝ	2722	5.1	
DUSIČNAN MANGANATÝ	2724	5.1	

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DUSIČNAN MOČOVINY, VLHČENÝ nejméně 10 % hm. vody	3370	4.1	
DUSIČNAN MOČOVINY, VLHČENÝ nejméně 20 % hm. vody	1357	4.1	
DUSIČNAN NIKELNATÝ	2725	5.1	
DUSIČNAN OLOVNATÝ	1469	5.1	
DUSIČNAN RTUŤNATÝ	1625	6.1	
DUSIČNAN RTUŤNÝ	1627	6.1	
DUSIČNAN SODNÝ	1498	5.1	
DUSIČNAN SODNÝ A DUSIČNAN DRASELNÝ, SMĚS	1499	5.1	
DUSIČNAN STRONTNATÝ	1507	5.1	
DUSIČNAN STRÍBRNÝ	1493	5.1	
DUSIČNAN THALLNÝ	2727	6.1	
DUSIČNAN VÁPENATÝ	1454	5.1	
DUSIČNAN ZINEČNATÝ	1514	5.1	
DUSIČNAN ZIRKONIČITÝ	2728	5.1	
DUSIČNAN ŽELEZITÝ	1466	5.1	
DUSIČNANY, ANORGANICKÉ, J.N.	1477	5.1	
DUSIČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	3218	5.1	
DUSÍK, HLUBOCE ZCHLAZENÝ, KAPALNÝ	1977	2	
DUSÍK, STLAČENÝ	1066	2	
DUSITAN DRASELNÝ	1488	5.1	
DUSITAN NIKELNATÝ	2726	5.1	
DUSITAN SODNÝ	1500	5.1	
DUSITAN ZINEČNATOAMONNÝ	1512	5.1	
DUSITANY, ANORGANICKÉ, J.N.	2627	5.1	
DUSITANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	3219	5.1	
ELEKTROLYT PRO AKUMULÁTORY (BATERIE), ALKALICKÝ	2797	8	
1,2-EPOXY-3-ETHOXYPROPAN	2752	3	
EPIBROMHYDRIN	2558	6.1	
EPICHLORHYDRIN	2023	6.1	
ESTERY, J.N.	3272	3	
1-ETHYLPIPERIDIN	2386	3	
2-ETHYLANILÍN	2273	6.1	
2-ETHYLBUTANOL	2275	3	
2-ETHYLBUTYLACETÁT	1177	3	
2-ETHYLBUTYRALDEHYD	1178	3	
2-ETHYLHEXYLAMIN	2276	3	
2-ETHYLHEXYLCHLORFORMIÁT (2-ethylhexylchlorokarbonát)	2748	6.1	
ETHAN	1035	2	
ETHAN, HLUBOCE ZCHLAZENÝ, KAPALNÝ	1961	2	
ETHANOL (ETHYLALKOHOL) nebo ETHANOL, ROZTOK (ETHYLALKOHOL, ROZTOK)	1170	3	
ETHANOL, ROZTOK (ETHYLALKOHOL, ROZTOK)	1170	3	
ETHANOLAMIN nebo ETHANOLAMIN, ROZTOK	2491	8	
ETHANTHIOL (ethylmerkaptan)	2363	3	
ETHERY, J.N.	3271	3	
ETHYL-2-CHLORPROPIONÁT	2935	3	
ETHYLACETÁT	1173	3	
ETHYLACETYLÉN, STABILIZOVANÝ	2452	2	
ETHYLAKRYLÁT, STABILIZOVANÝ	1917	3	
ETHYLAMIN	1036	2	
ETHYLAMIN, VODNÝ ROZTOK, obsahující nejméně 50 %, ale nejvýše 70 % ethylaminu	2270	3	
ETHYLAMYLKETON	2271	3	
ETHYLBENZEN	1175	3	
ETHYLBROMACETÁT	1603	6.1	
ETHYLBROMID	1891	6.1	

Pojmenování a popis	UN číslo	Třída	Poznámka
ETHYLBUTYLETHER	1179	3	
ETHYLBUTYRÁT	1180	3	
ETHYLDICHLORARSIN	1892	6.1	
ETHYLDICHLORSILAN	1183	4.3	
ETHYLEN	1962	2	
ETHYLEN, ACETYLEN A PROPYLEN, SMĚS, HLUBOCE ZCHLAZENÁ, KAPALNÁ, obsahující nejméně 71,5 % ethylenu, nejvíce 22,5 % acetylenu a nejvíce 6 % propylenu	3138	2	
ETHYLEN, HLUBOCE ZCHLAZENÝ, KAPALNÝ	1038	2	
ETHYLENDIAMIN	1604	8	
ETHYLENDIBROMID	1605	6.1	
ETHYLENDICHLORID	1184	3	
ETHYLENGLYKOLDIETHYLETHER	1153	3	
ETHYLENGLYKOLMONOETHYLETHER	1171	3	
ETHYLENGLYKOLMONOETHYLETHERACETÁT	1172	3	
ETHYLENGLYKOLMONOMETHYLETHER	1188	3	
ETHYLENGLYKOLMONOMETHYLETHERACETÁT	1189	3	
ETHYLENCHLORHYDRIN	1135	6.1	
ETHYLENIMIN, STABILIZOVANÝ	1185	6.1	
ETHYLENOXID	1040	2	
ETHYLENOXID A DICHLORDIFLUORMETHAN, SMĚS, s nejvýše 12,5 % ethylenoxidu	3070	2	
ETHYLENOXID A CHLORTETRAFLUORETHAN, SMĚS, s nejvýše 8,8 % ethylenoxidu	3297	2	
ETHYLENOXID A OXID UHLIČITÝ, SMĚS, obsahující nejvýše 9 % ethylenoxidu	1952	2	
ETHYLENOXID A OXID UHLIČITÝ, SMĚS, s více než 87 % ethylenoxidu	3300	2	
ETHYLENOXID A OXID UHLIČITÝ, SMĚS, s více než 9 %, ale nejvýše 87 % ethylenoxidu	1041	2	
ETHYLENOXID A PENTAFLUORETHAN, SMĚS, s nejvýše 7,9 % ethylenoxidu	3298	2	
ETHYLENOXID A PROPYLENOXID, SMĚS, s nejvýše 30 % ethylenoxidu	2983	3	
ETHYLENOXID A TETRAFLUORETHAN, SMĚS, s nejvýše 5,6 % ethylenoxidu	3299	2	
ETHYLENOXID S DUSÍKEM, až do nejvýše přípustného celkového tlaku 1 MPa (10 bar) při 50 °C	1040	2	
ETHYLFENYLDICHLORSILAN	2435	8	
ETHYLFORMIÁT	1190	3	
ETHYLCHLORACETÁT	1181	6.1	
ETHYLCHLORFORMIÁT	1182	6.1	
ETHYLCHLORTHIOFORMIÁT (ethylchlorthiokarbonát)	2826	8	
ETHYLISOBUTYRÁT	2385	3	
ETHYLISOKYANÁT	2481	6.1	
ETHYLKROTONÁT	1862	3	
ETHYLLAKTÁT	1192	3	
ETHYLMETHAKRYLÁT, STABILIZOVANÝ	2277	3	
ETHYLMETHYLETHER	1039	2	
ETHYLMETHYLKETON (METHYLETHYLKETON)	1193	3	
ETHYLNITRIT, ROZTOK	1194	3	
ETHYLORTHOFORMIÁT	2524	3	
ETHYLOXALÁT	2525	6.1	
ETHYLPROPIONÁT	1195	3	
ETHYLPROPYLETHER	2615	3	
ETHYLTRICHLORSILAN	1196	3	
EXTRAKTY AROMATICKÉ, KAPALNÉ	1169	3	

Pojmenování a popis	UN číslo	Třída	Poznámka
EXTRAKTY AROMATICKÉ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	1169	3	
EXTRAKTY AROMATICKÉ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	1169	3	
EXTRAKTY AROMATICKÉ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	1169	3	
EXTRAKTY AROMATICKÉ, KAPALNÉ (tenze par při 50 °C je vyšší než 110 kPa)	1169	3	
EXTRAKTY AROMATICKÉ, KAPALNÉ (tenze par při 50 °C nepřesahuje 110 kPa)	1169	3	
EXTRAKTY OCHUCOVACÍ, KAPALNÉ	1197	3	
EXTRAKTY OCHUCOVACÍ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	1197	3	
EXTRAKTY OCHUCOVACÍ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	1197	3	
EXTRAKTY OCHUCOVACÍ, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	1197	3	
EXTRAKTY OCHUCOVACÍ, KAPALNÉ (tenze par při 50 °C je vyšší než 110 kPa)	1197	3	
EXTRAKTY OCHUCOVACÍ, KAPALNÉ (tenze par při 50 °C nepřesahuje 110 kPa)	1197	3	
FENACYLBROMID	2645	6.1	
FENETIDINY (ETHOXYANILÍNY)	2311	6.1	
FENOL, ROZTAVENÝ	2312	6.1	
FENOL, ROZTOK	2821	6.1	
FENOL, TUHÝ	1671	6.1	
FENYLACETONITRIL, KAPALNÝ	2470	6.1	
FENYLACETYLCHLORID	2577	8	
FENYLENDIAMINY (o-, m-, p-)	1673	6.1	
FENYLHYDRAZIN	2572	6.1	
FENYLCHLORFORMIÁT (fenylchlorkarbonát)	2746	6.1	
FENYLISOKYANÁT	2487	6.1	
FENYLKARBYLAMINCHLORID	1672	6.1	
FENYLMERKURIACETÁT	1674	6.1	
FENYLMERKURIHYDROXID	1894	6.1	
FENYLMERKURINITRÁT	1895	6.1	
FENYLTHIOFOSFORYLDICHLORID	2799	8	
FENYLTRICHLORSILAN	1804	8	
FERROCER	1323	4.1	
FERROSILICIUM, s více než 30 %, ale méně než 90 % křemíku	1408	4.3	
FILMY NA BÁZI NITROCELULÓZY, želatinované, kromě odpadů	1324	4.1	
FILTRY MEMBRÁNOVÉ Z NITROCELULÓZY, s nejvýše 12,6 % hm. dusíku v sušině	3270	4.1	
FLUOR, STLAČENÝ	1045	2	
FLUORACETÁT DRASELNÝ	2628	6.1	
FLUORACETÁT SODNÝ	2629	6.1	
FLUORANILÍNY	2941	6.1	
FLUORBENZEN	2387	3	
FLUORETHAN (ETHYLFLUORID) (PLYN JAKO CHLADICÍ PROSTŘEDEK R 161)	2453	2	
FLUORID AMONNÝ	2505	6.1	
FLUORID ANTIMONIČNÝ	1732	8	
FLUORID BORITÝ	1008	2	

Pojmenování a popis	UN číslo	Třída	Poznámka
FLUORID BORITÝ / KYSELINA OCTOVÁ, KOMPLEX, KAPALNÝ	1742	8	
FLUORID BORITÝ / KYSELINA OCTOVÁ, KOMPLEX, TUHÝ	3419	8	
FLUORID BORITÝ / KYSELINA PROPIONOVÁ, KOMPLEX, KAPALNÝ	1743	8	
FLUORID BORITÝ / KYSELINA PROPIONOVÁ, KOMPLEX, TUHÝ	3420	8	
FLUORID BORITÝ, DIHYDRÁT	2851	8	
FLUORID BROMIČNÝ	1745	5.1	
FLUORID BROMITÝ	1746	5.1	
FLUORID DRASELNÝ, ROZTOK	3422	6.1	
FLUORID DRASELNÝ, TUHÝ	1812	6.1	
FLUORID DUSITÝ	2451	2	
FLUORID FOSFOREČNÝ	2198	2	
FLUORID CHLOREČNÝ (CHLORPENTAFLUORID)	2548	2	
FLUORID CHLORITÝ (CHLORTRIFLUORID)	1749	2	
FLUORID CHROMITÝ, ROZTOK	1757	8	
FLUORID CHROMITÝ, TUHÝ	1756	8	
FLUORID JODIČNÝ	2495	5.1	
FLUORID KARBONYLU (KARBONYLFLUORID)	2417	2	
FLUORID KŘEMIČITÝ	1859	2	
FLUORID KYSLÍKU, STLAČENÝ	2190	2	
FLUORID SELENOVÝ	2194	2	
FLUORID SÍROVÝ	1080	2	
FLUORID SÍŘIČITÝ	2418	2	
FLUORID SODNÝ, ROZTOK	3415	6.1	
FLUORID SODNÝ, TUHÝ	1690	6.1	
FLUORID SULFURYLU (SULFURYLFLUORID)	2191	2	
FLUORID TELUROVÝ	2195	2	
FLUORID WOLFRAMOVÝ	2196	2	
FLUORMETHAN (METHYLFLUORID) (PLYN JAKO CHLADICÍ PROSTŘEDEK R 41)	2454	2	
FLUOROVODÍK, BEZVODÝ	1052	8	
FLUORTOLUENY	2388	3	
9-FOSFABICYKLONONANY (CYKLOOKTADIENFOSFINY)	2940	4.2	
FORMALDEHYD, ROZTOK, HOŘLAVÝ	1198	3	
FORMALDEHYD, ROZTOK, obsahující nejméně 25 % formaldehydu	2209	8	
FOSFID DRASELNÝ	2012	4.3	
FOSFID HLINITÝ	1397	4.3	
FOSFID HOŘEČNATO-HLINITÝ	1419	4.3	
FOSFID HOŘEČNATÝ	2011	4.3	
FOSFID SODNÝ	1432	4.3	
FOSFID STRONTNATÝ	2013	4.3	
FOSFID VÁPENATÝ	1360	4.3	
FOSFID ZINEČNATÝ	1714	4.3	
FOSFIDY CÍNU	1433	4.3	
FOSFOR, AMORFNÍ	1338	4.1	
FOSFOR, BÍLÝ nebo ŽLUTÝ, POD VODOU nebo V ROZTOKU	1381	4.2	
FOSFOR, BÍLÝ nebo ŽLUTÝ, ROZTAVENÝ	2447	4.2	
FOSFOR, BÍLÝ nebo ŽLUTÝ, SUCHÝ	1381	4.2	
FOSFOROVODÍK (FOSFIN)	2199	2	
FOSFORTRISULFID, neobsahující žlutý ani bílý fosfor	1343	4.1	
FOSGEN	1076	2	
FTALANHYDRID, obsahující více než 0,05 % maleinanhydridu	2214	8	
FULMINÁT RTUŤNATÝ, VLHČENÝ nejméně 20 % hm. vody nebo směsí alkoholu s vodou	0135	1	

Pojmenování a popis	UN číslo	Třída	Poznámka
FUMARYLCHLORID	1780	8	
FURALDEHYDY	1199	6.1	
FURAN	2389	3	
FURFURYLALKOHOL	2874	6.1	
FURFURYLAMIN	2526	3	
GALLIUM	2803	8	
GENERÁTOR KYSLÍKOVÝ, CHEMICKÝ	3356	5.1	
GENETICKY MODIFIKOVANÉ MIKROORGANISMY nebo GENETICKY MODIFIKOVANÉ ORGANISMY	3245	9	
GENETICKY MODIFIKOVANÉ MIKROORGANISMY nebo GENETICKY MODIFIKOVANÉ ORGANISMY, ve zmraženém kapalném dusíku	3245	9	
GERMANOVODÍK (GERMAN)	2192	2	
GLUKONÁT RTUŤNATÝ	1637	6.1	
GLYCIDALDEHYD	2622	3	
GRANÁTY, CVIČNÉ, ruční nebo puškové	0110	1	
GRANÁTY, CVIČNÉ, ruční nebo puškové	0318	1	
GRANÁTY, CVIČNÉ, ruční nebo puškové	0372	1	
GRANÁTY, CVIČNÉ, ruční nebo puškové	0452	1	
GRANÁTY, ruční nebo puškové, s trhací náplní	0284	1	
GRANÁTY, ruční nebo puškové, s trhací náplní	0285	1	
GRANÁTY, ruční nebo puškové, s trhací náplní	0292	1	
GRANÁTY, ruční nebo puškové, s trhací náplní	0293	1	
GRANULÁTY HORČÍKU, POTAŽENÉ, velikost částic nejméně 149 mikrometrů	2950	4.3	
GUANYL-4-NITROSO-AMINO GUANYL (TETRAZEN), VLNĚNÝ nejméně 30 % hm. vody nebo směsí alkoholu s vodou	0114	1	
GUANYLNITROSOAMINO GUANYLID-HYDRAZIN, VLNĚNÝ nejméně 30 % hm. vody	0113	1	
Hadry znečištěné olejem	1856	4.2	Není předmětem pro ADR
HAFNIUM, PRÁŠEK, SUCHÝ	2545	4.2	
HAFNIUM, PRÁŠEK, VLNĚNÝ nejméně 25 % vody	1326	4.1	
1-HEXEN	2370	3	
HELIUM, HLUBOCE ZCHLAZENÉ, KAPALNÉ	1963	2	
HELIUM, STLAČENÉ	1046	2	
HEPTAFLUORPROPAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 227)	3296	2	
HEPTANY	1206	3	
HEXADECYLTRICHLORSILAN	1781	8	
HEXADIENY	2458	3	
HEXAETHYLTETRAFOSFÁT	1611	6.1	
HEXAETHYLTETRAFOSFÁT A STLAČENÝ PLYN, SMĚS	1612	2	
HEXAFLUORACETON	2420	2	
HEXAFLUORACETON, HYDRÁT, KAPALNÝ	2552	6.1	
HEXAFLUORACETON, HYDRÁT, TUHÝ	3436	6.1	
HEXAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 116)	2193	2	
HEXAFLUOROKŘEMIČITAN AMONNÝ	2854	6.1	
HEXAFLUOROKŘEMIČITAN DRASELNÝ	2655	6.1	
HEXAFLUOROKŘEMIČITAN HOŘEČNATÝ	2853	6.1	
HEXAFLUOROKŘEMIČITAN SODNÝ	2674	6.1	
HEXAFLUOROKŘEMIČITAN ZINEČNATÝ	2855	6.1	
HEXAFLUOROKŘEMIČITANY, J.N.	2856	6.1	
HEXAFLUOROPROPYLEN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 1216)	1858	2	

Pojmenování a popis	UN číslo	Třída	Poznámka
HEXACHLORACETON	2661	6.1	
HEXACHLORBENZEN	2729	6.1	
HEXACHLORBUTADIEN	2279	6.1	
HEXACHLORCYKLOPENTADIEN	2646	6.1	
HEXACHLOROFEN	2875	6.1	
HEXALDEHYD	1207	3	
HEXAMETHYLENDIAMIN, ROZTOK	1783	8	
HEXAMETHYLENDIAMIN, TUHÝ	2280	8	
HEXAMETHYLENDIISOKYANÁT	2281	6.1	
HEXAMETHYLENIMIN	2493	3	
HEXAMETHYLENTETRAMIN	1328	4.1	
HEXANITRODIFENYLAMIN (DIPKRYLAMIN; HEXYL)	0079	1	
HEXANITROSTILBEN	0392	1	
HEXANOLY	2282	3	
HEXANY	1208	3	
HEXOLIT (HEXOTOL), suchý nebo vlhčený méně než 15 % hm. vody	0118	1	
HEXOTONAL	0393	1	
HEXYLTRICHLORSILAN	1784	8	
HLINÍK, PRÁŠEK, NEPOTAŽENÝ	1396	4.3	
HLINÍK, PRÁŠEK, POTAZENÝ	1309	4.1	
HLINITAN SODNÝ, ROZTOK	1819	8	
Hlinitan sodný, tuhý	2812	8	Není předmětem pro ADR
HLOUBKOVÉ SONDY, VÝBUŠNÉ	0204	1	
HLOUBKOVÉ SONDY, VÝBUŠNÉ	0296	1	
HLOUBKOVÉ SONDY, VÝBUŠNÉ	0374	1	
HLOUBKOVÉ SONDY, VÝBUŠNÉ	0375	1	
HNOJIVA OBSAHUJÍCÍ DUSIČNAN AMONNÝ	2067	5.1	
Hnojiva obsahující dusičnan amonný, stejnoměrné směsi dusíku / fosforečnanu, dusíku / potaše nebo dusíku / fosforečnanu / potaše, obsahující nejvíce 70 % dusičnanu amonného a nejvíce 0,4 % celkového hořlavého / organického materiálu, vypočteno na uhlík, nebo obsahující nejvíce 45 % dusičnanu amonného a bez omezení hořlavého materiálu	2071	9	Není předmětem pro ADR
HNOJIVO V ROZTOKU s volným čpavkem	1043	2	
HOŘČÍK nebo SLITINY HOŘČÍKU, s více než 50 % hořčíku jako hrudky, třísky nebo pásy	1869	4.1	
HOŘČÍK, PRÁŠEK nebo SLITINY HOŘČÍKU, PRÁŠEK	1418	4.3	
HYDRAZIN, BEZVODÝ	2029	8	
HYDRAZIN, VODNÝ ROZTOK, obsahující více než 37 % hm. hydrazinu	2030	8	
HYDRAZIN, VODNÝ ROZTOK, s nejvýše 37 % hm. hydrazinu	3293	6.1	
HYDRAZIN, VODNÝ ROZTOK, HOŘLAVÝ, obsahující více než 37 % hm. hydrazinu	3484	8	
HYDRID HLINITÝ	2463	4.3	
HYDRID HOŘEČNATÝ	2010	4.3	
HYDRID LITHNÝ	1414	4.3	
HYDRID LITHNÝ, ROZTAVENÝ A ZTUHLÝ	2805	4.3	
HYDRID SODNÝ	1427	4.3	
HYDRID VÁPENATÝ	1404	4.3	
HYDRID ZIRKONIA	1437	4.1	
HYDRIDY KOVŮ, HOŘLAVÉ, J.N.	3182	4.1	
HYDRIDY KOVŮ, REAGUJÍCÍ S VODOU, J.N.	1409	4.3	
HYDROGENFLUORID AMONNÝ, ROZTOK	2817	8	
HYDROGENFLUORID AMONNÝ, TUHÝ	1727	8	

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HYDROGENFLUORID DRASELNÝ, ROZTOK	3421	8	
HYDROGENFLUORID DRASELNÝ, TUHÝ	1811	8	
HYDROGENFLUORID SODNÝ	2439	8	
HYDROGENFLUORIDY, ROZTOK, J.N.	3471	8	
HYDROGENFLUORIDY, TUHÉ, J.N.	1740	8	
HYDROGENSÍRAN AMONNÝ	2506	8	
HYDROGENSÍRAN DRASELNÝ	2509	8	
HYDROGENSÍŘIČITANY, VODNÝ ROZTOK, J.N.	2693	8	
HYDROGENSULFÁTY, VODNÝ ROZTOK	2837	8	
HYDROGENSULFID SODNÝ HYDRATOVANÝ, obsahující nejméně 25 % krystalové vody	2949	8	
HYDROGENSULFID SODNÝ, s méně než 25 % krystalové vody	2318	4.2	
HYDROCHLORID 4-CHLOR-o-TOLUIDINU, ROZTOK	3410	6.1	
HYDROCHLORID 4-CHLOR-o-TOLUIDINU, TUHÝ	1579	6.1	
HYDROCHLORID ANILÍNU	1548	6.1	
HYDROCHLORID NIKOTINU, KAPALNÝ nebo ROZTOK	1656	6.1	
HYDROCHLORID NIKOTINU, TUHÝ	3444	6.1	
HYDROXID CESNÝ	2682	8	
HYDROXID CESNÝ, ROZTOK	2681	8	
HYDROXID DRASELNÝ, ROZTOK	1814	8	
HYDROXID DRASELNÝ, TUHÝ	1813	8	
HYDROXID LITHNÝ	2680	8	
HYDROXID LITHNÝ, ROZTOK	2679	8	
HYDROXID RUBIDNÝ	2678	8	
HYDROXID RUBIDNÝ, ROZTOK	2677	8	
HYDROXID SODNÝ, ROZTOK	1824	8	
HYDROXID SODNÝ, TUHÝ	1823	8	
1-HYDROXYBENZOTRIAZOL, BEZVODÝ, suchý nebo vlhčený méně než 20 % hm. vody	0508	1	
1-HYDROXYBENZOTRIAZOL, MONOHYDRÁT	3474	4.1	
HYDROXYLAMINSULFÁT	2865	8	
CHEMICKÁ LÁTKA POD TLAKEM, HOŘLAVÁ, J.N.	3501	2	
CHEMICKÁ LÁTKA POD TLAKEM, HOŘLAVÁ, TOXICKÁ, J.N.	3504	2	
CHEMICKÁ LÁTKA POD TLAKEM, HOŘLAVÁ, ŽÍRAVÁ, J.N.	3505	2	
CHEMICKÁ LÁTKA POD TLAKEM, J.N.	3500	2	
CHEMICKÁ LÁTKA POD TLAKEM, TOXICKÁ, J.N.	3502	2	
CHEMICKÁ LÁTKA POD TLAKEM, ŽÍRAVÁ, J.N.	3503	2	
1-CHLOR-1,1-DIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 142b)	2517	2	
1-CHLOR-1,2,2,2-TETRAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 124)	1021	2	
1-CHLOR-2,2,2-TRIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 133a)	1983	2	
1-CHLORPROPAN (PROPYLCHLORID)	1278	3	
2-CHLORETHANAL	2232	6.1	
2-CHLORPROPAN	2356	3	
2-CHLORPROPEN	2456	3	
2-CHLORPYRIDIN	2822	6.1	
3-CHLOR-1,2-PROPANDIOL (glycerol-alfa-monochlorhydrin)	2689	6.1	
3-CHLOR-1-PROPANOL	2849	6.1	
3-CHLOR-4-METHYLFENYLISOKYANÁT, KAPALNÝ	2236	6.1	
3-CHLOR-4-METHYLFENYLISOKYANÁT, TUHÝ	3428	6.1	
CHINOLIN	2656	6.1	
CHLADÍRENSKÉ STROJE s hořlavým, netoxickým, zkapalněným plynem	3358	2	
CHLÓR	1017	2	
CHLORACETOFENON, KAPALNÝ	3416	6.1	

Pojmenování a popis	UN číslo	Třída	Poznámka
CHLORACETOFENON, TUHÝ	1697	6.1	
CHLORACETON, STABILIZOVANÝ	1695	6.1	
CHLORACETONITRIL	2668	6.1	
CHLORACETYLCHLORID	1752	6.1	
CHLORAL, BEZVODÝ, STABILIZOVANÝ	2075	6.1	
CHLORANILÍNÝ, KAPALNÉ	2019	6.1	
CHLORANILÍNÝ, TUHÉ	2018	6.1	
CHLORANIZIDINY	2233	6.1	
CHLORBENZEN	1134	3	
CHLORBENZOTRIFLUORIDY	2234	3	
CHLORBENZYLCHLORIDY, KAPALNÉ	2235	6.1	
CHLORBENZYLCHLORIDY, TUHÉ	3427	6.1	
CHLORBUTANY	1127	3	
CHLORDIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 22)	1018	2	
CHLORDIFLUORMETHAN A CHLORPENTAFLUORETHAN, SMĚS s konstantním bodem varu s cca 49 % chlortrifluormethanu (PLYN JAKO CHLADICÍ PROSTŘEDEK R 502)	1973	2	
CHLORDINITROBENZENY, KAPALNÉ	1577	6.1	
CHLORDINITROBENZENY, TUHÉ	3441	6.1	
CHLOREČNAN BARNATÝ, ROZTOK	3405	5.1	
CHLOREČNAN BARNATÝ, TUHÝ	1445	5.1	
CHLOREČNAN DRASELNÝ	1485	5.1	
CHLOREČNAN DRASELNÝ, VODNÝ ROZTOK	2427	5.1	
CHLOREČNAN HOŘEČNATÝ	2723	5.1	
CHLOREČNAN MĚDNATÝ	2721	5.1	
CHLOREČNAN SODNÝ	1495	5.1	
CHLOREČNAN SODNÝ, VODNÝ ROZTOK	2428	5.1	
CHLOREČNAN STRONTNATÝ	1506	5.1	
CHLOREČNAN THALLNÝ	2573	5.1	
CHLOREČNAN VÁPENATÝ	1452	5.1	
CHLOREČNAN VÁPENATÝ, VODNÝ ROZTOK	2429	5.1	
CHLOREČNAN ZINEČNATÝ	1513	5.1	
CHLOREČNANY A BORITANY, SMĚS	1458	5.1	
CHLOREČNANY A CHLORID HOŘEČNATÝ, SMĚS, ROZTOK	3407	5.1	
CHLOREČNANY A CHLORID HOŘEČNATÝ, SMĚS, TUHÁ	1459	5.1	
CHLOREČNANY, ANORGANICKÉ, J.N.	1461	5.1	
CHLOREČNANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	3210	5.1	
CHLORETHAN (ETHYLCHLORID)	1037	2	
CHLORFENOLÁTY, KAPALNÉ nebo FENOLÁTY, KAPALNÉ	2904	8	
CHLORFENOLÁTY, TUHÉ nebo FENOLÁTY, TUHÉ	2905	8	
CHLORFENOLY, KAPALNÉ	2021	6.1	
CHLORFENOLY, TUHÉ	2020	6.1	
CHLORFENYLTRICHLORSILAN	1753	8	
CHLORFORMIÁTY, TOXICKÉ, ŽÍRAVÉ, J.N.	3277	6.1	
CHLORID ANTIMONIČNÝ, KAPALNÝ	1730	8	
CHLORID ANTIMONIČNÝ, ROZTOK	1731	8	
CHLORID ANTIMONITÝ	1733	8	
CHLORID ARSENITÝ	1560	6.1	
CHLORID BORITÝ	1741	2	
CHLORID BROMU (BROMCHLORID)	2901	2	
CHLORID ČINIČITÝ, BEZVODÝ	1827	8	
CHLORID ČINIČITÝ, PENTAHYDRÁT	2440	8	
CHLORID FOSFOREČNÝ	1806	8	
CHLORID FOSFORITÝ	1809	6.1	
CHLORID FOSFORYLU (OXYCHLORID FOSFOREČNÝ)	1810	6.1	
CHLORID HLINITÝ, BEZVODÝ	1726	8	

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CHLORID HLINITÝ, ROZTOK	2581	8	
CHLORID CHROMYLU (OXYCHLORID CHROMOVÝ)	1758	8	
CHLORID MĚDNATÝ	2802	8	
CHLORID MOLYBDENIČNÝ	2508	8	
CHLORID NITROSYLU (NITROSYLCHLORID)	1069	2	
CHLORID RTUŤNATO-AMONNÝ	1630	6.1	
CHLORID RTUŤNATÝ	1624	6.1	
CHLORID SELENINYLU (OXYCHLORID SELENIČITÝ)	2879	8	
CHLORID SULFURYLU	1834	6.1	
CHLORID THIOFOSFORYLU	1837	8	
CHLORID THIONYLU	1836	8	
CHLORID TITANIČITÝ	1838	6.1	
CHLORID TITANITÝ, PYROFORNÍ nebo SMĚSI CHLORIDU TITANITÉHO, PYROFORNÍ	2441	4.2	
CHLORID TITANITÝ, SMĚS	2869	8	
CHLORID VANADIČITÝ	2444	8	
CHLORID VANADITÝ	2475	8	
CHLORID ZINEČNATÝ, BEZVODÝ	2331	8	
CHLORID ZINEČNATÝ, ROZTOK	1840	8	
CHLORID ZIRKONIČITÝ	2503	8	
CHLORID ŽELEZITÝ, BEZVODÝ	1773	8	
CHLORID ŽELEZITÝ, ROZTOK	2582	8	
CHLORIDY SÍRY	1828	8	
CHLORISTAN AMONNÝ	0402	1	
CHLORISTAN AMONNÝ	1442	5.1	
CHLORISTAN BARNATÝ, ROZTOK	3406	5.1	
CHLORISTAN BARNATÝ, TUHÝ	1447	5.1	
CHLORISTAN DRASELNÝ	1489	5.1	
CHLORISTAN HOŘEČNATÝ	1475	5.1	
CHLORISTAN OLOVNATÝ, ROZTOK	3408	5.1	
CHLORISTAN OLOVNATÝ, TUHÝ	1470	5.1	
CHLORISTAN SODNÝ	1502	5.1	
CHLORISTAN STRONTNATÝ	1508	5.1	
CHLORISTAN VÁPENATÝ	1455	5.1	
CHLORISTANY, ANORGANICKÉ, J.N.	1481	5.1	
CHLORISTANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	3211	5.1	
CHLORITAN SODNÝ	1496	5.1	
CHLORITAN VÁPENATÝ	1453	5.1	
CHLORITAN, ROZTOK	1908	8	
CHLORITANY, ANORGANICKÉ, J.N.	1462	5.1	
CHLORKRESOLY, ROZTOK	2669	6.1	
CHLORKRESOLY, TUHÉ	3437	6.1	
CHLORKYAN, STABILIZOVANÝ	1589	2	
CHLORMETHAN (METHYLCHLORID) (PLYN JAKO CHLADICÍ PROSTŘEDEK R 40)	1063	2	
CHLORMETHAN (METHYLCHLORID) A DICHLORMETHAN, SMĚS	1912	2	
CHLORMETHYLETHYLEETHER	2354	3	
CHLORMETHYLCHLORFORMIÁT (chlormethylchlorkarbonát)	2745	6.1	
CHLORNAN BARNATÝ, s více než 22 % aktivního chlóru	2741	5.1	
CHLORNAN LITHNÝ, SUCHÝ nebo CHLORNAN LITHNÝ, SMĚS	1471	5.1	
CHLORNAN VÁPENATÝ, HYDRATOVANÝ nebo CHLORNAN VÁPENATÝ, HYDRATOVANÁ SMĚS, s nejméně 5,5 %, ale nejvýše 16 % vody	2880	5.1	
CHLORNAN VÁPENATÝ, SMĚS, SUCHÁ, s více než 10 %, ale nejvýše 39 % aktivního chlóru	2208	5.1	

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CHLORNAN VÁPENATÝ, SUCHÝ nebo CHLORNAN VÁPENATÝ, SMĚS, SUCHÁ, s více než 39 % aktivního chlóru (8,8 % aktivního kyslíku)	1748	5.1	
CHLORNAN VÁPENATÝ, SUCHÝ, ŽÍRAVÝ nebo CHLORNAN VÁPENATÝ, SMĚS, SUCHÁ, ŽÍRAVÁ, s více než 39 % aktivního chlóru (8,8 % aktivního kyslíku)	3485	5.1	
CHLORNAN VÁPENATÝ, SMĚS, SUCHÁ, ŽÍRAVÁ, s více než 10 %, ale nejvýše 39 % aktivního chlóru	3486	5.1	
CHLORNAN VÁPENATÝ, HYDRATOVANÝ, ŽÍRAVÝ nebo CHLORNAN VÁPENATÝ, HYDRATOVANÁ SMĚS, ŽÍRAVÁ, s nejméně 5,5 %, ale nejvýše 16 % vody	3487	5.1	
CHLORNAN, ROZTOK	1791	8	
CHLORNANY, ANORGANICKÉ, J.N.	3212	5.1	
CHLORNITROANILÍNY	2237	6.1	
CHLORNITROBENZENY, KAPALNÉ	3409	6.1	
CHLORNITROBENZENY, TUHÉ	1578	6.1	
CHLORNITROTOLUENY, KAPALNÉ	2433	6.1	
CHLORNITROTOLUENY, TUHÉ	3457	6.1	
CHLOROCTAN SODNÝ	2659	6.1	
CHLOROFORM	1888	6.1	
CHLOROKARBONÁTY (CHLORFORMIÁTY), TOXICKÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N.	2742	6.1	
CHLOROPREN, STABILIZOVANÝ	1991	3	
CHLOROVODÍK, BEZVODÝ	1050	2	
CHLOROVODÍK, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2186	2	Přeprava zakázána
CHLORPENTAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 115)	1020	2	
CHLORPIKRIN	1580	6.1	
CHLORPIKRIN A METHYLBROMID, SMĚS, s více než 2 % chlorpikrinu	1581	2	
CHLORPIKRIN A METHYLCHLORID, SMĚS	1582	2	
CHLORPIKRIN, SMĚS, J.N.	1583	6.1	
CHLORSILANY, HOŘLAVÉ, ŽÍRAVÉ, J.N.	2985	3	
CHLORSILANY, REAGUJÍCÍ S VODOU, HOŘLAVÉ, ŽÍRAVÉ, J.N.	2988	4.3	
CHLORSILANY, TOXICKÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N.	3362	6.1	
CHLORSILANY, TOXICKÉ, ŽÍRAVÉ, J.N.	3361	6.1	
CHLORSILANY, ŽÍRAVÉ, HOŘLAVÉ, J.N.	2986	8	
CHLORSILANY, ŽÍRAVÉ, J.N.	2987	8	
CHLORTOLUENY	2238	3	
CHLORTOLUIDINY, KAPALNÉ	3429	6.1	
CHLORTOLUIDINY, TUHÉ	2239	6.1	
CHLORTRIFLUORETHYLEN, STABILIZOVANÝ	1082	2	
CHLORTRIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 13)	1022	2	
CHLORTRIFLUORMETHAN A TRIFLUORMETHAN, AZEOTROPNÍ SMĚS s cca 60 % chlortrifluormethanu (PLYN JAKO CHLADICÍ PROSTŘEDEK R 503)	2599	2	
3,3'-IMINOBISSOPROPYLAMIN	2269	8	
INSEKTICID, PLYNNÝ, HOŘLAVÝ, J.N.	3354	2	
INSEKTICID, PLYNNÝ, J.N.	1968	2	
INSEKTICID, PLYNNÝ, TOXICKÝ, HOŘLAVÝ, J.N.	3355	2	
INSEKTICID, PLYNNÝ, TOXICKÝ, J.N.	1967	2	
ISOBUTAN	1969	2	
ISOBUTANOL (ISOBUTYLALKOHOL)	1212	3	
ISOBUTEN	1055	2	

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ISOBUTYLACETÁT	1213	3	
ISOBUTYLAKRYLÁT, STABILIZOVANÝ	2527	3	
ISOBUTYLAMIN	1214	3	
ISOBUTYLFORMIÁT	2393	3	
ISOBUTYLISOBUTYRÁT	2528	3	
ISOBUTYLISOKYANÁT	2486	6.1	
ISOBUTYLMETHAKRYLÁT, STABILIZOVANÝ	2283	3	
ISOBUTYLPROPIONÁT	2394	3	
ISOBUTYLVINYLETER, STABILIZOVANÝ	1304	3	
ISOBUTYRALDEHYD	2045	3	
ISOBUTYRONITRIL	2284	3	
ISOBUTYRYLCHLORID	2395	3	
ISOFORONDIAMIN	2289	8	
ISOFORONDIISOKYANÁT	2290	6.1	
ISOHEPTEN	2287	3	
ISOHEXEN	2288	3	
ISOKYANÁTOBENZOTRIFLUORIDY	2285	6.1	
ISOKYANÁTY, HOŘLAVÉ, TOXICKÉ, J.N. nebo ISOKYANÁT, ROZTOK, HOŘLAVÝ, TOXICKÝ, J.N.	2478	3	
ISOKYANÁTY, TOXICKÉ, HOŘLAVÉ, J.N. nebo ISOKYANÁT, ROZTOK, TOXICKÝ, HOŘLAVÝ, J.N.	3080	6.1	
ISOKYANÁTY, TOXICKÉ, J.N. nebo ISOKYANÁT, ROZTOK, TOXICKÝ, J.N.	2206	6.1	
ISOOKTENY	1216	3	
ISOPENTENY	2371	3	
ISOPREN, STABILIZOVANÝ	1218	3	
ISOPROPANOL (ISOPROPYLALKOHOL)	1219	3	
ISOPROPENYLACETÁT	2403	3	
ISOPROPENYLBENZEN	2303	3	
ISOPROPYL-2-CHLORPROPIONÁT	2934	3	
ISOPROPYLACETÁT	1220	3	
ISOPROPYLAMIN	1221	3	
ISOPROPYLBENZEN	1918	3	
ISOPROPYLBUTYRÁT	2405	3	
ISOPROPYLFOSFÁT	1793	8	
ISOPROPYLCHLORACETÁT	2947	3	
ISOPROPYLCHLORFORMIÁT (isopropylchlorkarbonát)	2407	6.1	
ISOPROPYLIISOBUTYRÁT	2406	3	
ISOPROPYLIISOKYANÁT	2483	6.1	
ISOPROPYLNITRÁT	1222	3	
ISOPROPYLPROPIONÁT	2409	3	
ISOPROPYLTOLUENY (CYMENY)	2046	3	
ISOSORBID-5-MONONITRÁT	3251	4.1	
JÓD	3495	8	
2-JODBUTAN	2390	3	
JODID DRASELNO-RTUŤNATÝ	1643	6.1	
JODID RTUŤNATÝ	1638	6.1	
JODMETHYLPROPANY	2391	3	
JODOVODIK, BEZVODÝ	2197	2	
JODPROPANY	2392	3	
KAFR, syntetický	2717	4.1	
KAKODYLÁT SODNÝ	1688	6.1	
KARBID HLINITÝ	1394	4.3	
KARBID VÁPENATÝ	1402	4.3	
KARBONYLY KOVŮ, KAPALNÉ, J.N.	3281	6.1	
KARBONYLY KOVŮ, TUHÉ, J.N.	3466	6.1	
KATALYZÁTOR, KOVOVÝ, SUCHÝ	2881	4.2	

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KATALYZÁTOR, KOVOVÝ, VLHCENÝ, s viditelným přebytkem kapaliny	1378	4.2	
KAUČUK (guma), ODPAD, mletý nebo KAUČUK (guma), ZBYTKY, práškovitý nebo granulovaný	1345	4.1	
KAUČUK, ROZTOK	1287	3	
KAUČUK, ROZTOK (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	1287	3	
KAUČUK, ROZTOK (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	1287	3	
KAUČUK, ROZTOK (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	1287	3	
KAUČUK, ROZTOK (tenze par při 50 °C je vyšší než 110 kPa)	1287	3	
KAUČUK, ROZTOK (tenze par při 50 °C nepřesahuje 110 kPa)	1287	3	
KETONY, KAPALNÉ, J.N.	1224	3	
KETONY, KAPALNÉ, J.N. (tenze par při 50 °C je vyšší než 110 kPa)	1224	3	
KETONY, KAPALNÉ, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)	1224	3	
KONDENZÁTOR, elektrická dvojrstva (s akumulací kapacitou větší než 0,3 Wh)	3499	9	
KOPRA	1363	4.2	
KOV PYROFORNÍ, J.N. nebo SLITINA PYROFORNÍ, J.N.	1383	4.2	
KOVY ŽELEZNÉ JAKO TRÍSKY PŘI VRTÁNÍ, FRÉZOVÁNÍ, SOUSTRUŽENÍ, ODPADY ve formě schopné samoohřevu	2793	4.2	
KRESOLY, KAPALNÉ	2076	6.1	
KRESOLY, TUHÉ	3455	6.1	
KROTONALDEHYD nebo KROTONALDEHYD, STABILIZOVANÝ	1143	6.1	
KROTONYLEN	1144	3	
KRYPTON, HLUBOCE ZCHLAZENÝ, KAPALNÝ	1970	2	
KRYPTON, STLAČENÝ	1056	2	
KŘEMÍK, PRÁŠEK, AMORFNÍ	1346	4.1	
KULIČKY POLYMERNÍ, ZPĚŇOVATELNÉ, vylučující hořlavé páry	2211	9	
KYANAMID VÁPENATÝ, s více než 0,1 % karbidu vápenatého	1403	4.3	
KYANID BARNATÝ	1565	6.1	
KYANID DRASELNO-RTUŤNATÝ	1626	6.1	
KYANID DRASELNÝ, ROZTOK	3413	6.1	
KYANID DRASELNÝ, TUHÝ	1680	6.1	
KYANID MĚDNÝ	1587	6.1	
KYANID NIKELNATÝ	1653	6.1	
KYANID OLOVNATÝ	1620	6.1	
KYANID RTUŤNATÝ	1636	6.1	
KYANID SODNÝ, ROZTOK	3414	6.1	
KYANID SODNÝ, TUHÝ	1689	6.1	
KYANID STŘÍBRNÝ	1684	6.1	
KYANID VÁPENATÝ	1575	6.1	
KYANID ZINEČNATÝ	1713	6.1	
KYANID, ROZTOK, J.N.	1935	6.1	
KYANIDY, ANORGANICKÉ, TUHÉ, J.N.	1588	6.1	
KYANOVODÍK, ROZTOK V ALKOHOLU, obsahující nejvýše 45 % kyanovodíku	3294	6.1	
KYANOVODÍK, STABILIZOVANÝ, obsahující méně než 3 % vody	1051	6.1	
KYANOVODÍK, STABILIZOVANÝ, obsahující méně než 3 % vody a nasáklý v porézni inertní hmotě	1614	6.1	

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KYANURCHLORID	2670	8	
KYSELINA 2-CHLORPROPIONOVÁ	2511	8	
KYSELINA 5-MERKAPTOTETRAZOL-1-OCTOVÁ	0448	1	
KYSELINA AKRYLOVÁ, STABILIZOVANÁ	2218	8	
KYSELINA AMIDOSULFONOVÁ	2967	8	
KYSELINA ARSENIČNÁ, KAPALNÁ	1553	6.1	
KYSELINA ARSENIČNÁ, TUHÁ	1554	6.1	
KYSELINA BROMOCTOVÁ, ROZTOK	1938	8	
KYSELINA BROMOCTOVÁ, TUHÁ	3425	8	
KYSELINA DIFLUORFOSFOREČNÁ, BEZVODÁ	1768	8	
KYSELINA DICHLORISOKYANUROVÁ, SUCHÁ nebo KYSELINA DICHLORISOKYANUROVÁ, SOLI	2465	5.1	
KYSELINA DICHLORECTOVÁ	1764	8	
KYSELINA DUSIČNÁ A CHLOROVODÍKOVÁ (solná), SMĚS	1798	8	Přeprava zakázána
KYSELINA DUSIČNÁ, DÝMAVÁ	2032	8	
KYSELINA DUSIČNÁ, jiná než dýmavá, obsahující nejméně 65 %, ale nejvýše 70 % kyseliny	2031	8	
KYSELINA DUSIČNÁ, jiná než dýmavá, obsahující méně než 65 % kyseliny	2031	8	
KYSELINA DUSIČNÁ, jiná než dýmavá, obsahující více než 70 % kyseliny	2031	8	
KYSELINA FENOLSULFONOVÁ, KAPALNÁ	1803	8	
KYSELINA FLUOROBORITÁ	1775	8	
KYSELINA FLUOROCTOVÁ	2642	6.1	
KYSELINA FLUOROFOSFOREČNÁ, BEZVODÁ	1776	8	
KYSELINA FLUOROKŘEMIČITÁ	1778	8	
KYSELINA FLUOROSULFONOVÁ	1777	8	
KYSELINA FLUOROVODÍKOVÁ A KYSELINA SÍROVÁ, SMĚS	1786	8	
KYSELINA FLUOROVODÍKOVÁ, roztok, obsahující nejvýše 60 % fluorovodíku	1790	8	
KYSELINA FLUOROVODÍKOVÁ, roztok, obsahující více než 60 %, nejvýše však 85 % fluorovodíku	1790	8	
KYSELINA FLUOROVODÍKOVÁ, roztok, obsahující více než 85 % fluorovodíku	1790	8	
KYSELINA FOSFOREČNÁ, ROZTOK	1805	8	
KYSELINA FOSFOREČNÁ, TUHÁ	3453	8	
KYSELINA FOSFORITÁ	2834	8	
KYSELINA HEXAFLUOROFOSFOREČNÁ	1782	8	
KYSELINA HEXACHLOROPLATIČITÁ, TUHÁ	2507	8	
KYSELINA CHLOREČNÁ, VODNÝ ROZTOK, s nejvýše 10 % kyseliny chlorečné	2626	5.1	
KYSELINA CHLORISTÁ, s nejvýše 50 % hm. kyseliny	1802	8	
KYSELINA CHLORISTÁ, s více než 50 % hm., ale nejvýše 72 % hm. kyseliny	1873	5.1	
KYSELINA CHLOROCTOVÁ, ROZTAVENÁ	3250	6.1	
KYSELINA CHLOROCTOVÁ, ROZTOK	1750	6.1	
KYSELINA CHLOROCTOVÁ, TUHÁ	1751	6.1	
KYSELINA CHLOROVODÍKOVÁ (kyselina solná)	1789	8	
KYSELINA CHLORSULFONOVÁ (s oxidem sírovým nebo bez)	1754	8	
KYSELINA CHROMOVÁ, ROZTOK	1755	8	
KYSELINA CHROMSÍROVÁ	2240	8	
KYSELINA ISOMASELNÁ	2529	3	
KYSELINA JODOVODÍKOVÁ	1787	8	
KYSELINA KAKODYLOVÁ	1572	6.1	
KYSELINA KAPRONOVÁ	2829	8	
KYSELINA KRESOLOVÁ	2022	6.1	

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KYSELINA KROTONOVÁ, KAPALNÁ	3472	8	
KYSELINA KROTONOVÁ, TUHÁ	2823	8	
KYSELINA KYANOVODIKOVÁ, VODNÝ ROZTOK (KYANOVODÍK, VODNÝ ROZTOK), obsahující nejvýše 20 % kyanovodíku	1613	6.1	
KYSELINA MÁSELNÁ	2820	8	
KYSELINA METHAKRYLOVÁ, STABILIZOVANÁ	2531	8	
KYSELINA MRAVENČÍ s více než 10 %, ale nejvíce 85 % hm. kyseliny	3412	8	
KYSELINA MRAVENČÍ s více než 5 %, ale nejvíce 10 % hm. kyseliny	3412	8	
KYSELINA MRAVENČÍ s více než 85 % hm. kyseliny	1779	8	
KYSELINA NITROBENZENSULFONOVÁ	2305	8	
KYSELINA NITROSYLSÍROVÁ, KAPALNÁ	2308	8	
KYSELINA NITROSYLSÍROVÁ, TUHÁ	3456	8	
KYSELINA OCTOVÁ, LEDOVÁ nebo KYSELINA OCTOVÁ, ROZTOK, obsahující více než 80 % hm. kyseliny	2789	8	
KYSELINA OCTOVÁ, ROZTOK, obsahující nejméně 10 % hm., ale nejvíce 50 % hm. kyseliny	2790	8	
KYSELINA OCTOVÁ, ROZTOK, obsahující nejméně 50 % hm., ale nejvíce 80 % hm. kyseliny	2790	8	
KYSELINA PROPIONOVÁ s více než 10 % hm., ale nejvýše 90 % hm. kyseliny	1848	8	
KYSELINA PROPIONOVÁ s více než 90 % hm. kyseliny	3463	8	
KYSELINA SELENOVÁ	1905	8	
KYSELINA SÍROVÁ, DÝMAVÁ	1831	8	
KYSELINA SÍROVÁ, obsahující nejvýše 51 % kyseliny nebo ELEKTROLYT PRO AKUMULÁTORY (BATERIE), KYSELÝ	2796	8	
KYSELINA SÍROVÁ, obsahující více než 51 % kyseliny	1830	8	
KYSELINA SÍROVÁ, ODPADNÍ	1906	8	
KYSELINA SÍROVÁ, POUŽITÁ	1832	8	
KYSELINA SÍŘIČITÁ	1833	8	
KYSELINA TETRAZOL-1-OCTOVÁ	0407	1	
KYSELINA THIOGLYKOLOVÁ	1940	8	
KYSELINA THIOMLÉČNÁ	2936	6.1	
KYSELINA THIOOCTOVÁ	2436	3	
KYSELINA TRIFLUOROCTOVÁ	2699	8	
KYSELINA TRICHLORISOKYANUROVÁ, SUCHÁ	2468	5.1	
KYSELINA TRICHLOROCTOVÁ	1839	8	
KYSELINA TRICHLOROCTOVÁ, ROZTOK	2564	8	
KYSELINA TRINITROBENZENSULFONOVÁ	0386	1	
KYSELINA TRINITROBENZOOVÁ, suchá nebo vlhčená méně než 30 % hm. vody	0215	1	
KYSELINA TRINITROBENZOOVÁ, VLNĚNÁ nejméně 10 % hm. vody	3368	4.1	
KYSELINA TRINITROBENZOOVÁ, VLNĚNÁ nejméně 30 % hm. vody	1355	4.1	
KYSELINY ALKYLSÍROVÉ	2571	8	
KYSELINY ALKYLSULFONOVÉ, KAPALNÉ nebo KYSELINY ARYLSULFONOVÉ, KAPALNÉ, obsahující nejvýše 5 % volné kyseliny sírové	2586	8	
KYSELINY ALKYLSULFONOVÉ, KAPALNÉ nebo KYSELINY ARYLSULFONOVÉ, KAPALNÉ, obsahující více než 5 % volné kyseliny sírové	2584	8	
KYSELINY ALKYLSULFONOVÉ, TUHÉ nebo KYSELINY ARYLSULFONOVÉ, TUHÉ, obsahující nejvýše 5 % volné kyseliny sírové	2585	8	

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KYSELINY ALKYL-SULFONOVÉ, TUHÉ nebo KYSELINY ARYL-SULFONOVÉ, TUHÉ, obsahující více než 5 % volné kyseliny sírové	2583	8	
KYSLÍK, HLUBOCE ZCHLAZENÝ, KAPALNÝ	1073	2	
KYSLÍK, STLAČENÝ	1072	2	
LAKTÁT ANTIMONIČNÝ	1550	6.1	
LÁTKA HOŘLAVÁ, KAPALNÁ, J.N.	1993	3	
LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	1993	3	
LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	1993	3	
LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	1993	3	
LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (tenze par při 50 °C je vyšší než 110 kPa)	1993	3	
LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)	1993	3	
LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, J.N.	1992	3	
LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, ŽÍRAVÁ, J.N.	3286	3	
LÁTKA HOŘLAVÁ, KAPALNÁ, ŽÍRAVÁ, J.N.	2924	3	
LÁTKA HOŘLAVÁ, TUHÁ, ANORGANICKÁ, J.N.	3178	4.1	
LÁTKA HOŘLAVÁ, TUHÁ, ORGANICKÁ, J.N.	1325	4.1	
LÁTKA HOŘLAVÁ, TUHÁ, ORGANICKÁ, ROZTAVENÁ, J.N.	3176	4.1	
LÁTKA HOŘLAVÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	3097	4.1	Přeprava zakázána
LÁTKA HOŘLAVÁ, TUHÁ, TOXICKÁ, ANORGANICKÁ, J.N.	3179	4.1	
LÁTKA HOŘLAVÁ, TUHÁ, TOXICKÁ, ORGANICKÁ, J.N.	2926	4.1	
LÁTKA HOŘLAVÁ, TUHÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.	3180	4.1	
LÁTKA HOŘLAVÁ, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	2925	4.1	
LÁTKA INFEKČNÍ, NEBEZPEČNÁ pouze PRO ZVÍRATA	2900	6.2	
LÁTKA INFEKČNÍ, NEBEZPEČNÁ pouze PRO ZVÍRATA (pouze materiál ze zvířat)	2900	6.2	
LÁTKA INFEKČNÍ, NEBEZPEČNÁ pouze PRO ZVÍRATA, ve zmraženém kapalném dusíku	2900	6.2	
LÁTKA INFEKČNÍ, NEBEZPEČNÁ PRO LIDI	2814	6.2	
LÁTKA INFEKČNÍ, NEBEZPEČNÁ PRO LIDI (pouze materiál ze zvířat)	2814	6.2	
LÁTKA INFEKČNÍ, NEBEZPEČNÁ PRO LIDI, ve zmraženém kapalném dusíku	2814	6.2	
Látka kapalná, která podléhá předpisům platným pro leteckou dopravu, j.n.	3334	9	Není předmětem pro ADR
LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, J.N.	3208	4.3	
LÁTKA KOVOVÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.	3209	4.3	
LÁTKA OHROŽUJÍCÍ ŽIVOTNÍ PROSTŘEDÍ, KAPALNÁ, J.N.	3082	9	
LÁTKA OHROŽUJÍCÍ ŽIVOTNÍ PROSTŘEDÍ, TUHÁ, J.N.	3077	9	
LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, J.N.	3139	5.1	
LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, TOXICKÁ, J.N.	3099	5.1	
LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, ŽÍRAVÁ, J.N.	3098	5.1	
LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, HOŘLAVÁ, J.N.	3137	5.1	Přeprava zakázána
LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, J.N.	1479	5.1	
LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.	3121	5.1	Přeprava zakázána

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LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	3100	5.1	Přeprava zakázána
LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, TOXICKÁ, J.N.	3087	5.1	
LÁTKA PODPORUJÍCÍ HOŘENÍ, TUHÁ, ŽÍRAVÁ, J.N.	3085	5.1	
LÁTKA PRO PŘÍPRAVU SLZNÉHO PLYNU, KAPALNÁ, J.N.	1693	6.1	
LÁTKA PRO PŘÍPRAVU SLZNÉHO PLYNU, TUHÁ, J.N.	3448	6.1	
LÁTKA PYROFORNÍ, KAPALNÁ, ANORGANICKÁ, J.N.	3194	4.2	
LÁTKA PYROFORNÍ, KAPALNÁ, ORGANICKÁ, J.N.	2845	4.2	
LÁTKA PYROFORNÍ, TUHÁ, ANORGANICKÁ, J.N.	3200	4.2	
LÁTKA PYROFORNÍ, TUHÁ, ORGANICKÁ, J.N.	2846	4.2	
LÁTKA RADIOAKTIVNÍ, HEXAFLUORID URANU, jiná než štěpná nebo vyjmutá štěpná	2978	7	
LÁTKA RADIOAKTIVNÍ, HEXAFLUORID URANU, ŠTĚPNÁ	2977	7	
LÁTKA RADIOAKTIVNÍ, KUS TYPU A, jiné než zvláštní formy, jiná než štěpná nebo vyjmutá štěpná	2915	7	
LÁTKA RADIOAKTIVNÍ, KUS TYPU A, ŠTĚPNÁ, jiné než zvláštní formy	3327	7	
LÁTKA RADIOAKTIVNÍ, KUS TYPU A, ZVLÁŠTNÍ FORMY, jiné než štěpná nebo vyjmutá štěpná	3332	7	
LÁTKA RADIOAKTIVNÍ, KUS TYPU A, ZVLÁŠTNÍ FORMY, ŠTĚPNÁ	3333	7	
LÁTKA RADIOAKTIVNÍ, KUS TYPU B (M), jiná než štěpná nebo vyjmutá štěpná	2917	7	
LÁTKA RADIOAKTIVNÍ, KUS TYPU B (M), ŠTĚPNÁ	3329	7	
LÁTKA RADIOAKTIVNÍ, KUS TYPU B (U), jiná než štěpná nebo vyjmutá štěpná	2916	7	
LÁTKA RADIOAKTIVNÍ, KUS TYPU B (U), ŠTĚPNÁ	3328	7	
LÁTKA RADIOAKTIVNÍ, KUS TYPU C, jiná než štěpná nebo vyjmutá štěpná	3323	7	
LÁTKA RADIOAKTIVNÍ, KUS TYPU C, ŠTĚPNÁ	3330	7	
LÁTKA RADIOAKTIVNÍ, POVRCHOVĚ KONTAMINOVANÉ PŘEDMĚTY (SCO-I nebo SCO-II), ŠTĚPNÉ	3326	7	
LÁTKA RADIOAKTIVNÍ, PŘEPRAVOVANÁ ZA ZVLÁŠTNÍCH PODMÍNEK, jiná než štěpná nebo vyjmutá štěpná	2919	7	
LÁTKA RADIOAKTIVNÍ, PŘEPRAVOVANÁ ZA ZVLÁŠTNÍCH PODMÍNEK, ŠTĚPNÁ	3331	7	
LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-I), jiná než štěpná nebo vyjmutá štěpná	2912	7	
LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-II), jiná než štěpná nebo vyjmutá štěpná	3321	7	
LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-II), ŠTĚPNÁ	3324	7	
LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-III), jiná než štěpná nebo vyjmutá štěpná	3322	7	
LÁTKA RADIOAKTIVNÍ, S NÍZKOU SPECIFICKOU AKTIVITOU (LSA-III), ŠTĚPNÁ	3325	7	
LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS - OMEZENÁ MNOŽSTVÍ	2910	7	
LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS - PRÁZDNÝ OBAL	2908	7	
LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS - PŘÍSTROJE nebo VÝROBKY	2911	7	
LÁTKA RADIOAKTIVNÍ, VYJMUTÝ KUS - VÝROBKY Z PŘÍRODNÍHO URANU nebo OCHUZENÉHO URANU nebo PŘÍRODNÍHO THORIA	2909	7	
LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, J.N.	3148	4.3	
LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, TOXICKÁ, J.N.	3130	4.3	

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LÁTKA REAGUJÍCÍ S VODOU, KAPALNÁ, ŽÍRAVÁ, J.N.	3129	4.3	
LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, J.N.	2813	4.3	
LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, HOŘLAVÁ, J.N.	3132	4.3	
LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	3133	4.3	Přeprava zakázána
LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	3135	4.3	
LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, TOXICKÁ, J.N.	3134	4.3	
LÁTKA REAGUJÍCÍ S VODOU, TUHÁ, ŽÍRAVÁ, J.N.	3131	4.3	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP B	3221	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP B, S ŘÍZENÍM TEPLoty	3231	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP C	3223	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP C, S ŘÍZENÍM TEPLoty	3233	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP D	3225	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP D, S ŘÍZENÍM TEPLoty	3235	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP E	3227	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP E, S ŘÍZENÍM TEPLoty	3237	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP F	3229	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, KAPALNÁ, TYP F, S ŘÍZENÍM TEPLoty	3239	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP B	3222	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP B, S ŘÍZENÍM TEPLoty	3232	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP C	3224	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP C, S ŘÍZENÍM TEPLoty	3234	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP D	3226	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP D, S ŘÍZENÍM TEPLoty	3236	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP E	3228	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP E, S ŘÍZENÍM TEPLoty	3238	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP F	3230	4.1	
LÁTKA SAMOVOLNĚ SE ROZKLÁDAJÍCÍ, TUHÁ, TYP F, S ŘÍZENÍM TEPLoty	3240	4.1	
LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ANORGANICKÁ, J.N.	3186	4.2	
LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ORGANICKÁ, J.N.	3183	4.2	
LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, TOXICKÁ, ANORGANICKÁ, J.N.	3187	4.2	
LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, TOXICKÁ, ORGANICKÁ, J.N.	3184	4.2	
LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.	3188	4.2	
LÁTKA SCHOPNÁ SAMOOHŘEVU, KAPALNÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	3185	4.2	
LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ANORGANICKÁ, J.N.	3190	4.2	
LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ORGANICKÁ, J.N.	3088	4.2	

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LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	3127	4.2	Přeprava zakázána
LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, TOXICKÁ, ANORGANICKÁ, J.N.	3191	4.2	
LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, TOXICKÁ, ORGANICKÁ, J.N.	3128	4.2	
LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.	3192	4.2	
LÁTKA SCHOPNÁ SAMOOHŘEVU, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	3126	4.2	
LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, J.N., s inhalační toxicitou nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC50	3384	6.1	
LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, J.N., s inhalační toxicitou nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC50	3383	6.1	
LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, J.N., s inhalační toxicitou nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC50	3382	6.1	
LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, J.N., s inhalační toxicitou nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC50	3381	6.1	
LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N., s inhalační toxicitou nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC50	3388	6.1	
LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N., s inhalační toxicitou nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC50	3387	6.1	
LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N., s inhalační toxicitou nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC50	3386	6.1	
LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N., s inhalační toxicitou nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC50	3385	6.1	
LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, ŽÍRAVÁ, J.N., s inhalační toxicitou nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC50	3390	6.1	
LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, ŽÍRAVÁ, J.N., s inhalační toxicitou nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC50	3389	6.1	
LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, ŽÍRAVÁ, J.N., s inhalační toxicitou nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC50	3488	6.1	
LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, HOŘLAVÁ, ŽÍRAVÁ, J.N., s inhalační toxicitou nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC50	3489	6.1	
LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N., s inhalační toxicitou nejvýše 200 ml/m ³ a nasycenou koncentrací par nejméně 500 LC50	3490	6.1	
LÁTKA TOXICKÁ PŘI VDECHOVÁNÍ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N., s inhalační toxicitou nejvýše 1000 ml/m ³ a nasycenou koncentrací par nejméně 10 LC50	3491	6.1	
LÁTKA TOXICKÁ, KAPALNÁ, ANORGANICKÁ, J.N.	3287	6.1	
LÁTKA TOXICKÁ, KAPALNÁ, HOŘLAVÁ, ORGANICKÁ, J.N.	2929	6.1	
LÁTKA TOXICKÁ, KAPALNÁ, ORGANICKÁ, J.N.	2810	6.1	

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LÁTKA TOXICKÁ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	3122	6.1	
LÁTKA TOXICKÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.	3123	6.1	
LÁTKA TOXICKÁ, KAPALNÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.	3289	6.1	
LÁTKA TOXICKÁ, KAPALNÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	2927	6.1	
LÁTKA TOXICKÁ, TUHÁ, ANORGANICKÁ, J.N.	3288	6.1	
LÁTKA TOXICKÁ, TUHÁ, HOŘLAVÁ, ORGANICKÁ, J.N.	2930	6.1	
LÁTKA TOXICKÁ, TUHÁ, ORGANICKÁ, J.N.	2811	6.1	
LÁTKA TOXICKÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	3086	6.1	
LÁTKA TOXICKÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.	3125	6.1	
LÁTKA TOXICKÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	3124	6.1	
LÁTKA TOXICKÁ, TUHÁ, ŽÍRAVÁ, ANORGANICKÁ, J.N.	3290	6.1	
LÁTKA TOXICKÁ, TUHÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.	2928	6.1	
Látka tuhá, která podléhá předpisům platným pro leteckou dopravu, j.n.	3335	9	Není předmětem pro ADR
LÁTKA ZAHŘÁTÁ, KAPALNÁ, HOŘLAVÁ, J.N., s bodem vzplanutí více než 60 °C, při teplotě rovnající se bodu vzplanutí nebo vyšší a pod 100 °C	3256	3	
LÁTKA ZAHŘÁTÁ, KAPALNÁ, HOŘLAVÁ, J.N., s bodem vzplanutí více než 60 °C, při teplotě rovnající se bodu vzplanutí nebo vyšší a při 100 °C nebo výše	3256	3	
LÁTKA ZAHŘÁTÁ, KAPALNÁ, J.N., při teplotě 100 °C nebo vyšší a nižší než je její bod vzplanutí (včetně roztavených kovů, roztavených solí atd.), plněná při teplotě nižší než 190 °C	3257	9	
LÁTKA ZAHŘÁTÁ, KAPALNÁ, J.N., při teplotě 100 °C nebo vyšší a nižší než je její bod vzplanutí (včetně roztavených kovů, roztavených solí atd.), plněná při teplotě vyšší než 190 °C	3257	9	
LÁTKA ZAHŘÁTÁ, TUHÁ, J.N., při teplotě 240 °C nebo vyšší	3258	9	
LÁTKA ZNECITLIVĚNÁ, VÝBUŠNÁ, KAPALNÁ, J.N.	3379	3	
LÁTKA ZNECITLIVĚNÁ, VÝBUŠNÁ, TUHÁ, J.N.	3380	4.1	
LÁTKA ŽÍRAVÁ, ALKALICKÁ, KAPALNÁ, J.N.	1719	8	
LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ANORGANICKÁ, J.N.	3266	8	
LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ORGANICKÁ, J.N.	3267	8	
LÁTKA ŽÍRAVÁ, KAPALNÁ, HOŘLAVÁ, J.N.	2920	8	
LÁTKA ŽÍRAVÁ, KAPALNÁ, J.N.	1760	8	
LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ANORGANICKÁ, J.N.	3264	8	
LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ORGANICKÁ, J.N.	3265	8	
LÁTKA ŽÍRAVÁ, KAPALNÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	3093	8	
LÁTKA ŽÍRAVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.	3094	8	
LÁTKA ŽÍRAVÁ, KAPALNÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	3301	8	
LÁTKA ŽÍRAVÁ, KAPALNÁ, TOXICKÁ, J.N.	2922	8	
LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ANORGANICKÁ, J.N.	3262	8	
LÁTKA ŽÍRAVÁ, TUHÁ, ALKALICKÁ, ORGANICKÁ, J.N.	3263	8	
LÁTKA ŽÍRAVÁ, TUHÁ, HOŘLAVÁ, J.N.	2921	8	
LÁTKA ŽÍRAVÁ, TUHÁ, J.N.	1759	8	
LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ANORGANICKÁ, J.N.	3260	8	
LÁTKA ŽÍRAVÁ, TUHÁ, KYSELÁ, ORGANICKÁ, J.N.	3261	8	
LÁTKA ŽÍRAVÁ, TUHÁ, PODPORUJÍCÍ HOŘENÍ, J.N.	3084	8	
LÁTKA ŽÍRAVÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.	3096	8	
LÁTKA ŽÍRAVÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	3095	8	

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LÁTKA ŽÍRAVÁ, TUHÁ, TOXICKÁ, J.N.	2923	8	
LÁTKA, RADIOAKTIVNÍ - POVRCHOVĚ KONTAMINOVANÉ PŘEDMĚTY (SCO-I nebo SCO-II), jiné než štěpné nebo vyjmuté štěpné	2913	7	
LÁTKY BIOLOGICKÉ, KATEGORIE B	3373	6.2	
Látky magnetizované	2807	9	Není předmětem pro ADR
LÁTKY TUHÉ nebo směsi tuhých látek (jako přípravky a odpady), OBSAHUJÍCÍ HOŘLAVÉ KAPALNÉ LÁTKY, J.N., s bodem vzplanutí nejvýše 60 °C	3175	4.1	
LÁTKY TUHÉ, OBSAHUJÍCÍ TOXICKOU KAPALNOU LÁTKU, J.N.	3243	6.1	
LÁTKY TUHÉ, OBSAHUJÍCÍ ŽÍRAVOU KAPALNOU LÁTKU, J.N.	3244	8	
LÁTKY VÝBUŠNÉ, J.N.	0357	1	
LÁTKY VÝBUŠNÉ, J.N.	0358	1	
LÁTKY VÝBUŠNÉ, J.N.	0359	1	
LÁTKY VÝBUŠNÉ, J.N.	0473	1	
LÁTKY VÝBUŠNÉ, J.N.	0474	1	
LÁTKY VÝBUŠNÉ, J.N.	0475	1	
LÁTKY VÝBUŠNÉ, J.N.	0476	1	
LÁTKY VÝBUŠNÉ, J.N.	0477	1	
LÁTKY VÝBUŠNÉ, J.N.	0478	1	
LÁTKY VÝBUŠNÉ, J.N.	0479	1	
LÁTKY VÝBUŠNÉ, J.N.	0480	1	
LÁTKY VÝBUŠNÉ, J.N.	0481	1	
LÁTKY VÝBUŠNÉ, J.N.	0485	1	
LÁTKY VÝBUŠNÉ, VELMI NECITLIVÉ (EVI), J.N.	0482	1	
LÉČIVA, KAPALNÁ, HOŘLAVÁ, TOXICKÁ, J.N.	3248	3	
LÉČIVA, KAPALNÁ, TOXICKÁ, J.N.	1851	6.1	
LÉČIVA, TUHÁ, TOXICKÁ, J.N.	3249	6.1	
LEPIDLA s hořlavou kapalnou látkou	1133	3	
LEPIDLA s hořlavou kapalnou látkou (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	1133	3	
LEPIDLA s hořlavou kapalnou látkou (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	1133	3	
LEPIDLA s hořlavou kapalnou látkou (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	1133	3	
LEPIDLA s hořlavou kapalnou látkou (tenze par při 50 °C je vyšší než 110 kPa)	1133	3	
LEPIDLA s hořlavou kapalnou látkou (tenze par při 50 °C nepřevyšuje 110 kPa)	1133	3	
LITHIUM	1415	4.3	
LONDON PURPLE	1621	6.1	
MALEINANHYDRID	2215	8	
MALEINANHYDRID, ROZTAVENÝ	2215	8	
MALONONITRIL	2647	6.1	
MANEB nebo MANEB, PŘÍPRAVKY, s nejméně 60 % manebu	2210	4.2	
MANEB, STABILIZOVANÝ nebo MANEB, PŘÍPRAVKY, STABILIZOVANÉ proti samoohřevu	2968	4.3	
MANGANISTAN BARNATÝ	1448	5.1	
MANGANISTAN DRASELNÝ	1490	5.1	
MANGANISTAN SODNÝ	1503	5.1	
MANGANISTAN VÁPENATÝ	1456	5.1	

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MANGANISTAN ZINEČNATÝ	1515	5.1	
MANGANISTANY, ANORGANICKÉ, J.N.	1482	5.1	
MANGANISTANY, ANORGANICKÉ, J.N.	1482	5.1	
MANGANISTANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	3214	5.1	
MANNITHEXANITRÁT (NITROMANNIT), VLHČENÝ nejméně 40 % hm. vody nebo směsí alkoholu s vodou	0133	1	
1-METHOXY-2-PROPANOL	3092	3	
1-METHYLPYRIDIN	2399	3	
2-METHYL-1-BUTEN	2459	3	
2-METHYL-2-BUTEN	2460	3	
2-METHYL-2-HEPTANTHIOL	3023	6.1	
2-METHYL-5-ETHYLPYRIDIN	2300	6.1	
2-METHYLBUTANAL	3371	3	
2-METHYLFURAN	2301	3	
2-METHYLPENTAN-2-OL	2560	3	
3-METHYL-1-BUTEN	2561	3	
3-METHYLBUTAN-2-ON	2397	3	
4-METHOXY-4-METHYLPENTAN-2-ON	2293	3	
4-METHYLMORFOLIN (N-METHYLMORFOLIN)	2535	3	
5-METHYLHEXAN-2-ON	2302	3	
MĚD / ETHYLENDIAMIN, KOMPLEX, ROZTOK	1761	8	
MESITYLOXID	1229	3	
METALDEHYD	1332	4.1	
METAVANADIČNAN AMONNÝ	2859	6.1	
METAVANADIČNAN DRASELNÝ	2864	6.1	
METHAKRYLALDEHYD, STABILIZOVANÝ	2396	3	
METHAKRYLONITRIL, STABILIZOVANÝ	3079	6.1	
METHAN, HLUBOCE ZCHLAZENÝ, KAPALNÝ nebo PLYN ZEMNÍ, HLUBOCE ZCHLAZENÝ, KAPALNÝ, s vysokým obsahem methanu	1972	2	
METHAN, STLAČENÝ nebo PLYN ZEMNÍ, STLAČENÝ, s vysokým obsahem methanu	1971	2	
METHANOL	1230	3	
METHANSULFONYLCHLORID	3246	6.1	
METHANTHIOL (METHYLMERKAPTAN)	1064	2	
METHOXYMETHYLISOKYANÁT	2605	6.1	
METHYL-2-CHLORPROPIONÁT	2933	3	
METHYLACETÁT	1231	3	
METHYLACETYLEN A PROPADIEN, SMĚS, STABILIZOVANÁ (směs P1 nebo směs P2)	1060	2	
METHYLAKRYLÁT, STABILIZOVANÝ	1919	3	
METHYLAL	1234	3	
METHYLALLYLALKOHOL	2614	3	
METHYLALLYLCHLORID	2554	3	
METHYLAMIN, BEZVODÝ	1061	2	
METHYLAMIN, VODNÝ ROZTOK	1235	3	
METHYLAMYLACETÁT	1233	3	
METHYLÁT SODNÝ	1431	4.2	
METHYLÁT SODNÝ, ROZTOK v alkoholu	1289	3	
METHYLBROMACETÁT	2643	6.1	
METHYLBROMID A ETHYLENDIBROMID, SMĚS, KAPALNÁ	1647	6.1	
METHYLBUTYRÁT	1237	3	
METHYLCYKLOHEXAN	2296	3	
METHYLCYKLOHEXANOLY, hořlavé	2617	3	
METHYLCYKLOHEXANON	2297	3	
METHYLCYKLOPENTAN	2298	3	

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METHYLDICHLORACETÁT	2299	6.1	
METHYLDICHLORSILAN	1242	4.3	
METHYLFENYLDICHLORSILAN	2437	8	
METHYLFORMIÁT	1243	3	
METHYLHYDRAZIN	1244	6.1	
METHYLCHLORACETÁT	2295	6.1	
METHYLCHLORFORMIÁT	1238	6.1	
METHYLCHLORMETHYLETER	1239	6.1	
METHYLCHLORSILAN	2534	2	
METHYLISOBUTYLKARBINOL	2053	3	
METHYLISOBUTYLKETON	1245	3	
METHYLISOKYANÁT	2480	6.1	
METHYLISOPROPENYLKETON, STABILIZOVANÝ	1246	3	
METHYLISOTHIOKYANÁT	2477	6.1	
METHYLISOVALERÁT	2400	3	
METHYLJODID	2644	6.1	
METHYLMAGNESIUMBROMID V ETHYLETERU	1928	4.3	
METHYLMETHAKRYLÁT, MONOMERNÍ, STABILIZOVANÝ	1247	3	
METHYLNITRIT	2455	2	Přeprava zakázána
METHYLORTHOSILIKÁT	2606	6.1	
METHYLPENTADIEN	2461	3	
METHYLPROPIONÁT	1248	3	
METHYLPROPYLETER	2612	3	
METHYLPROPYLKETON	1249	3	
METHYLTETRAHYDROFURAN	2536	3	
METHYLTRICHLORACETÁT	2533	6.1	
METHYLTRICHLORSILAN	1250	3	
METHYLVINYLKETON, STABILIZOVANÝ	1251	6.1	
MINY, s trhací náplní	0136	1	
MINY, s trhací náplní	0137	1	
MINY, s trhací náplní	0138	1	
MINY, s trhací náplní	0294	1	
MONOCHLORID JÓDU, KAPALNÝ	3498	8	
MONOCHLORID JÓDU, TUHÝ	1792	8	
MORFOLIN	2054	8	
Motor spalovací nebo vozidlo poháněné hořlavým plynem nebo vozidlo poháněné hořlavou kapalinou nebo motor, palivové články poháněné hořlavým plynem nebo motor, palivové články poháněné hořlavou kapalinou nebo vozidlo, palivové články poháněné hořlavým plynem nebo vozidlo, palivové články poháněné hořlavou kapalinou	3166	9	Není předmětem pro ADR
MOŘSKÝ KRIL	3497	4.2	
MOUČKA RYBÍ (ODPAD RYBÍ), NESTABILIZOVANÁ (Ý)	1374	4.2	
Moučka rybí (odpad rybí), stabilizovaná (ý)	2216	9	Není předmětem pro ADR
MUNICE, CVIČNÁ	0362	1	
MUNICE, CVIČNÁ	0488	1	
MUNICE, DÝMOVÁ, S BÍLÝM FOSFOREM, s trhavou náložkou, výmetnou nebo hnací náplní	0245	1	
MUNICE, DÝMOVÁ, S BÍLÝM FOSFOREM, s trhavou náložkou, výmetnou nebo hnací náplní	0246	1	
MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	0015	1	

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MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	0016	1	
MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	0303	1	
MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně, obsahující žíravé látky	0015	1	
MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně, obsahující žíravé látky	0016	1	
MUNICE, DÝMOVÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně, obsahující žíravé látky	0303	1	
MUNICE, OSVĚTLOVACÍ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	0171	1	
MUNICE, OSVĚTLOVACÍ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	0254	1	
MUNICE, OSVĚTLOVACÍ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	0297	1	
MUNICE, SLZOTVORNÁ, NEVÝBUŠNÁ, bez redukováné trhací náplně nebo výmetné náplně, slepé	2017	6.1	
MUNICE, SLZOTVORNÁ, s trhavou náložkou, výmetnou nebo hnací náplní	0018	1	
MUNICE, SLZOTVORNÁ, s trhavou náložkou, výmetnou nebo hnací náplní	0019	1	
MUNICE, SLZOTVORNÁ, s trhavou náložkou, výmetnou nebo hnací náplní	0301	1	
MUNICE, TOXICKÁ, NEVÝBUŠNÁ, bez redukováné trhací náplně nebo výmetné náplně, slepé	2016	6.1	
MUNICE, TOXICKÁ, s trhavou náložkou, výmetnou nebo hnací náplní	0020	1	Přeprava zakázána
MUNICE, TOXICKÁ, s trhavou náložkou, výmetnou nebo hnací náplní	0021	1	Přeprava zakázána
MUNICE, ZÁPALNÁ, S BÍLÝM FOSFOREM s trhavou náložkou, výmetnou nebo hnací náplní	0244	1	
MUNICE, ZÁPALNÁ, S BÍLÝM FOSFOREM, s trhavou náložkou, výmetnou nebo hnací náplní	0243	1	
MUNICE, ZÁPALNÁ, s kapalinou nebo gelem, s trhavou náložkou, výmetnou nebo hnací náplní	0247	1	
MUNICE, ZÁPALNÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	0009	1	
MUNICE, ZÁPALNÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	0010	1	
MUNICE, ZÁPALNÁ, s nebo bez trhavé náložky, výmetné nebo hnací náplně	0300	1	
MUNICE, ZKUŠEBNÍ	0363	1	
N-(n-BUTYL)-IMIDAZOL	2690	6.1	
N,N-DIETHYLANILÍN	2432	6.1	
N,N-DIETHYLETHYLENDIAMIN	2685	8	
N,N-DIMETHYLANILÍN	2253	6.1	
N,N-DIMETHYLCYKLOHEXYLAMIN	2264	8	
N,N-DIMETHYLFORMAMID	2265	3	
1-NAFTYLAMIN (alfa-naftylamin)	2077	6.1	
2-NAFTYLAMIN (beta-naftylamin), ROZTOK	3411	6.1	
2-NAFTYLAMIN (beta-naftylamin), TUHÝ	1650	6.1	
NÁBOJE PRO ZBRANĚ S INERTNÍ STŘELOU nebo NÁBOJE, MALORÁŽOVÉ	0012	1	
NÁBOJE PRO ZBRANĚ, CVIČNÉ	0326	1	
NÁBOJE PRO ZBRANĚ, CVIČNÉ	0413	1	

Pojmenování a popis	UN číslo	Třída	Poznámka
NÁBOJE PRO ZBRANĚ, CVIČNÉ nebo NÁBOJE, MALORÁŽOVÉ, CVIČNÉ nebo NÁBOJE PRO NÁSTROJE, CVIČNÉ	0014	1	
NÁBOJE PRO ZBRANĚ, CVIČNÉ nebo NÁBOJE, MALORÁŽOVÉ, CVIČNÉ	0327	1	
NÁBOJE PRO ZBRANĚ, CVIČNÉ nebo NÁBOJE, MALORÁŽOVÉ, CVIČNÉ	0338	1	
NÁBOJE PRO ZBRANĚ, S INERTNÍ STŘELOU	0328	1	
NÁBOJE PRO ZBRANĚ, S INERTNÍ STŘELOU nebo NÁBOJE MALORÁŽOVÉ	0339	1	
NÁBOJE PRO ZBRANĚ, S INERTNÍ STŘELOU nebo NÁBOJE, MALORÁŽOVÉ	0417	1	
NÁBOJE PRO ZBRANĚ, s trhací náplní	0005	1	
NÁBOJE PRO ZBRANĚ, s trhací náplní	0006	1	
NÁBOJE PRO ZBRANĚ, s trhací náplní	0007	1	
NÁBOJE PRO ZBRANĚ, s trhací náplní	0321	1	
NÁBOJE PRO ZBRANĚ, s trhací náplní	0348	1	
NÁBOJE PRO ZBRANĚ, s trhací náplní	0412	1	
NÁBOJE, SIGNÁLNÍ	0054	1	
NÁBOJE, SIGNÁLNÍ	0312	1	
NÁBOJE, SIGNÁLNÍ	0405	1	
NÁBOJE, ZÁBLESKOVÉ	0049	1	
NÁBOJE, ZÁBLESKOVÉ	0050	1	
NÁBOJKY PRO ROPNÉ VRTY	0277	1	
NÁBOJKY PRO ROPNÉ VRTY	0278	1	
NÁBOJKY PRO TECHNICKÉ ÚČELY	0275	1	
NÁBOJKY PRO TECHNICKÉ ÚČELY	0276	1	
NÁBOJKY PRO TECHNICKÉ ÚČELY	0323	1	
NÁBOJKY PRO TECHNICKÉ ÚČELY	0381	1	
NÁBOJNICE, PRAZDNĚ, SE ZÁPALKOU	0055	1	
NÁBOJNICE, PRAZDNĚ, SE ZÁPALKOU	0379	1	
NÁBOJNICE, SPALITELNÉ, PRAZDNĚ, BEZ ZÁPALKY	0446	1	
NÁBOJNICE, SPALITELNÉ, PRAZDNĚ, BEZ ZÁPALKY	0447	1	
NÁDOBKY, MALÉ, OBSAHUJÍCÍ PLYN (KARTUŠE), bez odběrního ventilu, které nelze opětovně plnit	2037	2	
NÁDRŽ PALIVOVÁ PRO HYDRAULICKÉ AGREGÁTY LETADEL (obsahující směs bezvodého hydrazinu a methylhydrazinu) (Palivo M86)	3165	3	
NAFTA MOTOROVÁ, vyhovující normě EN 590:2004 nebo PALIVO PRO VZNĚTOVÉ MOTORY nebo OLEJ PLYNOVÝ nebo OLEJ TOPNÝ (LEHKÝ), s bodem vzplanutí, specifikovaným v normě EN 590:2004	1202	3	
NAFTALEN, ROZTAVENÝ	2304	4.1	
NAFTALEN, SUROVÝ nebo NAFTALEN, RAFINOVANÝ	1334	4.1	
NAFTENÁTY KOBALTNATÉ, PRÁŠEK	2001	4.1	
NAFTYLMOČOVINA	1652	6.1	
NAFTYLTHIOMOČOVINA	1651	6.1	
NÁLOŽE, DESTRUKČNÍ	0048	1	
NÁLOŽE, HLUBINNÉ	0056	1	
NÁLOŽE, KUMULATIVNÍ, bez rozbušky	0059	1	
NÁLOŽE, KUMULATIVNÍ, bez rozbušky	0439	1	
NÁLOŽE, KUMULATIVNÍ, bez rozbušky	0440	1	
NÁLOŽE, KUMULATIVNÍ, bez rozbušky	0441	1	
NÁLOŽE, KUMULATIVNÍ, OHEBNÉ, LINEÁRNÍ	0237	1	
NÁLOŽE, KUMULATIVNÍ, OHEBNÉ, LINEÁRNÍ	0288	1	

Pojmenování a popis	UN číslo	Třída	Poznámka
NÁLOŽE, KUMULATIVNÍ, PERFORAČNÍ, pro ropné vrty, bez rozbušky	0124	1	
NÁLOŽE, KUMULATIVNÍ, PERFORAČNÍ, pro ropné vrty, bez rozbušky	0494	1	
NÁLOŽE, POČINOVÉ, bez rozbušky	0042	1	
NÁLOŽE, POČINOVÉ, bez rozbušky	0283	1	
NÁLOŽE, POČINOVÉ, S ROZBUŠKOU	0225	1	
NÁLOŽE, POČINOVÉ, S ROZBUŠKOU	0268	1	
NÁLOŽE, PŘÍDAVNÉ, VÝBUŠNÉ	0060	1	
NÁLOŽE, TRHACÍ, S PLASTICKÝM POJIVEM	0457	1	
NÁLOŽE, TRHACÍ, S PLASTICKÝM POJIVEM	0458	1	
NÁLOŽE, TRHACÍ, S PLASTICKÝM POJIVEM	0459	1	
NÁLOŽE, TRHACÍ, S PLASTICKÝM POJIVEM	0460	1	
NÁLOŽE, VÝBUŠNÉ, PRŮMYSLOVÉ, bez rozbušky	0442	1	
NÁLOŽE, VÝBUŠNÉ, PRŮMYSLOVÉ, bez rozbušky	0443	1	
NÁLOŽE, VÝBUŠNÉ, PRŮMYSLOVÉ, bez rozbušky	0444	1	
NÁLOŽE, VÝBUŠNÉ, PRŮMYSLOVÉ, bez rozbušky	0445	1	
N-AMINOETHYLPIPERAZIN	2815	8	
n-AMYLMETHYLKETON	1110	3	
NÁPLNĚ HASICÍCH PŘÍSTROJŮ, žiravá kapalná látka	1774	8	
NÁPLNĚ HNACÍ	0271	1	
NÁPLNĚ HNACÍ	0272	1	
NÁPLNĚ HNACÍ	0415	1	
NÁPLNĚ HNACÍ, PRO DĚLA	0242	1	
NÁPLNĚ HNACÍ, PRO DĚLA	0279	1	
NÁPLNĚ HNACÍ, PRO DĚLA	0414	1	
NAPOJE ALKOHOLICKÉ, s obsahem více než 70 % obj. alkoholu	3065	3	
NAPOJE ALKOHOLICKÉ, s více než 24 % obj., ale nejvýše 70 % obj. alkoholu	3065	3	
n-BUTYLAMIN	1125	3	
N-BUTYLANILÍN	2738	6.1	
n-BUTYLFORMIÁT	1128	3	
n-BUTYLCHLORFORMIÁT (n-butylchlorcarbonát)	2743	6.1	
n-BUTYLISOKYANÁT	2485	6.1	
n-BUTYLMETHAKRYLÁT, STABILIZOVANÝ	2227	3	
n-DEKAN	2247	3	
Nebezpečné věci ve strojích nebo nebezpečné věci v přístrojích	3363	9	Není předmětem pro ADR (viz 1.1.3.1b)
NEON, HLUBOCE ZCHLAZENÝ, KAPALNÝ	1913	2	
NEON, STLAČENÝ	1065	2	
N-ETHYLANILÍN	2272	6.1	
N-ETHYLBENZYLTOLOUDIN, KAPALNÝ	2753	6.1	
N-ETHYLBENZYLTOLOUDIN, TUHÝ	3460	6.1	
N-ETHYL-N-BENZYLANILÍN	2274	6.1	
N-ETHYLTLOUDINY	2754	6.1	
n-HEPTALDEHYD	3056	3	
n-HEPTEN	2278	3	
3-NITRO-4-CHLORBENZOTRIFLUORID	2307	6.1	
4-NITROFENYHYDRAZIN, s nejméně 30 % hm. vody	3376	4.1	
5-NITROBENZOTRIAZOL	0385	1	
NIKOTIN	1654	6.1	
NITRID LITHNÝ	2806	4.3	
NITRILY, HOŘLAVÉ, TOXICKÉ, J.N.	3273	3	
NITRILY, TOXICKÉ, HOŘLAVÉ, J.N.	3275	6.1	
NITRILY, KAPALNÉ, TOXICKÉ, J.N.	3276	6.1	

Pojmenování a popis	UN číslo	Třída	Poznámka
NITRILY, TUHÉ, TOXICKÉ, J.N.	3439	6.1	
NITROANILÍNY (o-, m-, p-)	1661	6.1	
NITROANISOLY, KAPALNÉ	2730	6.1	
NITROANISOLY, TUHÉ	3458	6.1	
NITROBENZEN	1662	6.1	
NITROBENZOTRIFLUORIDY, KAPALNÉ	2306	6.1	
NITROBENZOTRIFLUORIDY, TUHÉ	3431	6.1	
NITROBROMBENZENY, KAPALNÉ	2732	6.1	
NITROBROMBENZENY, TUHÉ	3459	6.1	
NITROCELULOZA, neupravená nebo plastifikovaná méně než 18 % hm. plastifikátoru	0341	1	
NITROCELULOZA, PLASTIFIKOVANÁ nejméně 18 % hm. plastifikátoru	0343	1	
NITROCELULOZA, suchá nebo vlhčená méně než 25 % hm. vody (nebo alkoholu)	0340	1	
NITROCELULOZA, VLNĚNÁ nejméně 25 % hm. alkoholu	0342	1	
NITROCELULÓZA S ALKOHOLEM, s nejméně 25 % hm. alkoholu a nejvýše 12,6 % hm. dusíku v sušině	2556	4.1	
NITROCELULÓZA S VODOU, s nejméně 25 % hm. vody	2555	4.1	
NITROCELULÓZA, HOŘLAVÝ ROZTOK, obsahující nejvíce 12,6 % hm. dusíku v sušině a nejvíce 55 % nitrocelulózy	2059	3	
NITROCELULÓZA, HOŘLAVÝ ROZTOK, obsahující nejvíce 12,6 % hm. dusíku v sušině a nejvíce 55 % nitrocelulózy (tenze par při 50 °C nepřesahuje 110 kPa)	2059	3	
NITROCELULÓZA, s nejvýše 12,6 % hm. dusíku v sušině, SMĚS S nebo BEZ PLASTIFIKAČNÍHO PROSTŘEDKU, S nebo BEZ PIGMENTU	2557	4.1	
NITROETHAN	2842	3	
NITROFENOLY (o-, m-, p-)	1663	6.1	
NITROGLYCERIN, ROZTOK V ALKOHOLU, s nejvýše 1 % nitroglycerinu	1204	3	
NITROGLYCERIN, ROZTOK V ALKOHOLU, s více než 1 %, ale nejvíce 10 % nitroglycerinu	0144	1	
NITROGLYCERIN, ROZTOK V ALKOHOLU, s více než 1 %, ale nejvýše 5 % nitroglycerinu	3064	3	
NITROGLYCERIN, SMĚS, ZNECITLIVĚNÁ, KAPALNÁ, HOŘLAVÁ, J.N., s nejvýše 30 % hm. nitroglycerinu	3343	3	
NITROGLYCERIN, SMĚS, ZNECITLIVĚNÁ, KAPALNÁ, J.N., s nejvýše 30 % hm. nitroglycerinu	3357	3	
NITROGLYCERIN, SMĚS, ZNECITLIVĚNÁ, TUHÁ, J.N., s více než 2 % hm., ale nejvýše 10 % hm. nitroglycerinu	3319	4.1	
NITROGLYCERIN, ZNECITLIVĚNÝ nejméně 40 % hm. netěkavého, ve vodě nerozpustného flegmatizačního prostředku	0143	1	
NITROGUANIDIN (PIKRIT), suchý nebo vlhčený méně než 20 % hm. vody	0282	1	
NITROGUANIDIN (PIKRIT), VLNĚNÝ nejméně 20 % hm. vody	1336	4.1	
NITROKRESOLY, KAPALNÉ	3434	6.1	
NITROKRESOLY, TUHÉ	2446	6.1	
NITROMETHAN	1261	3	
NITROMOČOVINA	0147	1	
NITROMOČOVINA, suchá nebo vlhčená méně než 20 % hm. vody	0220	1	
NITRONAFTALEN	2538	4.1	
NITROPROPANY	2608	3	
NITROŠKROB, suchý nebo vlhčený méně než 20 % hm. vody	0146	1	
NITROŠKROB, VLNĚNÝ nejméně 20 % hm. vody	1337	4.1	
NITROTOLUENY, KAPALNÉ	1664	6.1	

Pojmenování a popis	UN číslo	Třída	Poznámka
NITROTOLUENY, TUHÉ	3446	6.1	
NITROTOLUIDINY (MONO)	2660	6.1	
NITROXYLENY, KAPALNÉ	1665	6.1	
NITROXYLENY, TUHÉ	3447	6.1	
N-METHYLANILÍN	2294	6.1	
N-METHYLBUTYLAMIN	2945	3	
NONANY	1920	3	
NONYLTRICHLORSILAN	1799	8	
n-PROPANOL (n-PROPYLALKOHOL)	1274	3	
n-PROPYLACETÁT	1276	3	
n-PROPYLBENZEN	2364	3	
n-PROPYLCHLORFORMIÁT (n-propylchlorkarbonát)	2740	6.1	
n-PROPYLSOKYANÁT	2482	6.1	
n-PROPYLNITRÁT	1865	3	
NUKLEÁT RTUŤNATÝ	1639	6.1	
NÝTY, VÝBUŠNÉ	0174	1	
OCTAN OLOVNATÝ	1616	6.1	
OCTAN RTUŤNATÝ	1629	6.1	
o-DICHLORBENZEN (1,2-dichlorbenzen)	1591	6.1	
ODPAD KLINICKÝ NESPECIFIKOVANÝ, J.N. nebo ODPAD (BIO)MEDICÍNSKÝ, J.N. nebo ODPAD MEDICÍNSKÝ REGULOVANÝ, J.N.	3291	6.2	
ODPAD KLINICKÝ NESPECIFIKOVANÝ, J.N. nebo ODPAD (BIO)MEDICÍNSKÝ, J.N. nebo ODPAD MEDICÍNSKÝ REGULOVANÝ, J.N., ve zmraženém kapalném dusíku	3291	6.2	
ODPADY BAVLNĚNÉ, OBSAHUJÍCÍ OLEJ	1364	4.2	
Odpady textilní, vlhké	1857	4.2	Není předmětem pro ADR
OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserií vozidel nebo vnitřní nátěry sudů)	1139	3	
OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserií vozidel nebo vnitřní nátěry sudů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	1139	3	
OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserií vozidel nebo vnitřní nátěry sudů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	1139	3	
OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserií vozidel nebo vnitřní nátěry sudů) (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	1139	3	
OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserií vozidel nebo vnitřní nátěry sudů) (tenze par při 50 °C je vyšší než 110 kPa)	1139	3	
OCHRANNÝ NÁTĚR, ROZTOK (včetně povrchových úprav nebo nátěrů používaných k průmyslovým nebo jiným účelům, jako jsou základní nátěry karoserií vozidel nebo vnitřní nátěry sudů) (tenze par při 50 °C nepřesahuje 110 kPa)	1139	3	
OKTADECYLTRICHLORSILAN	1800	8	

Pojmenování a popis	UN číslo	Třída	Poznámka
OKTADIENY	2309	3	
OKTAFLUOR-2-BUTEN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 1318)	2422	2	
OKTAFLUORCYKLOBUTAN (PLYN JAKO CHLADICÍ PROSTŘEDEK RC 318)	1976	2	
OKTAFLUORPROPAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 218)	2424	2	
OKTANY	1262	3	
OKTOLIT (OKTOL), suchý nebo vlhčený méně než 15 % hm. vody	0266	1	
OKTONAL	0496	1	
OKTYLALDEHYDY	1191	3	
OKTYLTRICHLORSILAN	1801	8	
OLEÁT RTUŤNATÝ	1640	6.1	
OLEJ BOROÝÝ	1272	3	
OLEJ BRIDLICNÝ	1288	3	
OLEJ KAFROÝÝ	1130	3	
OLEJ PRYSKYŘIČNÝ	1286	3	
OLEJ PRYSKYŘIČNÝ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	1286	3	
OLEJ PRYSKYŘIČNÝ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	1286	3	
OLEJ PRYSKYŘIČNÝ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	1286	3	
OLEJ PRYSKYŘIČNÝ (tenze par při 50 °C je vyšší než 110 kPa)	1286	3	
OLEJ PRYSKYŘIČNÝ (tenze par při 50 °C nepřesahuje 110 kPa)	1286	3	
OLEJE DEHTOVÉ, HOŘLAVÉ	1136	3	
ORTHOKŘEMIČITAN SODNÝ	3253	8	
ORTHOVANADIČNAN SODNOAMONNÝ	2863	6.1	
OXID ARSENIČNÝ	1559	6.1	
OXID ARSENITÝ	1561	6.1	
OXID BARNATÝ	1884	6.1	
OXID DRASELNÝ	2033	8	
OXID DUSIČITÝ	1067	2	
OXID DUSITÝ	2421	2	Přeprava zakázána
OXID DUSNATÝ A OXID DUSIČITÝ, SMĚS	1975	2	
OXID DUSNATÝ, STLAČENÝ	1660	2	
OXID DUSNÝ (RAJSKÝ PLYN)	1070	2	
OXID DUSNÝ, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2201	2	
OXID FOSFOREČNÝ	1807	8	
OXID FOSFORITÝ	2578	8	
OXID CHROMOVÝ, BEZVODÝ	1463	5.1	
OXID OLOVIČITÝ	1872	5.1	
OXID OSMIČELÝ	2471	6.1	
OXID RTUŤNATÝ	1641	6.1	
OXID SÍROVÝ, STABILIZOVANÝ	1829	8	
OXID SÍŘIČITÝ	1079	2	
OXID SODNÝ	1825	8	
OXID UHELNATÝ, STLAČENÝ	1016	2	
OXID UHLIČITÝ	1013	2	
OXID UHLIČITÝ, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2187	2	

Pojmenování a popis	UN číslo	Třída	Poznámka
Oxid uhličitý, tuhý (suchý led)	1845	9	Není předmětem pro ADR- při použití jako chladicí médium, viz 5.5.3
OXID VANADIČNÝ, neroztavený	2862	6.1	
Oxid vápenatý	1910	8	Není předmětem pro ADR
OXID ŽELEZNATÝ, POUŽITÝ nebo OXID ŽELEZNATÝ, HOUBA, POUŽITÝ, z čištění koksárenského plynu	1376	4.2	
OXID-DIKYANID DIRTUŇNATÝ, FLEGMATIZOVANÝ	1642	6.1	
OXYNITROTRIAZOL (ONTA)	0490	1	
PALIVO PRO TRYSKOVÉ MOTORY	1863	3	
PALIVO PRO TRYSKOVÉ MOTORY (tenze par při 50 °C je vyšší než 110 kPa)	1863	3	
PALIVO PRO TRYSKOVÉ MOTORY (tenze par při 50 °C nepřesahuje 110 kPa)	1863	3	
PALIVO PRO VZNĚTOVÉ MOTORY nebo OLEJ PLYNOVÝ nebo OLEJ TOPNÝ (LEHKÝ), s bodem vzplanutí nepřesahujícím 60 °C	1202	3	
PALIVO PRO VZNĚTOVÉ MOTORY nebo OLEJ PLYNOVÝ nebo OLEJ TOPNÝ (LEHKÝ), s bodem vzplanutí více než 60 °C ale méně než 100 °C	1202	3	
PAPÍR, OŠETŘENÝ NENASYCENÝMI OLEJI, neúplně vysušený (včetně uhlového papíru)	1379	4.2	
PARAFORMALDEHYD	2213	4.1	
PARALDEHYD	1264	3	
1-PENTEN (n-AMYLEN)	1108	3	
1-PENTOL	2705	8	
2,4-PENTADION (PENTA-2,4-DION)	2310	3	
PENTABORAN	1380	4.2	
PENTAERYTHRITETRANITRÁT (PENTAERYTHRITOLTETRANITRÁT; PENTAERYTHRIT- TETRANITRÁT; PENTAERYTHRITOL-TETRANITRÁT; PETN) SMĚS, ZNECITLIVĚNÁ, TUHÁ, J.N., s více než 10 % hm., ale nejvýše 20 % hm. PETN	3344	4.1	
PENTAERYTHRITETRANITRÁT (PENTAERYTHRITOLTETRANITRÁT; PETN), s nejméně 7 % hm. vosku	0411	1	
PENTAERYTHRITETRANITRÁT (PENTAERYTHRITOLTETRANITRÁT; PETN), VLHČENÝ nejméně 25 % hm. vody, nebo ZNECITLIVĚNÝ nejméně 15 % hm. flegmatizačního prostředku	0150	1	
PENTAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 125)	3220	2	
PENTACHLORETHAN	1669	6.1	
PENTACHLORFENOL	3155	6.1	
PENTACHLORFENOLÁT SODNÝ	2567	6.1	
PENTAKARBONYL ŽELEZA	1994	6.1	
PENTAMETHYLHEPTAN	2286	3	
PENTANOLY	1105	3	
PENTANY, kapalné	1265	3	
PENTOLIT, suchý nebo vlhčený méně než 15 % hm. vody	0151	1	
PERBORITAN SODNÝ, BEZVODÝ	3247	5.1	

Pojmenování a popis	UN číslo	Třída	Poznámka
PERBORITAN SODNÝ, MONOHYDRÁT	3377	5.1	
PERFLUORETHYLVINYLETHER	3154	2	
PERFLUORMETHYLVINYLETHER	3153	2	
PERCHLORMETHYLMERKAPTAN	1670	6.1	
PERCHLORYLFLUORID	3083	2	
PEROXID BARYA	1449	5.1	
PEROXID DRASELNÝ	1491	5.1	
PEROXID HOŘEČNATÝ	1476	5.1	
PEROXID LITHNÝ	1472	5.1	
PEROXID SODNÝ	1504	5.1	
PEROXID STRONTNATÝ	1509	5.1	
PEROXID VÁPENATÝ	1457	5.1	
PEROXID VODÍKU A KYSELINA PEROCTOVÁ, SMĚS, s kyselinou (kyselinami), vodou a nejvýše 5 % kyseliny peroctové, STABILIZOVANÁ	3149	5.1	
PEROXID VODÍKU, VODNÝ ROZTOK nejméně 8 %, ale méně než 20 % peroxidu vodíku (stabilizovaný podle potřeby)	2984	5.1	
PEROXID VODÍKU, VODNÝ ROZTOK s nejméně 20 %, ale nejvýše 60 % peroxidu vodíku (stabilizovaný podle potřeby)	2014	5.1	
PEROXID VODÍKU, VODNÝ ROZTOK, STABILIZOVANÝ s více než 60 %, ale nejvýše 70 % peroxidu vodíku	2015	5.1	
PEROXID VODÍKU, VODNÝ ROZTOK, STABILIZOVANÝ s více než 70% peroxidu vodíku	2015	5.1	
PEROXID ZINEČNATÝ	1516	5.1	
PEROXID, ORGANICKÝ, TYP B, KAPALNÝ	3101	5.2	
PEROXID, ORGANICKÝ, TYP B, KAPALNÝ, S ŘÍZENÍM TEPLoty	3111	5.2	
PEROXID, ORGANICKÝ, TYP B, TUHÝ	3102	5.2	
PEROXID, ORGANICKÝ, TYP B, TUHÝ, S ŘÍZENÍM TEPLoty	3112	5.2	
PEROXID, ORGANICKÝ, TYP C, KAPALNÝ	3103	5.2	
PEROXID, ORGANICKÝ, TYP C, KAPALNÝ, S ŘÍZENÍM TEPLoty	3113	5.2	
PEROXID, ORGANICKÝ, TYP C, TUHÝ	3104	5.2	
PEROXID, ORGANICKÝ, TYP C, TUHÝ, S ŘÍZENÍM TEPLoty	3114	5.2	
PEROXID, ORGANICKÝ, TYP D, KAPALNÝ	3105	5.2	
PEROXID, ORGANICKÝ, TYP D, KAPALNÝ, S ŘÍZENÍM TEPLoty	3115	5.2	
PEROXID, ORGANICKÝ, TYP D, TUHÝ	3106	5.2	
PEROXID, ORGANICKÝ, TYP D, TUHÝ, S ŘÍZENÍM TEPLoty	3116	5.2	
PEROXID, ORGANICKÝ, TYP E, KAPALNÝ	3107	5.2	
PEROXID, ORGANICKÝ, TYP E, KAPALNÝ, S ŘÍZENÍM TEPLoty	3117	5.2	
PEROXID, ORGANICKÝ, TYP E, TUHÝ	3108	5.2	
PEROXID, ORGANICKÝ, TYP E, TUHÝ, S ŘÍZENÍM TEPLoty	3118	5.2	
PEROXID, ORGANICKÝ, TYP F, KAPALNÝ	3109	5.2	
PEROXID, ORGANICKÝ, TYP F, KAPALNÝ, S ŘÍZENÍM TEPLoty	3119	5.2	
PEROXID, ORGANICKÝ, TYP F, TUHÝ	3110	5.2	
PEROXID, ORGANICKÝ, TYP F, TUHÝ, S ŘÍZENÍM TEPLoty	3120	5.2	
PEROXIDY, ANORGANICKÉ, J.N.	1483	5.1	
PERSÍRAN AMONNÝ	1444	5.1	
PERSÍRAN DRASELNÝ	1492	5.1	

Pojmenování a popis	UN číslo	Třída	Poznámka
PERSIRAN SODNÝ	1505	5.1	
PERSIRANY, ANORGANICKÉ, J.N.	3215	5.1	
PERSIRANY, ANORGANICKÉ, VODNÝ ROZTOK, J.N.	3216	5.1	
PESTICID - DERIVÁT KUMARINU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3024	3	
PESTICID - DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ	3026	6.1	
PESTICID - DERIVÁT KUMARINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	3025	6.1	
PESTICID - DERIVÁT KUMARINU, TUHÝ, TOXICKÝ	3027	6.1	
PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3346	3	
PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ	3348	6.1	
PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	3347	6.1	
PESTICID - DERIVÁT KYSELINY FENOXYOCTOVÉ, TUHÝ, TOXICKÝ	3345	6.1	
PESTICID - FOSFID HLINÍKU	3048	6.1	
PESTICID - KARBAMÁT, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	2758	3	
PESTICID - KARBAMÁT, KAPALNÝ, TOXICKÝ	2992	6.1	
PESTICID - KARBAMÁT, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	2991	6.1	
PESTICID - KARBAMÁT, TUHÝ, TOXICKÝ	2757	6.1	
PESTICID - ORGANICKÁ SLOUČENINA CINU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	2787	3	
PESTICID - ORGANICKÁ SLOUČENINA CINU, KAPALNÝ, TOXICKÝ	3020	6.1	
PESTICID - ORGANICKÁ SLOUČENINA CINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	3019	6.1	
PESTICID - ORGANICKÁ SLOUČENINA CINU, TUHÝ, TOXICKÝ	2786	6.1	
PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	2784	3	
PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ	3018	6.1	
PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	3017	6.1	
PESTICID - ORGANICKÁ SLOUČENINA FOSFORU, TUHÝ, TOXICKÝ	2783	6.1	
PESTICID - ORGANICKÁ SLOUČENINA CHLORU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	2762	3	
PESTICID - ORGANICKÁ SLOUČENINA CHLÓRU, KAPALNÝ, TOXICKÝ	2996	6.1	
PESTICID - ORGANICKÁ SLOUČENINA CHLÓRU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	2995	6.1	
PESTICID - ORGANICKÁ SLOUČENINA CHLORU, TUHÝ, TOXICKÝ	2761	6.1	
PESTICID - PYRETHROID, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	3350	3	
PESTICID - PYRETHROID, KAPALNÝ, TOXICKÝ	3352	6.1	

Pojmenování a popis	UN číslo	Třída	Poznámka
PESTICID - PYRETHROID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	3351	6.1	
PESTICID - PYRETHROID, TUHÝ, TOXICKÝ	3349	6.1	
PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	2780	3	
PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ	3014	6.1	
PESTICID - SUBSTITUOVANÝ NITROFENOL, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	3013	6.1	
PESTICID - SUBSTITUOVANÝ NITROFENOL, TUHÝ, TOXICKÝ	2779	6.1	
PESTICID NA BÁZI ARSENU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	2760	3	
PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ	2994	6.1	
PESTICID NA BÁZI ARSENU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	2993	6.1	
PESTICID NA BÁZI ARSENU, TUHÝ, TOXICKÝ	2759	6.1	
PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	2782	3	
PESTICID NA BÁZI BIPYRIDYLU, TUHÝ, TOXICKÝ	2781	6.1	
PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, TOXICKÝ	3016	6.1	
PESTICID NA BÁZI BIPYRIDYLU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	3015	6.1	
PESTICID NA BÁZI MĚDI, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	2776	3	
PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ	3010	6.1	
PESTICID NA BÁZI MĚDI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	3009	6.1	
PESTICID NA BÁZI MĚDI, TUHÝ, TOXICKÝ	2775	6.1	
PESTICID NA BÁZI RTUTI, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	2778	3	
PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ	3012	6.1	
PESTICID NA BÁZI RTUTI, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	3011	6.1	
PESTICID NA BÁZI RTUTI, TUHÝ, TOXICKÝ	2777	6.1	
PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	2772	3	
PESTICID NA BÁZI THIOKARBAMÁTU, TUHÝ, TOXICKÝ	2771	6.1	
PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, TOXICKÝ	3006	6.1	
PESTICID NA BÁZI THIOKARBAMÁTU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	3005	6.1	
PESTICID NA BÁZI TRIAZINU, KAPALNÝ, TOXICKÝ	2998	6.1	
PESTICID NA BÁZI TRIAZINU, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, s bodem vzplanutí 23 °C a vyšším	2997	6.1	
PESTICID NA BÁZI TRIAZINU, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, s bodem vzplanutí nižším než 23 °C	2764	3	
PESTICID NA BÁZI TRIAZINU, TUHÝ, TOXICKÝ	2763	6.1	
PESTICID, KAPALNÝ, HOŘLAVÝ, TOXICKÝ, J.N., s bodem vzplanutí nižším než 23 °C	3021	3	
PESTICID, KAPALNÝ, TOXICKÝ, HOŘLAVÝ, J.N., s bodem vzplanutí 23 °C a vyšším	2903	6.1	
PESTICID, KAPALNÝ, TOXICKÝ, J.N.	2902	6.1	
PESTICID, TUHÝ, TOXICKÝ, J.N.	2588	6.1	
PETROLEJ	1223	3	
PIGMENTY SCHOPNÉ SAMOOHŘEVU, ORGANICKÉ	3313	4.2	

Pojmenování a popis	UN číslo	Třída	Poznámka
PIKOLINY	2313	3	
PIKRAMÁT SODNÝ, VLHČENÝ nejméně 20 % hm. vody	1349	4.1	
PIKRAMÁT ZIRKONIČITÝ, VLHČENÝ nejméně 20 % hm. vody	1517	4.1	
PIKRAMÁT SODNÝ, suchý nebo vlhčený méně než 20 % hm. vody	0235	1	
PIKRAMÁT ZIRKONIČITÝ, suchý nebo vlhčený méně než 20 % hm. vody	0236	1	
PIKRÁT STRÍBRNÝ, VLHČENÝ nejméně 30 % hm. vody	1347	4.1	
PIKRÁT AMONNÝ, suchý nebo vlhčený méně než 10 % hm. vody	0004	1	
PIKRÁT AMONNÝ, VLHČENÝ nejméně 10 % hm. vody	1310	4.1	
PIPERAZIN	2579	8	
PIPERIDIN	2401	8	
PLASTY NA BÁZI NITROCELULÓZY, SCHOPNÉ SAMOOHŘEVU, J.N.	2006	4.2	
PLASTY, SMĚS LISOVACÍ, ve formě těsta, desek nebo tyčí, uvolňující hořlavé páry	3314	9	
PLYN HLUBOCE ZCHLAZENÝ, KAPALNÝ, HOŘLAVÝ, J.N.	3312	2	
PLYN HLUBOCE ZCHLAZENÝ, KAPALNÝ, J.N.	3158	2	
PLYN HLUBOCE ZCHLAZENÝ, KAPALNÝ, PODPORUJÍCÍ HOŘENÍ, J.N.	3311	2	
PLYN JAKO CHLADICÍ PROSTŘEDEK R 404A (pentafluorethan, 1,1,1-trifluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 44 % pentafluorethanu a 52 % 1,1,1-trifluorethanu)	3337	2	
PLYN JAKO CHLADICÍ PROSTŘEDEK R 407A (difluormethan, pentafluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 20 % difluormethanu a 40 % pentafluorethanu)	3338	2	
PLYN JAKO CHLADICÍ PROSTŘEDEK R 407B (difluormethan, pentafluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 10 % difluormethanu a 70 % pentafluorethanu)	3339	2	
PLYN JAKO CHLADICÍ PROSTŘEDEK R 407C (difluormethan, pentafluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 23 % difluormethanu a 25 % pentafluorethanu)	3340	2	
PLYN JAKO CHLADICÍ PROSTŘEDEK, J.N. (směs F1, směs F2 nebo směs F3)	1078	2	
PLYN ROPNÝ, STLAČENÝ	1071	2	
PLYN STLAČENÝ, HOŘLAVÝ, J.N.	1954	2	
PLYN STLAČENÝ, J.N.	1956	2	
PLYN STLAČENÝ, PODPORUJÍCÍ HOŘENÍ, J.N.	3156	2	
PLYN STLAČENÝ, TOXICKÝ, HOŘLAVÝ, J.N.	1953	2	
PLYN STLAČENÝ, TOXICKÝ, HOŘLAVÝ, ŽÍRAVÝ, J.N.	3305	2	
PLYN STLAČENÝ, TOXICKÝ, J.N.	1955	2	
PLYN STLAČENÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, J.N.	3303	2	
PLYN STLAČENÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, ŽÍRAVÝ, J.N.	3306	2	
PLYN STLAČENÝ, TOXICKÝ, ŽÍRAVÝ, J.N.	3304	2	
PLYN ZKAPALNĚNÝ, HOŘLAVÝ, J.N.	3161	2	
PLYN ZKAPALNĚNÝ, J.N.	3163	2	
PLYN ZKAPALNĚNÝ, PODPORUJÍCÍ HOŘENÍ, J.N.	3157	2	
PLYN ZKAPALNĚNÝ, TOXICKÝ, HOŘLAVÝ, J.N.	3160	2	
PLYN ZKAPALNĚNÝ, TOXICKÝ, HOŘLAVÝ, ŽÍRAVÝ, J.N.	3309	2	
PLYN ZKAPALNĚNÝ, TOXICKÝ, J.N.	3162	2	
PLYN ZKAPALNĚNÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, J.N.	3307	2	
PLYN ZKAPALNĚNÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, ŽÍRAVÝ, J.N.	3310	2	
PLYN ZKAPALNĚNÝ, TOXICKÝ, ŽÍRAVÝ, J.N.	3308	2	

Pojmenování a popis	UN číslo	Třída	Poznámka
PLYNOVÉ GENERÁTORY AIRBAGŮ nebo MODULY AIRBAGŮ nebo PŘEDPÍNAČE BEZPEČNOSTNÍCH PÁSŮ	0503	1	
PLYNOVÉ GENERÁTORY AIRBAGŮ nebo MODULY AIRBAGŮ nebo PŘEDPÍNAČE BEZPEČNOSTNÍCH PÁSŮ	3268	9	
PLYNY ROPNÉ, ZKAPALNĚNÉ	1075	2	
PLYNY ZKAPALNĚNÉ, nehořlavé, překryté dusíkem, oxidem uhličitým nebo vzduchem	1058	2	
p-NITROSODIMETHYLANILÍN	1369	4.2	
PODPALOVAČ, TUHÝ, s hořlavou kapalnou látkou	2623	4.1	
POHONNÁ HMOTA, KAPALNÁ	0495	1	
POHONNÁ HMOTA, KAPALNÁ	0497	1	
POHONNÁ HMOTA, TUHÁ	0498	1	
POHONNÁ HMOTA, TUHÁ	0499	1	
POHONNÁ HMOTA, TUHÁ	0501	1	
POHONNÉ HMOTY, SMĚSI PROTI KLEPÁNÍ MOTORU, HOŘLAVÉ	3483	6.1	
POLYSULFID AMONNÝ, ROZTOK	2818	8	
POLYVANADIČNAN AMONNÝ	2861	6.1	
POPEL ZINKOVÝ	1435	4.3	
1,2-PROPYLENDIAMIN	2258	8	
PRACH, BEZDÝMNÝ	0160	1	
PRACH, BEZDÝMNÝ	0161	1	
PRACH, BEZDÝMNÝ	0509	1	
PRACH ČERNÝ, LISOVANÝ nebo PRACH ČERNÝ, V PELETÁCH	0028	1	
PRACH ČERNÝ, zrnitý nebo moučkový	0027	1	
PRACHOVINA SUROVÁ, VLNĚNÁ nejméně 17 % hm. alkoholu	0433	1	
PRACHOVINA SUROVÁ, VLNĚNÁ nejméně 25 % hm. vody	0159	1	
PRÁŠEK KOVOVÝ, HOŘLAVÝ, J.N.	3089	4.1	
PRÁŠEK KOVOVÝ, SCHOPNÝ SAMOOHŘEVU, J.N.	3189	4.2	
PRÁZDNÉ BATERIOVÉ VOZIDLO - nevyčištěné			Viz. 4.3.2.4, 5.1.3 a 5.4.1.1.6
PRÁZDNÁ IBC - nevyčištěná			Viz. 4.1.1.11, 5.1.3 a 5.4.1.1.6
PRÁZDNÝ VELKÝ OBAL - nevyčištěný			Viz. 4.1.1.11, 5.1.3 a 5.4.1.1.6
PRÁZDNÝ MEGC - nevyčištěný			Viz. 4.3.2.4, 5.1.3 a 5.4.1.1.6
PRÁZDNÝ OBAL - nevyčištěný			Viz. 4.1.1.11, 5.1.3 a 5.4.1.1.6
PRÁZDNÁ NÁDOBA - nevyčištěná			Viz. 5.1.3 a 5.4.1.1.6
PRÁZDNÁ CISTERNA - nevyčištěná			Viz. 4.3.2.4, 5.1.3 a 5.4.1.1.6
PRÁZDNÉ VOZIDLO - nevyčištěné			Viz. 5.1.3 a 5.4.1.1.6
Barvy, viz.	1263 3066 3469 3470	3 8 3 8	

Pojmenování a popis	UN číslo	Třída	Poznámka
PRODUKTY VEDLEJŠÍ Z VÝROBY HLINÍKU nebo PRODUKTY VEDLEJŠÍ Z TAVENÍ HLINÍKU	3170	4.3	
PROPADIEN, STABILIZOVANÝ	2200	2	
PROPAN	1978	2	
PROPANTHIOLY (propylmerkaptany)	2402	3	
PROPEN	1077	2	
PROPIONALDEHYD	1275	3	
PROPIONITRIL	2404	3	
PROPIONYLCHLORID	1815	3	
PROPYLAMIN	1277	3	
PROPYLENCHLORHYDRIN	2611	6.1	
PROPYLENIMIN, STABILIZOVANÝ	1921	3	
PROPYLENOXID	1280	3	
PROPYLFORMIÁTY	1281	3	
PROPYLTRICHLORSILAN	1816	8	
PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, TOXICKÝ, J.N.	3142	6.1	
PROSTŘEDEK DEZINFEKČNÍ, KAPALNÝ, ŽÍRAVÝ, J.N.	1903	8	
PROSTŘEDEK DEZINFEKČNÍ, TUHÝ, TOXICKÝ, J.N.	1601	6.1	
PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ	1306	3	
PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	1306	3	
PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	1306	3	
PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	1306	3	
PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ (tenze par při 50 °C je vyšší než 110 kPa)	1306	3	
PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ (tenze par při 50 °C nepřesahuje 110 kPa)	1306	3	
PROSTŘEDKY SIGNÁLNÍ, DÝMOVÉ	0196	1	
PROSTŘEDKY SIGNÁLNÍ, DÝMOVÉ	0197	1	
PROSTŘEDKY SIGNÁLNÍ, DÝMOVÉ	0313	1	
PROSTŘEDKY SIGNÁLNÍ, DÝMOVÉ	0487	1	
PROSTŘEDKY SIGNÁLNÍ, DÝMOVÉ	0507	1	
PROSTŘEDKY SIGNÁLNÍ, RUČNÍ	0191	1	
PROSTŘEDKY SIGNÁLNÍ, RUČNÍ	0373	1	
PROSTŘEDKY SIGNÁLNÍ, TÍŠŇOVÉ, lodní	0194	1	
PROSTŘEDKY SIGNÁLNÍ, TÍŠŇOVÉ, lodní	0195	1	
PROSTŘEDKY SIGNÁLNÍ, TÍŠŇOVÉ, lodní	0505	1	
PROSTŘEDKY SIGNÁLNÍ, TÍŠŇOVÉ, lodní	0506	1	
PROSTŘEDKY ZÁCHRANNÉ, NIKOLI SAMONAFUKOVACÍ, které obsahují nebezpečné látky jako výbavu	3072	9	
PROSTŘEDKY ZÁCHRANNÉ, SAMONAFUKOVACÍ	2990	9	
PRYSKYŘICE POLYESTEROVÉ, VÍCESLOŽKOVÉ	3269	3	
PRYSKYŘICE, ROZTOK, hořlavý	1866	3	
PRYSKYŘICE, ROZTOK, hořlavý (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	1866	3	
PRYSKYŘICE, ROZTOK, hořlavý (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	1866	3	
PRYSKYŘICE, ROZTOK, hořlavý (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	1866	3	

Pojmenování a popis	UN číslo	Třída	Poznámka
PRYSKYŘICE, ROZTOK, hořlavý (tenze par při 50 °C je vyšší než 110 kPa)	1866	3	
PRYSKYŘICE, ROZTOK, hořlavý (tenze par při 50 °C nepřesahuje 110 kPa)	1866	3	
PŘEDMĚTY POD PNEUMATICKÝM TLAKEM nebo PŘEDMĚTY POD HYDRAULICKÝM TLAKEM (s nehořlavým plynem)	3164	2	
PŘEDMĚTY PYROFORICKÉ	0380	1	
PŘEDMĚTY PYROTECHNICKÉ pro technické účely	0428	1	
PŘEDMĚTY PYROTECHNICKÉ pro technické účely	0429	1	
PŘEDMĚTY PYROTECHNICKÉ pro technické účely	0430	1	
PŘEDMĚTY PYROTECHNICKÉ pro technické účely	0431	1	
PŘEDMĚTY PYROTECHNICKÉ pro technické účely	0432	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0349	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0350	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0351	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0352	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0353	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0354	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0355	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0356	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0462	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0463	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0464	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0465	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0466	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0467	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0468	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0469	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0470	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0471	1	
PŘEDMĚTY VÝBUŠNÉ, J.N.	0472	1	
PŘEDMĚTY VÝBUŠNÉ, VELMI NECITLIVÉ (PŘEDMĚTY EEI)	0486	1	
PŘIBOUDLINA	1201	3	
PŘÍSTROJE HASÍCÍ se stlačeným nebo zkapalněným plynem	1044	2	
PŘÍSTROJE MALÉ, POHÁNĚNÉ PLYNNÝM UHLOVODÍKEM nebo NÁDOBKY S PLYNNÝM UHLOVODÍKEM, OPAKOVANĚ PLNITELNÉ, PRO MALÉ PŘÍSTROJE, s odběrním ventilem	3150	2	
PUMY MLŽNÉ, DÝMOVNICE, NEVÝBUŠNÉ, obsahující žíravou kapalnou látku, bez zapalovačů	2028	8	
PUMY, S HOŘLAVOU KAPALINOU, s trhací náplní	0399	1	
PUMY, S HOŘLAVOU KAPALINOU, s trhací náplní	0400	1	
PUMY, s trhací náplní	0033	1	
PUMY, s trhací náplní	0034	1	
PUMY, s trhací náplní	0035	1	
PUMY, s trhací náplní	0291	1	
PUMY, ZÁBLESKOVÉ	0037	1	
PUMY, ZÁBLESKOVÉ	0038	1	
PUMY, ZÁBLESKOVÉ	0039	1	
PUMY, ZÁBLESKOVÉ	0299	1	
PYRIDIN	1282	3	
PYROSULFURYLCHLORID	1817	8	
PYRROLIDIN	1922	3	
RAKETOVÉ MOTORY	0186	1	
RAKETOVÉ MOTORY	0280	1	
RAKETOVÉ MOTORY	0281	1	

Pojmenování a popis	UN číslo	Třída	Poznámka
RAKETOVÉ MOTORY S HYPERGOLY, s nebo bez výmetné nálože	0250	1	
RAKETOVÉ MOTORY, S HYPERGOLEM, s nebo bez výmetné náplně	0322	1	
RAKETOVÉ MOTORY, S KAPALNÝM PALIVEM	0395	1	
RAKETOVÉ MOTORY, S KAPALNÝM PALIVEM	0396	1	
RAKETY s výmetnou náplní	0436	1	
RAKETY s výmetnou náplní	0437	1	
RAKETY s výmetnou náplní	0438	1	
RAKETY, s inertní hlavici	0183	1	
RAKETY, s inertní hlavici	0502	1	
RAKETY, S KAPALNÝM PALIVEM, s trhací náplní	0397	1	
RAKETY, S KAPALNÝM PALIVEM, s trhací náplní	0398	1	
RAKETY, s trhací náplní	0180	1	
RAKETY, s trhací náplní	0181	1	
RAKETY, s trhací náplní	0182	1	
RAKETY, s trhací náplní	0295	1	
RAKETY, TAHAČE LAN	0238	1	
RAKETY, TAHAČE LAN	0240	1	
RAKETY, TAHAČE LAN	0453	1	
RESINÁT (abietát) HLINITÝ	2715	4.1	
RESINÁT (abietát) KOBALTNATÝ, SRAŽENÝ	1318	4.1	
RESINÁT (abietát) MANGANATÝ	1330	4.1	
RESINÁT (abietát) VÁPENATÝ	1313	4.1	
RESINÁT (abietát) VÁPENATÝ, ROZTAVENÝ a ztuhlý	1314	4.1	
RESINÁT (abietát) ZINEČNATÝ	2714	4.1	
RESORCIN	2876	6.1	
ROPA SUROVÁ	1267	3	
ROPA SUROVÁ (tenze par při 50 °C je vyšší než 110 kPa)	1267	3	
ROPA SUROVÁ (tenze par při 50 °C nepřesahuje 110 kPa)	1267	3	
ROPA SUROVÁ, KYSELÁ, HOŘLAVÁ, TOXICKÁ	3494	3	
ROZBUŠKOVÉ SESTAVY, NEELEKTRICKÉ, pro trhací práce	0360	1	
ROZBUŠKOVÉ SESTAVY, NEELEKTRICKÉ, pro trhací práce	0361	1	
ROZBUŠKOVÉ SESTAVY, NEELEKTRICKÉ, pro trhací práce	0500	1	
ROZBUŠKY PRO MUNICI	0073	1	
ROZBUŠKY PRO MUNICI	0364	1	
ROZBUŠKY PRO MUNICI	0365	1	
ROZBUŠKY PRO MUNICI	0366	1	
ROZBUŠKY, ELEKTRICKÉ, pro trhací práce	0030	1	
ROZBUŠKY, ELEKTRICKÉ, pro trhací práce	0255	1	
ROZBUŠKY, ELEKTRICKÉ, pro trhací práce	0456	1	
ROZBUŠKY, NEELEKTRICKÉ, pro trhací práce	0029	1	
ROZBUŠKY, NEELEKTRICKÉ, pro trhací práce	0267	1	
ROZBUŠKY, NEELEKTRICKÉ, pro trhací práce	0455	1	
ROZRUŠOVACÍ ZAŘÍZENÍ, VÝBUŠNÁ, pro ropné vrty, bez rozbušky	0099	1	
RTUŤ	2809	8	
RTUŤ OBSAŽENÁ VE VÝROBCÍCH	3506	8	
RUBIDIUM	1423	4.3	
ŘEZAČKY KABELŮ, VÝBUŠNÉ	0070	1	
SALICYLÁT NIKOTINU	1657	6.1	
SALICYLÁT RTUŤNATÝ	1644	6.1	
SELENANY nebo SELENIČITANY	2630	6.1	
SELENOVODÍK, BEZVODÝ	2202	2	

Pojmenování a popis	UN číslo	Třída	Poznámka
Seno nebo sláma nebo plevy	1327	4.1	Není předmětem pro ADR
SILAN	2203	2	
SILICID HLINÍKU PRÁŠKOVÝ, NEPOTAŽENÝ	1398	4.3	
SILICID HOŘČÍKU	2624	4.3	
SILICID LITHIA	1417	4.3	
SILICID VÁPŇÍKU	1405	4.3	
ŠÍRA	1350	4.1	
ŠÍRA, ROZTAVENÁ	2448	4.1	
ŠÍRAN NIKOTINU, ROZTOK	1658	6.1	
ŠÍRAN NIKOTINU, TUHÝ	3445	6.1	
ŠÍRAN OLOVNATÝ, obsahující více než 3 % volné kyseliny	1794	8	
ŠÍRAN RTUŇNATÝ	1645	6.1	
ŠÍRAN VANADYLU	2931	6.1	
ŠIROUHLÍK	1131	3	
ŠIROVODÍK	1053	2	
SLITINA ALKALICKÝCH KOVŮ, KAPALNÁ, J.N.	1421	4.3	
SLITINA KOVŮ ALKALICKÝCH ZEMIN, J.N.	1393	4.3	
SLITINA KŘEMÍK / ŽELEZO / LITHIUM	2830	4.3	
SLITINA PRÁŠKOVÁ KŘEMÍK / ŽELEZO / HLINÍK	1395	4.3	
SLITINA VÁPŇÍK / MANGAN / KŘEMÍK	2844	4.3	
SLITINY BARYA, PYROFORNÍ	1854	4.2	
SLITINY DRASLÍKU A SODÍKU, KAPALNÉ	1422	4.3	
SLITINY DRASLÍKU A SODÍKU, TUHÉ	3404	4.3	
SLITINY DRASLÍKU, KOVOVÉ, KAPALNÉ	1420	4.3	
SLITINY DRASLÍKU, KOVOVÉ, TUHÉ	3403	4.3	
SLOUČENINA ANTIMONU, ANORGANICKÁ, KAPALNÁ, J.N.	3141	6.1	
SLOUČENINA ANTIMONU, ANORGANICKÁ, TUHÁ, J.N.	1549	6.1	
SLOUČENINA ARSENU, KAPALNÁ, J.N., anorganická, zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.	1556	6.1	
SLOUČENINA ARSENU, ORGANICKÁ, KAPALNÁ, J.N.	3280	6.1	
SLOUČENINA ARSENU, ORGANICKÁ, TUHÁ, J.N.	3465	6.1	
SLOUČENINA ARSENU, TUHÁ, J.N., anorganická, zahrnující arseničnany, j.n., arsenitany, j.n. a sulfidy arsenu, j.n.	1557	6.1	
SLOUČENINA BARYA, J.N.	1564	6.1	
SLOUČENINA BERYLLIA, J.N.	1566	6.1	
SLOUČENINA CÍNU, ORGANICKÁ, KAPALNÁ, J.N.	2788	6.1	
SLOUČENINA CÍNU, ORGANICKÁ, TUHÁ, J.N.	3146	6.1	
SLOUČENINA FENYLRTUŇNATÁ, J.N.	2026	6.1	
SLOUČENINA FOSFORU, ORGANICKÁ, KAPALNÁ, TOXICKÁ, J.N.	3278	6.1	
SLOUČENINA FOSFORU, ORGANICKÁ, TUHÁ, TOXICKÁ, J.N.	3464	6.1	
SLOUČENINA KADMIA	2570	6.1	
SLOUČENINA MOČOVINY, S PEROXIDEM VODÍKU	1511	5.1	
SLOUČENINA NIKOTINU, KAPALNÁ, J.N. nebo PŘÍPRAVKY NIKOTINOVÉ, KAPALNÉ, J.N.	3144	6.1	
SLOUČENINA NIKOTINU, TUHÁ, J.N. nebo PŘÍPRAVKY NIKOTINOVÉ, TUHÉ, J.N.	1655	6.1	
SLOUČENINA OLOVA, ROZPUSTNÁ, J.N.	2291	6.1	
SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, PYROFORNÍ, J.N.	3392	4.2	
SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, PYROFORNÍ, REAGUJÍCÍ S VODOU, J.N.	3394	4.2	

Pojmenování a popis	UN číslo	Třída	Poznámka
SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.	3399	4.3	
SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, REAGUJÍCÍ S VODOU, J.N.	3398	4.3	
SLOUČENINA ORGANOKOVOVÁ, KAPALNÁ, TOXICKÁ, J.N.	3282	6.1	
SLOUČENINA ORGANOKOVOVÁ, TUHÁ, TOXICKÁ, J.N.	3467	6.1	
SLOUČENINA ORGANOKOVOVÁ, TUHÁ, PYROFORNÍ, J.N.	3391	4.2	
SLOUČENINA ORGANOKOVOVÁ, TUHÁ, PYROFORNÍ, REAGUJÍCÍ S VODOU, J.N.	3393	4.2	
SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, HOŘLAVÁ, J.N.	3396	4.3	
SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, J.N.	3395	4.3	
SLOUČENINA ORGANOKOVOVÁ, TUHÁ, REAGUJÍCÍ S VODOU, SCHOPNÁ SAMOOHŘEVU, J.N.	3397	4.3	
SLOUČENINA ORGANOKOVOVÁ, TUHÁ, SCHOPNÁ SAMOOHŘEVU, J.N.	3400	4.2	
SLOUČENINA RTUTI, KAPALNÁ, J.N.	2024	6.1	
SLOUČENINA RTUTI, TUHÁ, J.N.	2025	6.1	
SLOUČENINA SELENU, KAPALNÁ, J.N.	3440	6.1	
SLOUČENINA SELENU, TUHÁ, J.N.	3283	6.1	
SLOUČENINA TELLURU, J.N.	3284	6.1	
SLOUČENINA VANADU, J.N.	3285	6.1	
SLOUČENINY THALLIA, J.N.	1707	6.1	
SLOŽ PYROTECHNICKÁ, ZÁBLESKOVÁ	0094	1	
SLOŽ PYROTECHNICKÁ, ZÁBLESKOVÁ	0305	1	
SLOŽE HNACÍ	0491	1	
SMĚS ETHANOLU A BENZÍNU nebo SMĚS ETHANOLU A PALIVA PRO ZÁŽEHOVÉ MOTORY, s více než 10 % ethanolu	3475	3	
SMĚS NITRAČNÍ, obsahující více než 50 % kyseliny dusičné	1796	8	
SMĚS NITRAČNÍ, ODPADNÍ, obsahující více než 50 % kyseliny dusičné	1826	8	
SODÍK	1428	4.3	
SOLI ORGANICKÝCH SLOUČENIN, KOVOVÉ, HOŘLAVÉ, J.N.	3181	4.1	
SOUČÁSTI ROZNĚTNÝCH ŘETĚZCŮ, J.N.	0382	1	
SOUČÁSTI ROZNĚTNÝCH ŘETĚZCŮ, J.N.	0383	1	
SOUČÁSTI ROZNĚTNÝCH ŘETĚZCŮ, J.N.	0384	1	
SOUČÁSTI ROZNĚTNÝCH ŘETĚZCŮ, J.N.	0461	1	
SOUPRAVA TESTOVACÍ, CHEMICKÁ nebo SOUPRAVA PRVNÍ POMOCI	3316	9	
STOPINA	0101	1	
STOPOVKY PRO MUNICI	0212	1	
STOPOVKY PRO MUNICI	0306	1	
STROJE CHLADICÍ, obsahující nehořlavé, netoxické plyny nebo roztoky amoniaku (UN 2672)	2857	2	
STRYCHNIN nebo SOLI STRYCHNINU	1692	6.1	
STŘELY, inertní, se stopovkou	0345	1	
STŘELY, inertní, se stopovkou	0424	1	
STŘELY, inertní, se stopovkou	0425	1	
STŘELY, s trhací náplní	0167	1	
STŘELY, s trhací náplní	0168	1	
STŘELY, s trhací náplní	0169	1	
STŘELY, s trhací náplní	0324	1	
STŘELY, s trhací náplní	0344	1	
STŘELY, s trhovou náložkou nebo výmetnou náplní	0346	1	

Pojmenování a popis	UN číslo	Třída	Poznámka
STŘELY, s trhavou náložkou nebo výmetnou náplní	0347	1	
STŘELY, s trhavou náložkou nebo výmetnou náplní	0426	1	
STŘELY, s trhavou náložkou nebo výmetnou náplní	0427	1	
STŘELY, s trhavou náložkou nebo výmetnou náplní	0434	1	
STŘELY, s trhavou náložkou nebo výmetnou náplní	0435	1	
STYREN, MONOMERNÍ, STABILIZOVANÝ	2055	3	
SULFID AMONNÝ, ROZTOK	2683	8	
SULFID DIPIKRYLU (SIRNÍK DIPIKRYLU), suchý nebo vlhčený méně než 10 % hm. vody	0401	1	
SULFID DRASELNÝ, BEZVODÝ nebo SULFID DRASELNÝ, s méně než 30 % krystalové vody	1382	4.2	
SULFID DRASELNÝ, HYDRATOVANÝ, obsahující nejméně 30 % krystalové vody	1847	8	
SULFID FOSFOREČNÝ, neobsahující žlutý ani bílý fosfor	1340	4.3	
SULFID KARBONYLU (KARBONYLSULFID)	2204	2	
SULFID SELENIČITÝ	2657	6.1	
SULFID SODNÝ, BEZVODÝ nebo SULFID SODNÝ, s méně než 30 % krystalové vody	1385	4.2	
SULFID SODNÝ, HYDRATOVANÝ, obsahující nejméně 30 % vody	1849	8	
SULFID TITANIČITÝ	3174	4.2	
SUPEROXID DRASELNÝ	2466	5.1	
SUPEROXID SODNÝ	2547	5.1	
SVĚTLICE, LETECKÉ	0093	1	
SVĚTLICE, LETECKÉ	0403	1	
SVĚTLICE, LETECKÉ	0404	1	
SVĚTLICE, LETECKÉ	0420	1	
SVĚTLICE, LETECKÉ	0421	1	
SVĚTLICE, POZEMNÍ	0092	1	
SVĚTLICE, POZEMNÍ	0418	1	
SVĚTLICE, POZEMNÍ	0419	1	
SVÍCE SLZOTVORNÉ	1700	6.1	
SVÍTIPLYN, STLAČENÝ	1023	2	
1,1,1,2-TETRAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 134a)	3159	2	
1,1,2,2-TETRACHLORETHAN	1702	6.1	
1,2,3,6-TETRAHYDROBENZALDEHYD	2498	3	
1,2,3,6-TETRAHYDROPYRIDIN	2410	3	
IH-TETRAZOL	0504	1	
terc-BUTYLCYKLOHEXYLCHLORFORMIÁT	2747	6.1	
terc-BUTYLHYPOCHLORIT	3255	4.2	Přeprava zakázána
terc-BUTYLISOKYANÁT	2484	6.1	
terc-BUTYLMETHYLETHER	2398	3	
TERPENTÝN	1299	3	
TERPINOLEN	2541	3	
TETRABROMETHAN	2504	6.1	
TETRABROMMETHAN	2516	6.1	
TETRAETHYLENPENTAMIN	2320	8	
TETRAETHYLPENTAOXODITHIODIFOSFÁT	1704	6.1	
TETRAETHYLSILIKÁT	1292	3	
TETRAFLUORETHYLEN, STABILIZOVANÝ	1081	2	
TETRAFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 14)	1982	2	
TETRAFOSFORHEPTASULFID, neobsahující žlutý ani bílý fosfor	1339	4.1	

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TETRAFOSFORTRISULFID (FOSFORSESKVISULFID), neobsahující žlutý ani bílý fosfor	1341	4.1	
TETRAHYDRIDOBORITAN DRASELNÝ	1870	4.3	
TETRAHYDRIDOBORITAN HLINITÝ	2870	4.2	
TETRAHYDRIDOBORITAN HLINITÝ V PŘÍSTROJÍCH	2870	4.2	
TETRAHYDRIDOBORITAN LITHNÝ	1413	4.3	
TETRAHYDRIDOBORITAN SODNÝ	1426	4.3	
TETRAHYDRIDOBORITAN SODNÝ A HYDROXID SODNÝ, ROZTOK, obsahující nejvýše 12 % hm. tetrahydridoboritanu sodného a nejvýše 40 % hm. hydroxidu sodného	3320	8	
TETRAHYDRIDOHLINITAN LITHNÝ	1410	4.3	
TETRAHYDRIDOHLINITAN LITHNÝ, V ETHERU	1411	4.3	
TETRAHYDRIDOHLINITAN SODNÝ	2835	4.3	
TETRAHYDROFTALANHYDRIDY, obsahující více než 0,05 % maleinanhydridu	2698	8	
TETRAHYDROFURAN	2056	3	
TETRAHYDROFURFURYLAMIN	2943	3	
TETRAHYDROTHIOFEN	2412	3	
TETRACHLORETHYLEN	1897	6.1	
TETRACHLORMETHAN	1846	6.1	
TETRACHLORSILAN (chlorid křemičitý)	1818	8	
TETRAKARBONYL NIKLU	1259	6.1	
TETRAMER PROPYLENU	2850	3	
TETRAMETHYLAMONIUMHYDROXID, ROZTOK	1835	8	
TETRAMETHYLAMONIUM-HYDROXID, TUHÝ	3423	8	
TETRAMETHYLSILAN	2749	3	
TETRANITROANILIN	0207	1	
TETRANITROMETHAN	1510	6.1	
TETRAPROPYLORTHOTITANÁT	2413	3	
4-THIAPENTANAL	2785	6.1	
THIOFEN	2414	3	
THIOFENOL (fenylmerkaptan)	2337	6.1	
THIOFOSGEN	2474	6.1	
THIOGLYKOL	2966	6.1	
THIOKYANÁT RTUŤNATÝ	1646	6.1	
THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, J.N. nebo SMĚS THIOLŮ (merkaptanů), KAPALNÁ, HOŘLAVÁ, J.N.	3336	3	
THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, J.N. nebo SMĚS THIOLŮ (merkaptanů), KAPALNÁ, HOŘLAVÁ, J.N. (tenze par při 50 °C je vyšší než 110 kPa)	3336	3	
THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, J.N. nebo SMĚS THIOLŮ (merkaptanů), KAPALNÁ, HOŘLAVÁ, J.N. (tenze par při 50 °C nepřesáhne 110 kPa)	3336	3	
THIOLY (merkaptany), KAPALNÉ, HOŘLAVÉ, TOXICKÉ, J.N. nebo SMĚSI THIOLŮ (směsi merkaptanů), KAPALNÉ, HOŘLAVÉ, TOXICKÉ, J.N.	1228	3	
THIOLY (merkaptany), KAPALNÉ, TOXICKÉ, HOŘLAVÉ, J.N. nebo SMĚSI THIOLŮ (merkaptanů), KAPALNÉ, TOXICKÉ, HOŘLAVÉ, J.N.	3071	6.1	
TINKTURY, LÉKAŘSKÉ	1293	3	
TITAN - HOUBA, ČÁSTICE nebo TITAN - HOUBA, PRÁŠEK	2878	4.1	
TITAN, PRÁŠEK, SUCHÝ	2546	4.2	
TITAN, PRÁŠEK, VLHČENÝ nejméně 25 % vody	1352	4.1	
2,4-TOLUYLENDIAMIN, ROZTOK	3418	6.1	
2,4-TOLUYLENDIAMIN, TUHÝ	1709	6.1	
TOLUEN	1294	3	
TOLUENDISOKYANÁT	2078	6.1	

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TOLUIDINY, KAPALNÉ	1708	6.1	
TOLUIDINY, TUHÉ	3451	6.1	
TORPÉDA, S KAPALNÝM PALIVEM, s inertní hlavicí	0450	1	
TORPÉDA, S KAPALNÝM PALIVEM, s nebo bez trhací náplně	0449	1	
TORPÉDA, s trhací náplní	0329	1	
TORPÉDA, s trhací náplní	0330	1	
TORPÉDA, s trhací náplní	0451	1	
TOXINY, ZÍSKANÉ Z ŽIVÝCH ORGANISMŮ, KAPALNÉ, J.N.	3172	6.1	
TOXINY, ZÍSKANÉ Z ŽIVÝCH ORGANISMŮ, TUHÉ, J.N.	3462	6.1	
1,1,1-TRIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 143a)	2035	2	
1,1,1-TRICHOLORETHAN	2831	6.1	
1,3,5-TRIMETHYLBENZEN	2325	3	
2-TRIFLUORMETHYLANILÍN	2942	6.1	
3-TRIFLUORMETHYLANILÍN	2948	6.1	
TRHAVÉ NÁLOŽKY, výbušné	0043	1	
TRHAVINA, TYP A	0081	1	
TRHAVINA, TYP B	0082	1	
TRHAVINA, TYP B	0331	1	
TRHAVINA, TYP C	0083	1	
TRHAVINA, TYP D	0084	1	
TRHAVINA, TYP E	0241	1	
TRHAVINA, TYP E	0332	1	
TRIALLYLAMIN	2610	3	
TRIALLYLBORÁT	2609	6.1	
TRIBUTYLAMIN	2542	6.1	
TRIBUTYLFOSFAN	3254	4.2	
TRIETHYLAMIN	1296	3	
TRIETHYLBORÁT	1176	3	
TRIETHYLENTETRAMIN	2259	8	
TRIETHYLFOSFIT	2323	3	
TRIFLUORACETYLCHLORID	3057	2	
TRIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 23)	1984	2	
TRIFLUORMETHAN, HLUBOCE ZCHLAZENÝ, KAPALNÝ	3136	2	
TRICHLORACETYLCHLORID	2442	8	
TRICHLORBENZENY, KAPALNÉ	2321	6.1	
TRICHLORBUTEN	2322	6.1	
TRICHOLORETHYLEN	1710	6.1	
TRICHLORID VANADYLU (OXYCHLORID VANADIČITÝ)	2443	8	
TRICHLORSILAN	1295	4.3	
TRIISOBUTYLEN	2324	3	
TRIISOPROPYLBORÁT	2616	3	
TRIKRESYLFOSFÁT, s více než 3 % ortho-isomerů	2574	6.1	
TRIMETHYLACETYLCHLORID	2438	6.1	
TRIMETHYLAMIN, BEZVODÝ	1083	2	
TRIMETHYLAMIN, VODNÝ ROZTOK, s nejvýše 50 % hm. trimethylaminu	1297	3	
TRIMETHYLBORÁT	2416	3	
TRIMETHYLCYKLOHEXYLAMIN	2326	8	
TRIMETHYLFOSFIT	2329	3	
TRIMETHYLHEXAMETHYLEN-DIAMINY	2327	8	
TRIMETHYLHEXAMETHYLEN-DIISOKYANÁT (a isomerní směsi)	2328	6.1	
TRIMETHYLCHLORSILAN	1298	3	
TRINITROANILIN (PIKRAMID)	0153	1	
TRINITROANISOL	0213	1	

Pojmenování a popis	UN číslo	Třída	Poznámka
TRINITROBENZEN, suchý nebo vlhčený méně než 30 % hm. vody	0214	1	
TRINITROBENZEN, VLHČENÝ nejméně 30 % hm. vody	1354	4.1	
TRINITROBENZEN, VLHČENÝ, nejméně 10 % hm. vody	3367	4.1	
TRINITROFENETOL	0218	1	
TRINITROFENOL (KYSELINA PIKROVÁ), suchý nebo vlhčený méně než 30 % hm. vody	0154	1	
TRINITROFENOL (KYSELINA PIKROVÁ), VLHČENÝ (Á) nejméně 10 % hm. vody	3364	4.1	
TRINITROFENOL (KYSELINA PIKROVÁ), VLHČENÝ(A) nejméně 30 % hm. vody	1344	4.1	
TRINITROFENYLMETHYLNITRAMIN (TETRYL)	0208	1	
TRINITROFLUORENON	0387	1	
TRINITROCHLORBENZEN (PIKRYLCHLORID)	0155	1	
TRINITROCHLORBENZEN (PIKRYLCHLORID), VLHČENÝ nejméně 10 % hm. vody	3365	4.1	
TRINITRO-m-KRESOL	0216	1	
TRINITRONAFTALEN	0217	1	
TRINITRORESORCIN (KYSELINA STYFNOVÁ), suchý nebo vlhčený méně než 20 % hm. vody nebo směsí alkoholu s vodou	0219	1	
TRINITRORESORCIN (KYSELINA STYFNOVÁ), VLHČENÝ(-Á) nejméně 20 % hm. vody (nebo směsí alkoholu s vodou)	0394	1	
TRINITRORESORCINÁT OLOVNATÝ, VLHČENÝ nejméně 20 % hm. vody nebo směsí alkoholu s vodou	0130	1	
TRINITROTOLUEN (TNT) A TRINITROBENZEN, SMĚS nebo TRINITROTOLUEN (TNT) A HEXANITROSTILBEN, SMĚS	0388	1	
TRINITROTOLUEN (TNT) VE SMĚSI S TRINITROBENZENEM A HEXANITROSTILBENEM	0389	1	
TRINITROTOLUEN (TNT), suchý nebo vlhčený méně než 30 % hm. vody	0209	1	
TRINITROTOLUEN (TNT), VLHČENÝ nejméně 10 % hm. vody	3366	4.1	
TRINITROTOLUEN, VLHČENÝ nejméně 30 % hm. vody	1356	4.1	
TRIPROPYLAMIN	2260	3	
TRIPROPYLEN	2057	3	
TRIS-(1-AZIRIDINYL)-FOSFINOXID, ROZTOK	2501	6.1	
TRITONAL	0390	1	
TŘASKAVKY, ŽELEZNIČNÍ	0192	1	
TŘASKAVKY, ŽELEZNIČNÍ	0193	1	
TŘASKAVKY, ŽELEZNIČNÍ	0492	1	
TŘASKAVKY, ŽELEZNIČNÍ	0493	1	
UHLÍ, AKTIVOVANÉ	1362	4.2	
UHLÍ, živočišného nebo rostlinného původu	1361	4.2	
UHLIČITAN SODNÝ, PEROXYHYDRÁT	3378	5.1	
UHLOVODÍKY, KAPALNÉ, J.N.	3295	3	
UHLOVODÍKY, KAPALNÉ, J.N. (tenze par při 50 °C je vyšší než 110 kPa)	3295	3	
UHLOVODÍKY, KAPALNÉ, J.N. (tenze par při 50 °C nepřesahuje 110 kPa)	3295	3	
UHLOVODÍKY, PLYNNÉ, SMĚS, STLAČENÁ, J.N.	1964	2	
UHLOVODÍKY, PLYNNÉ, SMĚS, ZKAPALNĚNÁ, J.N. (směs A, A01, A02, A0, A1, B1, B2, B nebo C)	1965	2	
UHLOVODÍKY, TERPENICKÉ, J.N.	2319	3	
UNDEKAN	2330	3	
VALERALDEHYD	2058	3	
VALERYLCHLORID	2502	8	
VÁPŇÍK	1401	4.3	

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VÁPŇÍK, PYROFORNÍ NEBO SLITINY VÁPŇÍKU, PYROFORNÍ	1855	4.2	
VÁPNO NATRONOVÉ, s více než 4 % hydroxidu sodného	1907	8	
VINAN ANTIMONYLODRASELNÝ	1551	6.1	
VINAN NIKOTINU	1659	6.1	
VINYLACETÁT, STABILIZOVANÝ	1301	3	
VINYLBROMID, STABILIZOVANÝ	1085	2	
VINYLBUTYRÁT, STABILIZOVANÝ	2838	3	
VINYLETHYLETER, STABILIZOVANÝ	1302	3	
VINYLFUORID, STABILIZOVANÝ	1860	2	
VINYLCHLORACETÁT	2589	6.1	
VINYLCHLORID, STABILIZOVANÝ	1086	2	
VINYLIDENCHLORID, STABILIZOVANÝ	1303	3	
VINYLMETHYLETER, STABILIZOVANÝ	1087	2	
VINYLPYRIDINY, STABILIZOVANÉ	3073	6.1	
VINYLTOLUENY, STABILIZOVANÉ	2618	3	
VINYLTRICHLORSILAN	1305	3	
VLÁKNA nebo TKANINY, IMPREGNOVANÉ SLABĚ NITROVANOU CELULÓZOU, J.N.	1353	4.1	
VLÁKNA nebo TKANINY, ŽIVOČIŠNĚHO, ROSTLINĚHO NEBO SYNTETICKĚHO PŮVODU, J.N. impregnované olejem	1373	4.2	
Vlákna, rostlinného původu, suchá	3360	4.1	Není předmětem pro ADR
Vlákna, živočišného nebo rostlinného původu, spálená, mokrá nebo vlhká	1372	4.2	Není předmětem pro ADR
Vlna odpadní, vlhká	1387	4.2	Není předmětem pro ADR
VODÍK A METHAN, SMĚS, STLAČENÁ	2034	2	
VODÍK V METALHYDRIDOVÉM ZÁSOBNÍKOVÉM SYSTÉMU nebo VODÍK V METALHYDRIDOVÉM ZÁSOBNÍKOVÉM SYSTÉMU OBSAŽENÝ V ZAŘÍZENÍ nebo VODÍK V METALHYDRIDOVÉM ZÁSOBNÍKOVÉM SYSTÉMU BALENÝ SE ZAŘÍZENÍM	3468	2	
VODÍK, HLUBOCE ZCHLAZENÝ, KAPALNÝ	1966	2	
VODÍK, STLAČENÝ	1049	2	
Vozidlo na akumulátorový pohon nebo přístroj na akumulátorový pohon	3171	9	Není předmětem pro ADR, viz též zvláštní ustanovení 240 v kapitole 3.3
VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly	1266	3	
VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (s bodem varu nižším než 35 °C)	1266	3	
VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C je vyšší než 110 kPa, s bodem varu vyšším než 35 °C)	1266	3	
VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly (s bodem vzplanutí pod 23 °C a viskozitou podle 2.2.3.1.4) (tenze par při 50 °C nepřesahuje 110 kPa)	1266	3	

Pojmenování a popis	UN číslo	Třída	Poznámka
VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly (tenze par při 50 °C je vyšší než 110 kPa)	1266	3	
VÝROBKY KOSMETICKÉ s hořlavými rozpouštědly (tenze par při 50 °C nepřesahuje 110 kPa)	1266	3	
VÝROBKY ZÁBAVNĚ PYROTECHNIKY	0333	1	Viz. 2.2.1.1.7
VÝROBKY ZÁBAVNĚ PYROTECHNIKY	0334	1	
VÝROBKY ZÁBAVNĚ PYROTECHNIKY	0335	1	
VÝROBKY ZÁBAVNĚ PYROTECHNIKY	0336	1	
VÝROBKY ZÁBAVNĚ PYROTECHNIKY	0337	1	
VZDUCH, HLUBOCE ZCHLAZENÝ, KAPALNÝ	1003	2	
VZDUCH, STLAČENÝ	1002	2	
VZOREK CHEMICKÝ, TOXICKÝ	3315	6.1	
VZOREK PLYNU, NESTLAČENÝ, HOŘLAVÝ, J.N., který není hluboce zchlazený	3167	2	
VZOREK PLYNU, NESTLAČENÝ, TOXICKÝ, HOŘLAVÝ, J.N., který není hluboce zchlazený	3168	2	
VZOREK PLYNU, NESTLAČENÝ, TOXICKÝ, J.N., který není hluboce zchlazený	3169	2	
VZORKY, VÝBUŠNÉ, kromě třaskavin	0190	1	
XANTHÁTY	3342	4.2	
XENON	2036	2	
XENON, HLUBOCE ZCHLAZENÝ, KAPALNÝ	2591	2	
XYLENOLY, KAPALNÉ	3430	6.1	
XYLENOLY, TUHÉ	2261	6.1	
XYLENY	1307	3	
XYLIDINY, KAPALNÉ	1711	6.1	
XYLIDINY, TUHÉ	3452	6.1	
XYLYLBROMID, KAPALNÝ	1701	6.1	
XYLYLBROMID, TUHÝ	3417	6.1	
ZÁPALKOVÉ ŠROUBY	0319	1	
ZÁPALKOVÉ ŠROUBY	0320	1	
ZÁPALKOVÉ ŠROUBY	0376	1	
ZÁPALKY BEZPEČNOSTNÍ (knížečky, složky nebo krabičky)	1944	4.1	
ZÁPALKY VĚTROVÉ	2254	4.1	
ZÁPALKY VOSKOVÉ	1945	4.1	
ZÁPALKY, "ZÁPALNÉ KDEKOLI"	1331	4.1	
ZÁPALKY, KALIŠKOVÉ	0044	1	
ZÁPALKY, KALIŠKOVÉ	0377	1	
ZÁPALKY, KALIŠKOVÉ	0378	1	
ZÁPALNICE	0066	1	
ZÁPALNICE, BEZPEČNOSTNÍ	0105	1	
ZÁPALNICE, trubičková, s kovovým pláštěm	0103	1	
ZAPALOVAČE s hořlavým plynem nebo NÁDOBKY S NÁPLNÍ DO ZAPALOVAČŮ s hořlavým plynem	1057	2	
ZAPALOVAČE, DETONAČNÍ	0106	1	
ZAPALOVAČE, DETONAČNÍ	0107	1	
ZAPALOVAČE, DETONAČNÍ	0257	1	
ZAPALOVAČE, DETONAČNÍ	0367	1	
ZAPALOVAČE, DETONAČNÍ, s pojistným zařízením	0408	1	
ZAPALOVAČE, DETONAČNÍ, s pojistným zařízením	0409	1	
ZAPALOVAČE, DETONAČNÍ, s pojistným zařízením	0410	1	
ZAPALOVAČE, ZÁŽEHOVÉ	0316	1	
ZAPALOVAČE, ZÁŽEHOVÉ	0317	1	
ZAPALOVAČE, ZÁŽEHOVÉ	0368	1	
ZAPLYNOVANÁ NÁKLADNÍ DOPRAVNÍ JEDNOTKA	3359	9	
ZAŘÍZENÍ UVOLŇOVACÍ, VÝBUŠNÁ	0173	1	

Pojmenování a popis	UN číslo	Třída	Poznámka
ZARÍZENÍ, AKTIVOVATELNÁ VODOU, s trhavou náložkou, výmetnou nebo hnací náplní	0248	1	
ZARÍZENÍ, AKTIVOVATELNÁ VODOU, s trhavou náložkou, výmetnou nebo hnací náplní	0249	1	
ZASOBNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo ZASOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZARÍZENÍ nebo ZASOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZARÍZENÍM, obsahující hořlavé kapaliny	3473	3	
ZASOBNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo ZASOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZARÍZENÍ nebo ZASOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZARÍZENÍM, obsahující látky reagující s vodou	3476	4.3	
ZASOBNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo ZASOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZARÍZENÍ nebo ZASOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZARÍZENÍM, obsahující vodík v hydridech kovů	3479	2	
ZASOBNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo ZASOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZARÍZENÍ nebo ZASOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZARÍZENÍM, obsahující žiravé látky	3477	8	
ZASOBNÍKY DO PALIVOVÝCH ČLÁNKŮ nebo ZASOBNÍKY DO PALIVOVÝCH ČLÁNKŮ OBSAŽENÉ V ZARÍZENÍ nebo ZASOBNÍKY DO PALIVOVÝCH ČLÁNKŮ BALENÉ SE ZARÍZENÍM, obsahující zkapalněný hořlavý plyn	3478	2	
ZAZĚHOVAČE	0121	1	
ZAZĚHOVAČE	0314	1	
ZAZĚHOVAČE	0315	1	
ZAZĚHOVAČE	0325	1	
ZAZĚHOVAČE	0454	1	
ZAZĚHOVAČE ZÁPALNIC	0131	1	
ZBYTKY PO LISOVÁNÍ OLEJOVÝCH SEMEN, s nejvýše 1,5 % oleje a nejvýše 11 % vlhkosti	2217	4.2	
ZBYTKY PO LISOVÁNÍ OLEJOVÝCH SEMEN, s více než 1,5 % oleje a nejvýše 11 % vlhkosti	1386	4.2	
ZINEK, PRÁŠEK nebo ZINEK, PRACH	1436	4.3	
ZIRKONIUM, ODPAD	1932	4.2	
ZIRKONIUM, PRÁŠEK, SUCHÝ	2008	4.2	
ZIRKONIUM, PRÁŠEK, VLHČENÝ nejméně 25 % vody	1358	4.1	
ZIRKONIUM, SUCHÉ, hotové plechy, pásy nebo stočený drát (tenčí než 18 mikrometrů)	2009	4.2	
ZIRKONIUM, SUCHÉ, stočený drát, hotové plechy, pásy (tenčí než 254 mikrometrů, ale ne méně než 18 mikrometrů)	2858	4.1	
ZIRKONIUM, SUSPENDOVANÉ V HOŘLAVÉ KAPALNÉ LÁTCE	1308	3	
ZIRKONIUM, SUSPENDOVANÉ V HOŘLAVÉ KAPALNÉ LÁTCE (tenze par při 50 °C je vyšší než 110 kPa)	1308	3	
ZIRKONIUM, SUSPENDOVANÉ V HOŘLAVÉ KAPALNÉ LÁTCE (tenze par při 50 °C nepřesahuje 110 kPa)	1308	3	

KAPITOLA 3.3

ZVLÁŠTNÍ USTANOVENÍ PRO URČITÉ LÁTKY NEBO PŘEDMĚTY

- 3.3.1** V této kapitole jsou uvedena zvláštní ustanovení odpovídající číslům udaným ve sloupci (6) tabulky A kapitoly 3.2 pro látku nebo předmět, na které se tato zvláštní ustanovení vztahují.
- 16 Vzorky nových nebo již existujících výbušných látek nebo předmětů, které jsou přepravovány mimo jiné k pokusným, klasifikačním, výzkumným a vývojovým účelům, k účelům kontroly kvality nebo jako obchodní vzorky, smějí být přepravovány podle požadavků příslušného orgánu (viz odstavce 2.2.1.1.3). Hmotnost výbušných vzorků, které nejsou navlhčeny nebo znečtivěny, je omezena do 10 kg na malý kus podle požadavků příslušného orgánu. Hmotnost výbušných vzorků, které jsou navlhčeny nebo znečtivěny, je omezena do 25 kg.
- 23 Tato látka vykazuje nebezpečí hořlavosti, která se však projeví jen v případě velmi silného požáru v uzavřeném prostoru.
- 32 Tato látka nepodléhá předpisům ADR, pokud je v jakékoli jiné formě.
- 37 Tato látka nepodléhá předpisům ADR, jestliže je pokryta (potažena).
- 38 Tato látka nepodléhá předpisům ADR, jestliže obsahuje nejvýše 0,1 % křemíku vápenatého.
- 39 Tato látka nepodléhá předpisům ADR, jestliže obsahuje méně než 30 %, nebo nejméně 90 % křemíku.
- 43 Pokud jsou tyto látky podány k přepravě jako pesticidy, musí být přepravovány pod příslušnou položkou pro pesticidy a podle platných ustanovení pro pesticidy (viz odstavce 2.2.61.1.10 až 2.2.61.1.11.2).
- 45 Sulfidy a oxidy antimonu s obsahem nejvýše 0,5 % arzenu, vztaženo na celkovou hmotnost, nepodléhají předpisům ADR.
- 47 Ferrikyanidy a ferrokyanidy nepodléhají předpisům ADR.
- 48 Obsahuje-li tato látka více než 20 % kyanovodíku, není připuštěna k přepravě.
- 59 Tyto látky nepodléhají předpisům ADR, jestliže obsahují nejvýše 50 % hořčíku.
- 60 Činí-li koncentrace více než 72 %, není látka připuštěna k přepravě.
- 61 Technický název, kterým musí být doplněno oficiální pojmenování pro přepravu, musí být obvyklý název dovolený ISO (viz též normu ISO 1750 : 1981 "Pesticidy a jiné zemědělské chemikálie - obvyklé názvy" v platném znění), jiné názvy uvedené v publikaci Světové zdravotnické organizace (WHO) „Recommended Classification of Pesticides by Hazard and Guidelines to Classification“ anebo pojmenování aktivní látky (viz také odstavce 3.1.2.8.1 a 3.1.2.8.1.1).
- 62 Tato látka nepodléhá předpisům ADR, jestliže obsahuje nejvýše 4 % hydroxidu sodného.
- 65 Vodné roztoky peroxidu vodíku s méně než 8 % peroxidu vodíku nepodléhají předpisům ADR.
- 103 Dusitany amonné a směsi anorganického dusitanu se solí amonnou nejsou připuštěny k přepravě.
- 105 Nitrocelulóza odpovídající popisům UN 2556 nebo 2557 může být přiřazena ke třídě 4.1.
- 113 Chemicky nestálé směsi nejsou připuštěny k přepravě.
- 119 Chladicí stroje zahrnují stroje nebo jiná zařízení, které byly zkonstruovány ke specifickému účelu udržovat potraviny nebo jiné výrobky ve vnitřním prostoru na nízké teplotě, jakož i klimatizační jednotky. Chladicí stroje a součásti chladicích strojů nepodléhají předpisům ADR, pokud obsahují méně než 12 kg plynu třídy 2, skupiny A nebo O podle odstavce 2.2.2.1.3, nebo pokud obsahují méně než 12 litrů roztoku amoniaku (UN 2672).

- 122 Vedlejší nebezpečí a popřípadě řízená teplota a kritická teplota, jakož i UN čísla (druhé položky) pro každý z již zařazených přípravků organických peroxidů jsou uvedeny v pododdílu 2.2.52.4.
- 123 *(Vyhrazeno)*
- 127 Smí být použito jiné inertní látky nebo jiné inertní směsi látek, za předpokladu, že tyto látky mají stejné flegmatizační vlastnosti.
- 131 Flegmatizační látka musí být zřetelně méně citlivá než suchý PETN.
- 135 Hydratovaná sodná sůl kyseliny dichlorisokyanurové nepodléhá předpisům ADR.
- 138 p-brombenzylkyanid nepodléhá předpisům ADR.
- 141 Látky, které byly podrobeny dostatečnému tepelnému zpracování tak, že během přepravy nepředstavují žádné nebezpečí, nepodléhají předpisům ADR.
- 142 Moučka sójových bobů, která je extrahovaná rozpouštědlem, obsahující nejvýše 1,5 % oleje a 11 % vlhkosti a neobsahující prakticky žádné hořlavé rozpouštědlo, nepodléhá předpisům ADR.
- 144 Vodný roztok s nejvýše 24 % obj. alkoholu nepodléhá předpisům ADR.
- 145 Alkoholické nápoje obalové skupiny III nepodléhají předpisům ADR, jestliže jsou přepravovány v nádobách o vnitřním objemu nejvýše 250 litrů.
- 152 Zařazení této látky závisí na velikosti částecek a obalu, mezní hodnoty však dosud nebyly zkouškami určeny. Odpovídající zařazení musí být provedeno podle požadavků oddílu 2.2.1.
- 153 Tato položka platí jen, jestliže bylo na základě zkoušek prokázáno, že tyto látky ve styku s vodou nejsou hořlavé, nevykazují tendenci k samovznícení a vyvinutá směs plynů není hořlavá.
- 162 *(Vypuštěno)*
- 163 Látka jmenovitě uvedená v tabulce A kapitoly 3.2 nesmí být přepravována pod touto položkou. Látky, které jsou přepravovány pod touto položkou, smí obsahovat nejvýše 20 % nitrocelulózy, za podmínky, že nitrocelulóza neobsahuje více než 12,6 % dusíku (v suché hmotě).
- 168 Azbest, který je ponořen nebo fixován v přírodním nebo umělém pojivu (jako je cement, plast, asfalt, pryskyřice nebo minerály) tak, aby během přepravy nemohlo dojít k uvolnění nebezpečného množství vdechovatelných azbestových vláken, nepodléhá předpisům ADR. Hotové výrobky, které obsahují azbest a tento požadavek nesplňují, nepodléhají předpisům ADR, jestliže jsou zabaleny tak, že během přepravy nemůže dojít k uvolnění nebezpečného množství vdechovatelných azbestových vláken.
- 169 Anhydrid kyseliny ftalové v tuhém stavu a tetrahydroftalanhydridy s nejvýše 0,05 % maleinanhydridu nepodléhají předpisům ADR. Anhydrid kyseliny ftalové, roztavený při teplotě vyšší než je jeho bod vzplanutí, s nejvýše 0,05 % maleinanhydridu, musí být přiřazen k UN 3256.
- 172 Pro radioaktivní látky s vedlejším nebezpečím platí:
- (a) kusy musí být označeny bezpečnostními značkami odpovídajícími každému vedlejšímu nebezpečí představovanému látkami; odpovídající velké bezpečnostní značky se umístí na vozidla nebo kontejnery podle příslušných ustanovení oddílu 5.3.1;
- (b) radioaktivní látky musí být přiřazeny k obalovým skupinám I, II, popřípadě III, podle klasifikačních kritérií pro obalové skupiny obsažených v části 2 podle povahy převažujícího vedlejšího nebezpečí.
- Popis předepsaný v odstavci 5.4.1.2.5.1 (b) musí zahrnovat popis těchto vedlejších nebezpečí (např. "Vedlejší nebezpečí: 3, 6.1"), název součástí, které převažujícím způsobem přispívají k tomuto (těmto) vedlejší(m) nebezpečí(m) a popřípadě obalovou skupinu. K balení viz též 4.1.9.1.5.
- 177 Síran barya nepodléhá předpisům ADR.

- 178 Toto pojmenování smí být použito jen se souhlasem příslušného orgánu země původu (viz odstavec 2.2.1.1.3) a jen tehdy, není-li v tabulce A kapitoly 3.2 obsaženo jiné vhodné pojmenování.
- 181 Kusy s touto látkou musí být opatřeny bezpečnostní značkou podle vzoru č. 1 (viz 5.2.2.2.2), ledaže by příslušný orgán země původu souhlasil s odchylkou pro specifický obal, neboť usoudil na základě výsledků zkoušek, že látka v takovém obalu nemá výbušnou povahu (viz odstavec 5.2.2.1.9).
- 182 Skupina alkalických kovů zahrnuje prvky lithium, sodík, draslík, rubidium a cesium.
- 183 Skupina kovů alkalických zemin zahrnuje prvky hořčík, vápník, stroncium a baryum.
- 186 Při určení obsahu dusičnanu amonného se musí všechny ionty dusičnanu, pro které je ve směsi k dispozici ekvivalentní množství iontů amonia, počítat jako dusičnan amonný.
- 188 Články a baterie podávané k přepravě nepodléhají jiným ustanovením ADR, jestliže jsou splněny následující požadavky:
- (a) pro článek s kovem lithia nebo slitinou lithia je obsah lithia nejvýše 1 g a pro článek s ionty lithia je watt hodinová zatížitelnost nejvýše 20 Wh;
 - (b) pro baterii s kovem lithia nebo slitinou lithia je celkový obsah lithia nejvýše 2 g a pro baterii s ionty lithia je watt hodinová zatížitelnost nejvýše 100 Wh. Baterie s ionty lithia podléhající tomuto ustanovení musí mít na vnější skříni vyznačenu watt hodinovou zatížitelnost, kromě těch, které byly vyrobeny před 1. lednem 2009.
 - (c) každý článek nebo baterie splňuje ustanovení uvedená v 2.2.9.1.7 (a) a (e);
 - (d) články a baterie, s výjimkou těch, které jsou zabudovány v zařízeních, musí být zabaleny ve vnitřních obalech, které zcela uzavírají článek nebo baterii. Články a baterie musí být chráněny tak, aby se zamezilo zkratům. Toto zahrnuje ochranu proti dotyku s vodivými materiály uvnitř téhož obalu, který by mohl vést ke zkratu. Vnitřní obaly musí být zabaleny do pevných vnějších obalů, které vyhovují ustanovením pododdílů 4.1.1.1, 4.1.1.2 a 4.1.1.5;
 - (e) články a baterie, které jsou zabudovány v zařízeních, musí být chráněny před poškozením a zkratem a zařízení musí být vybaveno účinnými prostředky zabráňujícími jeho náhodnému uvedení do činnosti. Tento požadavek se nevztahuje na zařízení, která jsou záměrně aktivní v dopravě (vysílače vysokofrekvenční identifikace (RFID), hodiny, snímače atd.) a která nejsou schopna generovat nebezpečné vyvíjení tepla. Jsou-li baterie zabudovány v zařízeních, musí být tato zařízení zabalena do pevných vnějších obalů vyrobených z vhodného materiálu přiměřené pevnosti a konstrukce vzhledem k vnitřnímu objemu obalů a jejich zamýšlenému použití, ledaže je baterii poskytnuta rovnocenná ochrana zařízením, v němž je obsažena;
 - (f) S výjimkou kusů obsahujících knoflíkové baterie zabudované v zařízení (včetně obvodových desek), nebo nejvýše čtyři články zabudované v zařízení nebo nejvýše dvě baterie zabudované v zařízení musí mít každý kus následující označení:
 - (i) označení, že kus obsahuje články nebo baterie „LITHIUM KOV“ nebo „LITHIUM IONT“, jak je to náležité;
 - (ii) upozornění, že se s kusem musí manipulovat opatrně a že při poškození kusu existuje nebezpečí hořlavosti;
 - (iii) upozornění, že se v případě poškození kusu musí použít speciální postupy, včetně prohlídky a přebalení, pokud je to nutné; a
 - (iv) telefonní číslo pro doplňkové informace;
 - (g) Každá zásilka jednoho nebo více kusů označených podle (f) musí být doprovázena dokladem obsahujícím:
 - (i) informaci, že kus obsahuje články nebo baterie „LITHIUM KOV“ nebo „LITHIUM IONT“, jak je to náležité;
 - (ii) upozornění, že se s kusem musí manipulovat opatrně a že při poškození kusu existuje nebezpečí hořlavosti;
 - (iii) upozornění, že se v případě poškození kusu musí použít speciální postupy, včetně prohlídky a přebalení, pokud je to nutné; a
 - (iv) telefonní číslo pro doplňkové informace;

- (h) S výjimkou případů, kdy jsou baterie zabudovány v zařízeních, musí být každý kus schopen odolat zkoušce volným pádem z výšky 1,2 m ve všech orientacích bez poškození článků nebo baterií v něm obsažených, bez posunutí obsahu, které by dovolilo, aby se dostaly do styku baterie s baterií (nebo článek s článkem), a bez uvolnění obsahu; a
- (i) S výjimkou případů, kdy jsou baterie zabudovány v zařízeních nebo s nimi zabaleny, nesmějí kusy překročit 30 kg celkové (brutto) hmotnosti.

Ve výše uvedených požadavcích a v celé ADR se rozumí pod "obsahem lithia" hmotnost lithia na anodě článku s kovem lithia nebo slitinou lithia.

Existují zvláštní položky pro baterie s kovem lithia a pro baterie s ionty lithia, aby se usnadnila přeprava těchto baterií jednotlivými způsoby přepravy a aby se umožnila aplikace rozdílných činností při zásazích v nouzových situacích.

- 190 Aerosoly musí být opatřeny ochranou proti neúmyslnému vyprázdnění. Aerosoly o vnitřním objemu nejvýše 50 ml, které obsahují jen netoxické látky, nepodléhají předpisům ADR.
- 191 Malé nádoby (kartuše) na plyn o vnitřním objemu nejvýše 50 ml, které obsahují jen netoxické látky, nepodléhají předpisům ADR.
- 194 Řízená teplota a kritická teplota, pokud je, jakož i UN číslo (druhá položka) pro každou již zařazenou samovolně se rozkládající látku jsou uvedeny v pododdílu 2.2.41.4.
- 196 Pod touto položkou smějí být přepravovány přípravky, které při laboratorních zkouškách nedetonují v kavitovaném stavu ani nedeflagrují, které nevykazují žádný účinek při zahřívání v uzavřeném prostoru a které neprojevují žádnou výbušnou sílu. Přípravek musí být také tepelně stálý (tj. SADT je 60°C nebo vyšší pro kus o 50 kg). Přípravky, které nesplňují tato kritéria, musí být přepravovány podle ustanovení třídy 5.2 (viz pododdíl 2.2.52.4).
- 198 Roztoky nitrocelulózy s nejvýše 20 % nitrocelulózy mohou být přepravovány jako barvy, kosmetické výrobky, popřípadě tiskařské barvy (viz UN 1210, 1263, 1266, 3066, 3469 a 3470).
- 199 Sloučeniny olova, které, jsou-li smíchány v poměru 1 : 1000 s kyselinou solnou 0,07 M a míchají se po dobu jedné hodiny při teplotě $23^{\circ} \pm 2^{\circ}$ C, přičemž vykazují rozpustnost nejvýše 5 %, se považují za nerozpustné. (viz normu ISO 3711 :1990 „Barviva na bázi chromátu a chromomolybdatu olova – požadavky a zkoušky“) se považují za nerozpustné a nepodléhají předpisům ADR, pokud nesplňují kritéria pro zařazení do jiné třídy.
- 201 Zapalovače a nádoby s náplní do zapalovačů musí splňovat předpisy státu, v němž byly naplněny. Musí být opatřeny ochranou proti neúmyslnému vyprázdnění. Kapalná část plynu nesmí překročit 85 % vnitřního objemu nádoby při 15 °C. Nádoby včetně svých uzávěrů musí být schopny odolat vnitřnímu tlaku, který se rovná dvojnásobku tlaku zkपालněného ropného plynu při 55 °C. Ventilový mechanismus a zažehovací zařízení musí být bezpečným způsobem uzavřeny, přelepeny páskou nebo jinak upevněny, nebo zkonstruovány tak, aby se zamezilo činnosti nebo uniku obsahu během přepravy. Zapalovače nesmějí obsahovat více než 10 g zkपालněného ropného plynu. Nádoby s náplní do zapalovačů nesmějí obsahovat více než 65 g zkपालněného ropného plynu.
- POZNÁMKA:** K odpadovým zapalovačům shromažďovaným jednotlivě viz kapitolu 3.3, zvláštní ustanovení 654.
- 203 Tato položka nesmí být použita pro polychlorované bifenyly, kapalné, UN čísla 2315 a polychlorované bifenyly, tuhé, UN 3432.
- 204 (Vypuštěno)
- 205 Tato položka nesmí být použita pro pentachlorfenol (UN číslo 3155).
- 207 Polymerové kuličky a plastové polymery pro odlévání mohou být vyrobeny z polystyrénu, polymethylmethakrylátu nebo jiného polymerického materiálu.
- 208 Obchodně běžná forma hnojiva na bázi dusičnanu vápenatého, sestávající zejména z dvojných solí (dusičnan vápenatý a dusičnan amonný), obsahující nejvýše 10 % dusičnanu amonného a nejméně 12 % krystalové vody, nepodléhá předpisům ADR.

- 210 Toxiny z rostlin, zvířat nebo bakterií, které obsahují infekční látky, nebo toxiny, které jsou obsaženy v infekčních látkách, musí být přiřazeny ke třídě 6.2.
- 215 Tato položka platí jen pro technicky čistou látku nebo přípravky s touto látkou, které mají SADT vyšší než 75 °C; neplatí proto pro přípravky, které jsou látkami samovolně se rozkládajícími (k samovolně se rozkládajícím látkám viz pododíl 2.2.41.4). Homogenní směsi obsahující nejvýše 35 % hm. azodikarbonamidu a nejméně 65 % inertní látky nepodléhají ustanovením ADR, ledaže jsou splněna kritéria jiných tříd.
- 216 Směsi tuhých látek, které nepodléhají předpisům ADR, s hořlavými kapalinami smějí být přepravovány pod touto položkou bez toho, aby byla předtím použita klasifikační kritéria třídy 4.1, za podmínky, že v době nakládky věcí nebo v době uzavírání obalu, vozidla nebo kontejneru není viditelná žádná volná kapalina. Zatavené balíčky a předměty obsahující méně než 10 ml hořlavé kapaliny obalové skupiny II nebo III, absorbované v tuhém materiálu, nepodléhají ADR, za podmínky, že v balíčku nebo předmětu není žádná volná kapalina.
- 217 Směsi tuhých látek, které nepodléhají předpisům ADR, s toxickými kapalinami smějí být přepravovány pod touto položkou bez toho, aby byla předtím použita klasifikační kritéria třídy 6.1, za podmínky, že v době nakládky věcí nebo v době uzavírání obalu, vozidla nebo kontejneru není viditelná žádná volná kapalina. Tato položka nesmí být použita pro tuhé látky, které obsahují kapalinu obalové skupiny I.
- 218 Směsi tuhých látek, které nepodléhají předpisům ADR, s žíravými kapalinami smějí být přepravovány pod touto položkou, bez toho, aby byla předtím použita klasifikační kritéria třídy 8, za podmínky, že v době nakládky věcí nebo uzavírání obalu, vozidla nebo kontejneru není viditelná žádná volná kapalina.
- 219 Geneticky změněné mikroorganismy (GMMO) a geneticky změněné organismy (GMO) zabalené a označené podle pokynu pro balení P904 pododílu 4.1.4.1 nepodléhají žádným dalším ustanovením ADR.
- Jestliže GMMO nebo GMO splňují kritéria pro zařazení do třídy 6.1 nebo 6.2 (viz 2.2.61.1 a 2.2.62.1) vztahují se na ně ustanovení ADR pro přepravu toxických látek nebo infekčních látek.
- 220 Bezprostředně za oficiálním pojmenováním pro přepravu je nutno udat v závorce pouze technický název hořlavé kapaliny, která je součástí tohoto roztoku nebo směsi.
- 221 Látky, které spadají pod tuto položku, nesmějí náležet k obalové skupině I.
- 224 Látka musí zůstat za normálních přepravních podmínek kapalnou, ledaže by mohlo být zkouškami prokázáno, že látka není ve zmrzlém stavu citlivější než v kapalném stavu. Při teplotách vyšších než -15 °C nesmí zmrznout.
- 225 Hasicí přístroje, které spadají pod tuto položku, smějí být vybaveny ke svému uvedení do činnosti náložkami (náložky pro technické účely klasifikačního kódu 1.4C nebo 1.4 S) beze změny zařazení do třídy 2, skupiny A nebo O podle pododílu 2.2.2.1.3, za podmínky, že celkové množství deflagrační (hnací) výbušné látky nepřekročí 3,2 g na hasicí přístroj.
- 226 Přípravky této látky, které obsahují nejméně 30 % neprchavého, nehořlavého flegmatizačního prostředku, nepodléhají předpisům ADR.
- 227 Při znečtivění vodou a anorganickou inertní látkou nesmí obsah dusičnanu močoviny překročit 75 % hm. a směs nesmí být možno přivést k výbuchu zkouškami typu a) série 1 Příručky zkoušek a kritérií, části I.
- 228 Směsi, které neodpovídají kritériím pro hořlavé plyny (viz odstavec 2.2.2.1.5), musí být přepravovány pod UN 3163.
- 230 Lithiové články a baterie smějí být přepravovány pod touto položkou, jestliže splňují ustanovení uvedená v 2.2.9.1.7.
- 235 Tato položka platí pro předměty, které obsahují výbušné látky třídy 1 a které mohou obsahovat také nebezpečné věci jiných tříd. Tyto předměty jsou používány jako plynové generátory airbagů nebo moduly airbagů nebo předpínače bezpečnostních pásů.

- 236 Vícesložkové polyesterové pryskyřice sestávají ze dvou složek: základního materiálu (třída 3, obalová skupina II nebo III) a z aktivátoru (organický peroxid). Organický peroxid musí být typu D, E nebo F, nevyžadující řízení teploty. Obalová skupina je II nebo III podle kritérií třídy 3 platných pro základní materiál. Omezené množství uvedené ve sloupci (7a) tabulky A kapitoly 3.2 se vztahuje na základní materiál.
- 237 Membránové filtry, včetně oddělovacích papírových listů, povlaků nebo zesilujících materiálů atd., tak jak jsou podávány k přepravě, nesmějí být schopné přenést výbuch, jsou-li podrobeny jedné ze zkoušek série 1, typu a) Příručky zkoušek a kritérií, části 1.
- Mimo to může příslušný orgán na základě výsledků vhodných zkoušek rychlosti hoření se zohledněním standardních zkoušek dle Příručky zkoušek a kritérií, části III, pododdílu 33.2.1 rozhodnout, že membránové filtry z nitrocelulózy ve formě, ve které jsou podávány k přepravě, nepodléhají platným ustanovením pro hořlavé tuhé látky třídy 4.1.
- 238 (a) Akumulátory se považují za bezpečné proti vytečení, jestliže jsou schopny odolat, bez úniku akumulátorové kapaliny, níže uvedené vibrační a tlakové zkoušce.
- Vibrační zkouška:** akumulátor je pevně přichycen na desce vibračního přístroje, která je vystavena jednoduchému sinusovému pohybu o amplitudě 0,8 mm (1,6 mm celkového výkyvu). Frekvence se bude měnit ve stupních po 1 Hz/min. mezi 10 Hz a 55 Hz. Celé pásmo frekvencí se projde v obou směrech v 95 ± 5 minutách pro každou upevňovací pozici akumulátoru (tj. pro každý směr vibrací). Akumulátor se zkouší ve třech vzájemně kolmých polohách (a zejména v poloze, při které se plnicí a odvodušňovací otvory, pokud jsou, nacházejí v převrácené poloze) po tutéž dobu.
- Tlaková zkouška:** v návaznosti na vibrační zkoušku se akumulátor vystaví při teplotě $24 \text{ }^\circ\text{C} \pm 4 \text{ }^\circ\text{C}$ po dobu 6 hodin rozdílovému tlaku nejméně 88 kPa. Akumulátor se zkouší ve třech navzájem kolmých polohách (a zejména v poloze, při které se plnicí a odvodušňovací otvory, pokud jsou, nacházejí v převrácené poloze) po dobu nejméně 6 hodin v každé poloze.
- b) Akumulátory bezpečné proti vytečení nepodléhají předpisům ADR, jestliže při teplotě $55 \text{ }^\circ\text{C}$ elektrolyt nevyteče z rozbité nebo prasklé skříně a není žádná volná kapalina, která by mohla vytéct, a jsou-li póly akumulátorů, které jsou zabaleny pro přepravu, chráněny proti zkratu.
- 239 Akumulátory nebo články akumulátorů nesmějí obsahovat žádné nebezpečné látky kromě sodíku, síry nebo sloučenin sodíku (např. polysulfidů sodíku a tetrachlorhlinitanu sodného). Tyto akumulátory nebo články smějí být podány k přepravě při teplotě, při níž se může sodík v nich obsažený nacházet v kapalném stavu, pouze se schválením příslušného orgánu země původu a za podmínek jím stanovených. Není-li země původu smluvní stranou ADR, musí být schválení a stanovené podmínky uznány příslušným orgánem prvního státu smluvní strany ADR přicházejícího do styku se zásilkou.
- Články musí sestávat z hermeticky uzavřených kovových pouzder, které nebezpečné látky úplně obklopují a jsou zkonstruovány a uzavřeny tak, že je zabráněno jakémukoli úniku těchto nebezpečných látek za normálních podmínek přepravy.
- Akumulátory musí sestávat z článků, které jsou úplně uzavřeny a upevněny v kovové skříně, která je zkonstruována a uzavřena tak, že je zabráněno jakémukoli úniku těchto nebezpečných látek za normálních podmínek přepravy.
- 240 Viz poslední POZNÁMKU v 2.2.9.1.7.
- 241 Přípravek musí být vyroben tak, že zůstává homogenní a že v průběhu přepravy nenastane žádná oddělování fází. Předpisům ADR nepodléhají přípravky s nízkým obsahem nitrocelulózy, které nevykazují nebezpečné vlastnosti, jestliže jsou podrobeny zkouškám pro určení jejich detonačních, deflagračních nebo výbušných schopností při zahřátí pod uzavřením podle zkoušek typu a) série 1 nebo typů b) nebo c) série 2 části I Příručky zkoušek a kritérií a nechovají se jako hořlavá tuhá látka, pokud jsou podrobeny zkoušce č. 1 Příručky zkoušek a kritérií, části III, pododdílu 33.2.1.4 (pro tuto zkoušku musí být látka v destičkové formě, pokud je to nutné, rozdrcena a proseta, aby se velikost zrn zredukovala na méně než 1,25 mm).

- 242 Síra nepodléhá předpisům ADR, pokud je zformována do specifického tvaru (např. kuliček, pilulek, granulí, pastilek nebo vloček).
- 243 Benzin a palivo pro použití v zážehových motorech (např. v automobilech, stacionárních motorech a jiných motorech) musí být přiřazen k této položce bez ohledu na změny těkavosti.
- 244 Tato položka zahrnuje např. hliníkové stěry, hliníkové strusky, použité katody, použitou výstelku nádob a strusky hliníkových solí.
- 247 Alkoholicke nápoje s více než 24 %, nejvýše však 70 % obj. alkoholu, smějí být přepravovány, pokud jde o přepravu v rámci výrobního procesu, v dřevěných sudech o vnitřním objemu větším než 250 litrů a nejvýše 500 litrů, které splňují všeobecné požadavky oddílu 4.1.1, pokud platí, za těchto podmínek:
- (a) dřevěné sudy musí být před naplněním zkontrolovány na těsnost,
 - (b) pro roztažení kapaliny musí být ponechán dostatečný volný plnicí prostor (nejméně 3 %),
 - (c) dřevěné sudy musí být přepravovány s otvory pro zátky směřujícími nahoru,
 - (d) dřevěné sudy musí být přepravovány v kontejnerech, které splňují požadavky Mezinárodní úmluvy o bezpečných kontejnerech (KBK), v jejím platném znění. Každý dřevěný sud musí být upevněn ve speciálním lůžku a zaklíněn pomocí vhodných prostředků tak, že je vyloučen jakýkoli jeho posun během přepravy.
- 249 Ferocer, stabilizovaný proti korozi, s obsahem železa nejméně 10 % nepodléhá předpisům ADR.
- 250 Tato položka smí být používána jen pro vzorky chemických látek, které jsou odebírány za účelem analýzy v souvislosti s použitím Úmluvy o zákazu vývoje, výroby, skladování a použití chemických zbraní a o jejich ničení. Přeprava látek, které pod tuto položku spadají, musí probíhat podle řetězového postupu pro ochranu a bezpečnost, který stanovila Organizace pro zákaz chemických zbraní.
- Chemický vzorek je možno přepravit až poté, co příslušný orgán nebo generální ředitel Organizace pro zákaz chemických zbraní udělil povolení pro přepravu a pokud vzorek odpovídá následujícím požadavkům:
- (a) musí být zabalen podle pokynu pro balení 623 (viz tabulku S-3-8 Doplňku) Technických pokynů ICAO; a
 - (b) při přepravě musí být k přepravnímu dokladu připojen jeden exemplář povolení pro přepravu, ve kterém jsou uvedena množstevní omezení a požadavky na balení.
- 251 Položka SOUPRAVA TESTOVACÍ, CHEMICKÁ nebo SOUPRAVA PRVNÍ POMOCI se vztahuje na skříňky, kazety atd., které obsahují malá množství různých nebezpečných věcí například pro lékařské, analytické nebo zkušební nebo opravářské účely. Tyto soupravy nesmějí obsahovat žádné nebezpečné věci, u kterých je ve sloupci (7a) tabulky A kapitoly 3.2 udán kód množství „0“
- Součásti těchto souprav nesmějí spolu nebezpečně reagovat (viz pojem "nebezpečná reakce" v oddílu 1.2.1). Celkové množství nebezpečných věcí v jedné soupravě nesmí být větší než 1 litr nebo 1 kg. Obalovou skupinou, k níž je přiřazena celá souprava, musí být obalová skupina té látky obsažené v soupravě, která vyžaduje nejpřísnější obalovou skupinu.
- Soupravy, které jsou přepravovány ve vozidlech pro účely první pomoci nebo pro provozní účely, nepodléhají předpisům ADR.
- Soupravy testovací, chemické a soupravy první pomoci obsahující nebezpečné věci ve vnitřních obalech, které nepřekračují omezená množství platné pro jednotlivé látky, jak je uvedeno ve sloupci (7a) tabulky A kapitoly 3.2, smějí být přepravovány podle kapitoly 3.4.
- 252 Vodné roztoky dusičnanu amonného s nejvýše 0,2 % hořlavých látek a s koncentrací nejvýše 80 % nepodléhají předpisům ADR, pokud dusičnan amonný zůstane za všech přepravních podmínek v roztoku.

- 266 Tato látka nesmí být přepravována, jestliže obsahuje méně alkoholu, vody nebo flegmatizačního prostředku než je stanoveno, ledaže by příslušný orgán udělil zvláštní povolení (viz pododdíl 2.2.1.1).
- 267 Trhavyiny typu C obsahující chlorečnany musí být odděleny od výbušných látek, které obsahují dusičnan amonný nebo jiné amonné soli.
- 270 Vodné roztoky anorganických tuhých dusičnanů třídy 5.1 se považují za látky neodpovídající kritériím třídy 5.1, jestliže koncentrace látek v roztoku při nejnižší teplotě, které může být dosaženo během přepravy, nepřekročí 80 % meze nasycení.
- 271 Laktóza, glukóza nebo podobné látky smějí být používány jako flegmatizační prostředek za podmínky, že látka obsahuje nejméně 90% hm. flegmatizačního prostředku. Příslušný orgán může na základě zkoušek typu c) série 6 Příručky zkoušek a kritérií, části 1 oddílu 16, které se provedou nejméně na třech obalech připravených k přepravě schválit přiřazení těchto směsí ke třídě 4.1. Směsi s nejméně 98 % hm. flegmatizačního prostředku nepodléhají předpisům ADR. Kusy, které obsahují směsi s nejméně 90 % hm. flegmatizačního prostředku, nemusí být opatřeny bezpečnostní značkou podle vzoru č. 6.1.
- 272 Tato látka smí být přepravována podle ustanovení pro třídu 4.1 jen se zvláštním povolením příslušného orgánu (viz UN 0143 nebo 0150, jak je to vhodné).
- 273 Maneb stabilizovaný a maneb, přípravky stabilizované proti samozahřátí nemusí být přiřazeny ke třídě 4.2, pokud je možné zkouškami prokázat, že objem 1 m³ látky samovolně nevzplane a že teplota uprostřed vzorku nepřesáhne 200 °C, jestliže je vzorek po dobu 24 hodin udržován na teplotě nejméně 75 °C ± 2 °C.
- 274 Platí ustanovení pododdílu 3.1.2.8.
- 278 Tyto látky smějí být zařazeny a přepravovány pouze se souhlasem příslušného orgánu na základě výsledků zkoušek série 2 a typu c) série 6 Příručky zkoušek a kritérií, části I, provedených na kusech připravených k přepravě (viz pododdíl 2.2.1.1). Příslušný orgán musí určit obalovou skupinu na základě kritérií oddílu 2.2.3 a typu obalu použitého pro zkoušku série 6(c).
- 279 Tato látka byla klasifikována nebo přiřazena k obalové skupině na základě jejich známých účinků na člověka, spíše než striktním použitím klasifikačních kritérií uvedených v ADR.
- 280 Tato položka platí pro předměty používané jako plynové generátory airbagů nebo moduly airbagů nebo předpínače bezpečnostních pásů, které obsahují nebezpečné věci třídy 1 nebo nebezpečné věci jiných tříd a jsou přepravovány jako montážní díly, a pokud tyto předměty, tak jak jsou podávány k přepravě, byly vyzkoušeny podle série zkoušek 6 (c) Příručky zkoušek a kritérií, části I, přičemž nedošlo k výbuchu zařízení, roztříštění pouzdra nebo tlakové nádoby, ani neexistuje nebezpečí úletu střepin nebo tepelné účinky, které by mohly významným způsobem bránit hašení požáru nebo jiným záchranným operacím v bezprostřední blízkosti.
- 282 *(Vypuštěno)*
- 283 Předměty obsahující plyn, které slouží jako tlumiče pérování, včetně zařízení pohlcujících nárazovou energii, nebo vzduchové pružiny, nepodléhají předpisům ADR, za podmínky:
- že každý předmět má plynovou nádobu o vnitřním objemu nejvýše 1,6 litru a plnicí tlak nejvýše 280 barů, přičemž součin vnitřního objemu (v litrech) a plnicího tlaku (v barech) nepřekročí 80 (tj. plynová nádoba o vnitřním objemu 0,5 litru a plnicí tlak 160 barů nebo plynová nádoba o vnitřním objemu 1 litr a plnicí tlak 80 barů nebo plynová nádoba o vnitřním objemu 1,6 litru a plnicí tlak 50 barů nebo plynová nádoba o vnitřním objemu 0,28 litrů a plnicí tlak 280 barů);
 - že každý předmět má minimální tlak při protržení čtyřikrát vyšší než plnicí tlak při 20 °C, pokud vnitřní objem plynové nádoby nepřekračuje 0,5 litru, a pětikrát vyšší než plnicí tlak, je-li vnitřní objem tlakové nádoby větší než 0,5 litru;
 - že každý předmět je zhotoven z výrobního materiálu, který se při protržení netříští;

protřzení nebo popraskání součástí, které jsou vystaveny tlaku zkapalněného plynu. Chladicí stroje a součásti chladicích strojů, které obsahují méně než 12 kg plynu, nepodléhají předpisům ADR.

292 (Vypuštěno)

293 Pro zápalky platí tyto definice:

- (a) větrové zápalky jsou zápalky, jejichž hlavičky jsou zhotoveny ze zápalné složky citlivé na tření a pyrotechnické složky, které hoří malým plamenem nebo bez plamene, avšak s velkou teplotou;
- (b) bezpečnostní zápalky jsou zápalky, které jsou spojeny nebo upevněny do knížečky, složky nebo krabičky a které je možno zapálit třením jen na připraveném povrchu;
- (c) zápalky „zápalné kdekoli“ jsou zápalky, které mohou být zapáleny třením na pevném povrchu;
- (d) voskové zápalky jsou zápalky, které mohou být zapáleny třením jak na připraveném, tak i na pevném povrchu.

295 Není nutné označovat každý jednotlivý akumulátor nápisy a bezpečnostními značkami, jsou-li odpovídající nápisy a bezpečnostní značky umístěny na paletě.

296 Tyto položky se vztahují na záchranné prostředky, jako jsou záchranné čluny, osobní plovací prostředky a samonafukovací skluzavky. UN 2990 se vztahuje na samonafukovací prostředky a UN 3072 se vztahuje na záchranné prostředky, které nejsou samonafukovací. Záchranné prostředky mohou obsahovat:

- (a) signální prostředky (třída 1), které mohou zahrnovat dýmotvorné a světelné signální prostředky, zabalené v obalech, které je chrání před neúmyslnou aktivací;
- (b) jen UN 2990 smí zahrnovat náložky pro technické účely podtřídy 1.4, skupiny snášenlivosti S pro samonafukovací mechanismus a za podmínky, že množství výbušné látky na prostředek nepřekročí 3,2 g;
- (c) stlačené nebo zkapalněné plyny třídy 2, skupiny A nebo O podle odstavce 2.2.2.1.3;
- (d) elektrické akumulátory (třída 8) a lithiové baterie (třída 9);
- (e) soupravy první pomoci nebo opravářské soupravy obsahující malá množství nebezpečných věcí (např. látky třídy 3, 4.1, 5.2, 8 nebo 9); nebo
- (f) zápalky „zápalné kdekoli“ zabalené v obalech, které je chrání před neúmyslnou aktivací.

Záchranné prostředky zabalené v pevných tuhých vnějších obalech o nejvyšší celkové (brutto) hmotnosti 40 kg, neobsahující žádné jiné nebezpečné věci než stlačené nebo zkapalněné plyny třídy 2, skupiny A nebo skupiny O, v nádobách o vnitřním objemu nejvýše 120 ml, které jsou v záchranných prostředcích obsaženy pouze za účelem jejich aktivace, nepodléhají ustanovením ADR.

298 (Vypuštěno)

300 Rybí moučka, rybí odpad a „krill“ moučka nesmějí být nakládány, jestliže teplota v době nakládky překračuje 35 °C, nebo je o 5 °C nad teplotou okolí, podle toho, která z těchto teplot je vyšší.

302 Zaplyňované nákladní dopravní (přepravní) jednotky, které neobsahují žádné jiné nebezpečné věci, podléhají pouze ustanovením oddílu 5.5.2.

303 Nádoby musí být přiřazeny ke klasifikačnímu kódu plynu nebo směsi plynů, který (kterou) obsahují, určenému podle ustanovení oddílu 2.2.2.

304 Tato položka smí být použita pouze pro přepravu neaktivovaných akumulátorů, které obsahují suchý hydroxid draselný a které jsou určeny k aktivaci před použitím přidáním patřičného množství vody do jednotlivých článků.

- 305 Tyto látky nepodléhají předpisům ADR, pokud jsou v koncentracích nejvýše 50 mg/kg.
- 306 Tato položka smí být použita pouze pro látky, které nevykazují výbušné vlastnosti třídy 1, jsou-li podrobeny zkouškám sérií 1 a 2 třídy 1 (viz Příručku zkoušek a kritérií, část I).
- 307 Tato položka smí být použita pouze pro homogenní směsi obsahující dusičnan amonný jako hlavní složku v rozmezí těchto mezních hodnot:
- nejméně 90 % dusičnanu amonného s nejvýše 0,2 % hořlavých/organických látek vyjádřených jako ekvivalent uhlíku a popřípadě s přísadou, která je anorganická a inertní vůči dusičnanu amonnému; nebo
 - méně než 90 %, ale více než 70 % dusičnanu amonného s jinými anorganickými látkami, nebo více než 80 %, ale méně než 90 % dusičnanu amonného ve směsi s uhličitánem vápenatým a/nebo dolomitem a/nebo minerálním síranem vápenatým a nejvýše 0,4 % hořlavých/organických látek vyjádřených jako ekvivalent uhlíku; nebo
 - dusíkatá hnojiva na bázi dusičnanu amonného obsahující směsi dusičnanu amonného se síranem amonným s více než 45 %, ale méně než 70 % dusičnanu amonného a nejvýše 0,4 % hořlavých/organických látek vyjádřených jako ekvivalent uhlíku tak, že součet procentních podílů dusičnanu amonného a síranu amonného překročí 70 %.
- 309 Tato položka se vztahuje na neznecitlivěné emulze, suspenze a gely sestávající v první řadě ze směsi dusičnanu amonného a paliva, určené k výrobě trhaviny typu E teprve po dalším zpracování před použitím.
- Směs pro emulze má obvykle toto složení: 60 – 85 % dusičnanu amonného; 5 – 30 % vody; 2 – 8 % paliva; 0,5 – 4 % emulgátoru; 0 – 10 % rozpustných omezovačů plamene a stopové přísady. Část dusičnanu amonného může být nahrazena jinými anorganickými nitrátovými solemi.
- Směs pro suspenze a gely má obvykle toto složení: 60 – 85 % dusičnanu amonného; 0 – 5 % chloristanu sodného nebo draselného; 0 – 17 % hexaminonitrátu nebo monomethylaminonitrátu; 5 – 30 % vody; 2 – 15 % paliva; 0,5 – 4 % zahušťovadla, 0 – 10 % rozpustných omezovačů plamene a stopové přísady. Část dusičnanu amonného může být nahrazena jinými anorganickými nitrátovými solemi.
- Tyto látky musí vyhovět zkouškám série 8 Příručky zkoušek a kritérií, části I, oddílu 18 a musí být schváleny příslušným orgánem.
- 310 Zkušební předpisy pododdílu 38.3 Příručky zkoušek a kritérií se nevztahují na výrobní série sestávající z nejvýše 100 článků a baterií, ani na předvýrobní prototypy článků a baterií, jsou-li tyto prototypy přepravovány ke zkouškám, jestliže
- články a baterie jsou přepravovány ve vnějším obalu, kterým je kovový, plastový nebo překližkový sud, nebo kovová, plastová nebo dřevěná bedna a který splňuje kritéria pro obalovou skupinu I; a
 - každý článek a baterie je jednotlivě zabalen(a) ve vnitřním obalu uvnitř vnějšího obalu a je obklopen(a) fixačním materiálem, který je nehořlavý a nevodivý.
- 311 Látky nesmějí být přepravovány pod touto položkou, ledaže to schválil příslušný orgán na základě výsledků příslušných zkoušek podle části I Příručky zkoušek a kritérií. Obal musí zajistit, aby procentní podíl ředidla neklesl v žádném okamžiku během přepravy pod procentní podíl uvedený ve schválení příslušného orgánu.
- 312 *(Vyhrazeno)*
- 313 *(Vypuštěno)*
- 314
- Tyto látky jsou náchylné k exotermickému rozkladu při zvýšených teplotách. Rozklad může být vyvolán teplem nebo nečistotami (např. práškovými kovy (železo, mangan, kobalt, hořčík) a jejich sloučeninami);
 - Během přepravy musí být tyto látky chráněny před přímým slunečním svitem a všemi zdroji tepla a musí být uloženy na dostatečně odvětrávaných místech.

- 315 Tato položka nesmí být použita pro látky třídy 6.1, které splňují kritéria toxicity při vdechnutí pro obalovou skupinu I, uvedená v odstavci 2.2.61.1.8.
- 316 Tato položka se vztahuje pouze na chloman vápenatý, suchý pokud je přepravován ve formě nedrobových tablet.
- 317 „Štěpné-vyjmuté“ se vztahuje pouze na ty kusy, které splňují ustanovení pododdílu 6.4.11.2.
- 318 Pro účely dokumentace musí být oficiální pojmenování pro přepravu doplněno technickým názvem (viz pododdíl 3.1.2.8). Jsou-li infekční látky, které se mají přepravovat, neznámé, avšak existuje podezření, že splňují kritéria pro zařazení do kategorie A a přiřazení k UN číslu 2814 nebo 2900, musí být v přepravním dokladu uvedena v závorkách za oficiálním pojmenováním pro přepravu slova „podezření na infekční látku kategorie A“.
- 319 Látky zabalené a označené podle pokynu pro balení P650 nepodléhají žádným jiným ustanovením ADR.
- 320 *(Vypuštěno)*
- 321 Tyto akumulární systémy musí být vždy pokládány za systémy obsahující vodík.
- 322 Jsou-li tyto věci přepravovány ve formě nedrobových tablet, jsou přiřazeny k obalové skupině III.
- 323 *(Vyhrazeno)*
- 324 Tato látka musí být stabilizována, jestliže její koncentrace nepřekračuje 99 %.
- 325 V případě neštěpného nebo štěpného vyjmutého hexafluoridu uranu musí být látka zařazena pod UN 2978.
- 326 V případě štěpného hexafluoridu uranu musí být látka zařazena pod UN 2977.
- 327 Odpadové aerosoly zasílané podle 5.4.1.1.3 mohou být přepravovány pod touto položkou za účelem recyklace nebo likvidace. Nemusí být chráněny proti neúmyslnému vyprázdnění za podmínky, že jsou učiněna opatření, aby se zamezilo nebezpečnému nárůstu tlaku a nebezpečné atmosféře. Odpadové aerosoly, s výjimkou těch, které jsou netěsné nebo silně deformované, musí být baleny podle pokynu pro balení P207 a zvláštního ustanovení pro balení PP87 nebo pokynu pro balení LP02 a zvláštního ustanovení pro balení L2. Netěsné nebo silně deformované aerosoly musí být přepravovány v záchranných obalech za podmínky, že jsou učiněna vhodná opatření k tomu, aby nedošlo k nebezpečnému nárůstu tlaku.
- POZNÁMKA:** Pro přepravu po moři nesmějí být odpadové aerosoly přepravovány v uzavřených kontejnerech.
- 328 Tato položka se vztahuje na zásobníky do palivových článků včetně těch, které jsou obsaženy v zařízeních nebo jsou baleny se zařízeními. Zásobníky do palivových článků, které jsou zamontovány nebo jsou nedílnou součástí systému palivových článků, se považují za obsažené v zařízeních. Zásobník do palivových článků je nádoba, v níž je obsaženo palivo pro jeho vypouštění do palivového článku ventilem (ventily), který(é) řídí průtok paliva do palivového článku. Zásobníky do palivových článků, včetně těch, které jsou obsaženy v zařízeních, musí být zkonstruovány a vyrobeny tak, aby se zamezilo úniku paliva za normálních podmínek přepravy.
- Konstrukční typy zásobníků do palivových článků používajících jako paliva kapaliny musí projít zkouškou vnitřním tlakem při tlaku 100 kPa (přetlak) bez úniku obsahu.
- S výjimkou zásobníků do palivových článků obsahujících vodík v kovovém hydridu, které musí vyhovovat zvláštnímu ustanovení 339, musí každý konstrukční typ zásobníku do palivového článku dokázat projít zkouškou volným pádem z výšky 1,2 metrů na tvrdý povrch v orientaci, při níž může nejpravděpodobněji dojít k selhání zádržného systému, bez jakéhokoli úniku obsahu.
- Jsou-li baterie s kovem lithia nebo baterie s ionty lithia obsaženy v systému palivových článků, musí být zásilka odeslána pod touto položkou a pod náležitými položkami pro UN 3091 BATERIE LITHIOVÉ KOVOVÉ OBSAŽENÉ V ZAŘÍZENÍ nebo UN 3481 BATERIE LITHIUM-IONTOVÉ OBSAŽENÉ V ZAŘÍZENÍ.

- 329 (Vyhrazeno)
- 330 (Vypuštěno)
- 331 (Vyhrazeno)
- 332 Dusičnan hořečnatý, hexahydrát nepodléhá předpisům ADR.
- 333 Směsi ethanolu a benzínu pro použití v zážehových motorech (např. v automobilech, stacionárních motorech a jiných motorech) musí být přiřazeny k této položce bez ohledu na změny těkavosti.
- 334 Zásobník do palivových článků smí obsahovat aktivátor, pokud je vybaven dvěma nezávislými prostředky k zamezení neúmyslného smíchání s palivem během přepravy.
- 335 Směsi tuhých látek, které nepodléhají předpisům ADR, a kapalin nebo tuhých látek ohrožujících životní prostředí musí být zařazeny pod UN 3077 a smějí být přepravovány pod touto položkou, pokud není viditelná žádná volná kapalina v době, kdy je látka nakládána, nebo v době, kdy je uzavírán obal nebo vozidlo nebo kontejner. Každé vozidlo nebo kontejner musí být těsné, jsou-li použity pro přepravu látek ve volně loženém stavu. Je-li viditelná volná kapalina v době, kdy je směs nakládána, nebo v době, kdy je uzavírán obal nebo vozidlo nebo kontejner, musí být směs zařazena pod UN 3082. Těsně uzavřené balíčky a předměty obsahující méně než 10 ml kapaliny ohrožující životní prostředí, nasáklé v tuhém materiálu, ale bez volné kapaliny v balíčku nebo předmětu, nebo obsahující méně než 10 g tuhé látky ohrožující životní prostředí nepodléhají předpisům ADR.
- 336 Jeden kus s nehořlavou tuhou látkou LSA-II nebo LSA-III nesmí při přepravě leteckou dopravou obsahovat aktivitu větší než 3 000 A₂.
- 337 Kusy typu B(U) a typu B(M) nesmějí při přepravě leteckou dopravou obsahovat aktivity větší, než jsou ty následující:
- (a) pro nízkodisperzní radioaktivní látky: jak je dovoleno pro vzor kusu podle specifikace v osvědčení o schválení;
 - (b) pro radioaktivní látky zvláštní formy: 3 000 A₁ nebo 100 000 A₂, podle toho, která z těchto dvou hodnot je nižší;
 - (c) pro všechny ostatní radioaktivní látky: 3 000 A₂.
- 338 Každý zásobník do palivových článků přepravovaný pod touto položkou a zkonstruovaný k tomu, aby obsahoval zkpalněný hořlavý plyn, musí:
- (a) být schopen odolat bez úniku obsahu nebo prasknutí tlaku rovnajícimu se nejméně dvojnásobku rovnovážného tlaku obsahu při 55 °C;
 - (b) neobsahovat více než 200 ml zkpalněného hořlavého plynu, jehož tenze par nesmí překročit 1 000 kPa při 55 °C; a
 - (c) projít úspěšně zkouškou v lázni s horkou vodou předepsanou v 6.2.6.3.1.
- 339 Zásobníky do palivových článků obsahující vodík v kovovém hydridu přepravované pod touto položkou nesmějí mít hydraulický vnitřní objem větší než 120 ml.
- Tlak v zásobníku do palivových článků nesmí překročit 5 MPa při 55 °C. Konstrukční typ musí odolat bez úniku obsahu nebo roztržení tlaku rovnajícimu se dvojnásobku výpočtového tlaku zásobníku při 55 °C, nebo tlaku o 200 kPa vyššímu než je výpočtový tlak zásobníku při 55 °C, podle toho, který z nich je vyšší. Tlak, při kterém se tato zkouška provádí, je zmíněn ve zkoušce volným pádem a ve vodíkové cyklační zkoušce jako „minimální tlak při roztržení pláště“.
- Zásobníky do palivových článků musí být plněny podle postupů stanovených výrobcem. Výrobce musí ke každému zásobníku do palivových článků poskytnout následující informace:
- (a) inspekční postupy, které je třeba provést před prvním plněním a před opakovaným plněním zásobníku do palivových článků;
 - (b) bezpečnostní opatření a potenciální nebezpečí, které je třeba si uvědomit;
 - (c) metodu pro určení okamžiku, kdy bylo dosaženo jmenovitého vnitřního objemu;

- (d) minimální a maximální tlakový rozsah;
- (e) minimální a maximální teplotní rozsah; a
- (f) jakékoli další požadavky, které je třeba dodržet při prvním plnění a opakovaném plnění včetně druhu zařízení, které je třeba používat pro první plnění a opakované plnění.

Zásobníky do palivových článků musí být konstruovány a vyrobeny tak, aby se zamezilo úniku paliva za normálních podmínek přepravy. Každý konstrukční typ zásobníku, včetně zásobníků, které jsou nedílnou součástí palivového článku, musí být s úspěchem podroben následujícím zkouškám:

Zkouška volným pádem

Zkouška volným pádem z výšky 1.8 metru na tvrdý povrch ve čtyřech různých orientacích:

- (a) vertikálně, na konec obsahující montážní jednotku s uzavíracím ventilem;
- (b) vertikálně, na konec protilehlý montážní jednotce s uzavíracím ventilem;
- (c) horizontálně, na ocelový hrot o průměru 38 mm, s ocelovým hrotem v poloze nahoru; a
- (d) pod úhlem 45° na konec obsahující montážní jednotku s uzavíracím ventilem.

Nesmí dojít k žádnému úniku, který se zjišťuje za použití roztoku mýdlových bublin nebo jinými rovnocennými prostředky na všech možných místech netěsnosti, když je zásobník naplněn na svůj jmenovitý plnicí tlak. Zásobník do palivových článků pak musí být hydrostaticky natlakován až do své destrukce. Zaznamenaný tlak při roztržení musí překročit 85 % minimálního tlaku při roztržení pláště.

Zkouška ohněm

Zásobník do palivových článků naplněný do svého jmenovitého vnitřního objemu vodíkem musí být podroben zkoušce vložení do ohně. Konstrukční typ zásobníku, který smí zahrnovat jako nedílnou součást pojistné odvětrávací zařízení, je považován za vyhovující při zkoušce ohněm, jestliže:

- (a) vnitřní tlak poklesne na nulový přetlak bez prasknutí zásobníku; nebo
- (b) zásobník odolá ohni po dobu nejméně 20 minut bez prasknutí.

Vodíková cyklační zkouška

Tato zkouška je určena k tomu, aby se zajistilo, že během používání zásobníku do palivových článků nebudou překročeny meze výpočtového napětí zásobníku.

Zásobník do palivových článků musí být podroben tlakovým cyklům od nejvýše 5 % jmenovité kapacity vodíku do nejméně 95 % jmenovité kapacity vodíku a zpět k nejvýše 5 % jmenovité kapacity vodíku. Pro plnění musí být použit jmenovitý plnicí tlak a teploty musí být udržovány v rozmezí provozních teplot. Musí být provedeno nejméně 100 tlakových cyklů.

Po cyklační zkoušce musí být zásobník do palivových článků naplněn a musí být změřen objem vody vytlačené zásobníkem. Konstrukční typ zásobníku se považuje za úspěšně prošlý vodíkovou cyklační zkouškou, jestliže objem vody vytlačené cyklovaným zásobníkem nepřevyšuje objem vody vytlačené necyklovaným zásobníkem naplněným do 95 % jmenovité kapacity a natlakovaným do 75 % minimálního tlaku při roztržení pláště.

Zkouška těsnosti ve výrobě

Každý zásobník do palivových článků musí být podroben kontrolní zkoušce těsnosti při 15 °C ± 5 °C za natlakování na jeho jmenovitý plnicí tlak. Nesmí dojít k žádnému úniku, který se zjišťuje za použití roztoku mýdlových bublin nebo jinými rovnocennými prostředky na všech možných místech netěsnosti.

Každý zásobník do palivových článků musí být trvale označen následujícími údaji:

- (a) jmenovitým plnicím tlakem v MPa;

- (b) sériovým číslem výrobce zásobníků do palivových článků nebo unikátním identifikačním číslem;
a
- (c) datem ukončení použitelnosti založeném na maximální provozní životnosti (rok ve čtyřech číslicích; měsíc ve dvou číslicích).
- 340 Chemické soupravy, soupravy první pomoci a soupravy polyesterové pryskyřice obsahující nebezpečné věci ve vnitřních obalech, které nepřekračují množství limity pro vyňatá množství platné pro jednotlivé látky, jak je to udáno ve sloupci (7b) tabulky A kapitoly 3.2, smějí být přepravovány podle kapitoly 3.5. Látky třídy 5.2, i když nejsou jednotlivě dovoleny jako vyňatá množství ve sloupci (7b) tabulky A kapitoly 3.2, jsou dovoleny v takových soupravách a je jim přiřazen kód E2 (viz 3.5.1.2).
- 342 Vnitřní nádoby ze skla (jako jsou ampule nebo kapsle) určené jen pro použití ve sterilizačních zařízeních, pokud obsahují méně než 30 ml ethylenoxidu na vnitřní obal s nejméně 300 ml na vnější obal, smějí být přepravovány podle ustanovení v kapitole 3.5, bez ohledu na údaj „E0“ ve sloupci (7b) tabulky A kapitoly 3.2, za podmínky, že:
- (a) po naplnění byla každá vnitřní nádoba ze skla podrobena zkoušce těsnosti v lázni s horkou vodou při teplotě a na dobu, které jsou dostatečné k tomu, aby se zajistilo dosažení vnitřního tlaku rovnajícího se tenzi par ethylenoxidu při 55 °C. Každá vnitřní nádoba ze skla vykazující stopy netěsnosti, deformace nebo jiného poškození při této zkoušce nesmí být přepravována podle tohoto zvláštního ustanovení;
- (b) kromě obalu vyžadovaného podle 3.5.2 je každá vnitřní nádoba ze skla vložena do zataveného pytle z plastu snášenlivého s ethylenoxidem a schopného zadržet obsah v případě rozbití nebo netěsnosti vnitřní nádoby ze skla; a
- (c) každá vnitřní nádoba ze skla je chráněna prostředky proti propíchnutí pytle z plastu (např. pouzdry nebo vycpávkovým materiálem) v případě poškození obalu (např. promáčknutím).
- 343 Tato položka platí pro surovou ropu obsahující sirovodík v dostatečné koncentraci, takže páry uvolněné ze surové ropy mohou představovat nebezpečí při vdechování. Přiřazená obalová skupina se určí podle nebezpečí hořlavosti a nebezpečí při vdechování podle stupně představovaného nebezpečí.
- 344 Ustanovení uvedená v 6.2.6 musí být dodržena.
- 345 Tento plyn obsažený v otevřených kryogenních nádobách o vnitřním objemu nejvýše 1 litr vyrobených s dvojitými stěnami ze skla, přičemž prostor mezi vnitřní a vnější stěnou je zbaven vzduchu (vakuová izolace), nepodléhá ustanovením ADR, pokud je každá nádoba přepravována ve vnějším obalu s vhodným fixačním nebo absorpčním materiálem, aby byla chráněna před poškozením při nárazu.
- 346 Otevřené kryogenní nádoby odpovídající požadavkům pokynu pro balení P203 pododdílu 4.1.4.1 a neobsahující žádné nebezpečné věci mimo UN 1977 dusík, hluboce zchlazený, kapalný, který je plně absorbován v porézním materiálu, nepodléhají žádným jiným ustanovením ADR.
- 347 Tato položka se použije pouze tehdy, jestliže výsledky série zkoušek 6 (d) části I Příručky zkoušek a kritérií prokázaly, že jakékoli nebezpečné účinky vyvolané činností jsou omezeny na vnitřek kusu.
- 348 Baterie vyrobené po 31. prosinci 2011 musí mít na vnější skříni vyznačenu jmenovitou zatížitelnost ve watthodinách.
- 349 Směsi chlornanu s amonnou solí nejsou připuštěny k přepravě. UN 1791 chlornan, roztok je látkou třídy 8.
- 350 Bromičnan amonný a jeho vodné roztoky a směsi bromičnanu s amonnou solí nejsou připuštěny k přepravě.
- 351 Chlorečnan amonný a jeho vodné roztoky a směsi chlorečnanu s amonnou solí nejsou připuštěny k přepravě.

- 352 Chloritan amonný a jeho vodné roztoky a směsi chloritanu s amonnou solí nejsou připuštěny k přepravě.
- 353 Manganistan amonný a jeho vodné roztoky a směsi manganistanu s amonnou solí nejsou připuštěny k přepravě.
- 354 Tato látka je toxická při vdechování.
- 355 Kyslíkové láhve pro použití v nouzových situacích přepravované pod touto položkou smějí zahrnovat zabudované spouštěcí náložky (náložky pro technické účely podtřídy 1.4, skupiny snášenlivosti C nebo S) beze změny klasifikace ve třídě 2, pokud celkové množství deflagrujících (hnacích) výbušných látek nepřekročí 3,2 g na kyslíkovou láhev. Láhve se zabudovanými spouštěcími náložkami připravené k přepravě musí mít účinné prostředky k zamezení nechtěné aktivace.
- 356 Zásobníkové systémy s hydridem kovu zabudované ve vozidlech, železničních vozech, plavidlech nebo letadlech nebo ve zkompletovaných dílech nebo určené k zabudování do vozidel, železničních vozů, plavidel nebo letadel musí být schváleny příslušným orgánem země výroby¹ před přijetím k přepravě. Převážní doklad musí obsahovat zápis, že kus byl schválen příslušným orgánem země výroby¹, nebo každou zásilku musí doprovázet kopie schválení příslušného orgánu země výroby¹.
- 357 Surová ropa obsahující sirovodík v dostatečné koncentraci, takže páry uvolněné ze surové ropy mohou představovat nebezpečí při vdechování, musí být přepravována pod položkou UN 3494 ROPA SUROVÁ, KYSELÁ, HOŘLAVÁ, TOXICKÁ.
- 358 Nitroglycerin, roztok v alkoholu, s více než 1 %, ale nejvýše 5 % nitroglycerinu, smí být zařazen do třídy 3 a přiřazen k UN 3064, pokud jsou dodrženy všechny požadavky pokynu pro balení P300 v 4.1.4.1.
- 359 Nitroglycerin, roztok v alkoholu, s více než 1 %, ale nejvýše 5 % nitroglycerinu, musí být zařazen do třídy 1 a přiřazen k UN 0144, pokud nejsou dodrženy všechny požadavky pokynu pro balení P300 v 4.1.4.1.
- 360 Vozidla, která jsou poháněna jen bateriemi s kovem lithia nebo bateriemi s ionty lithia, musí být zařazena pod položku UN 3171 vozidlo na akumulátorový pohon.
- 361 Tato položka platí pro elektrické dvouvrstvé kondenzátory s kapacitou akumulace energie větší než 0,3 Wh. Kondenzátory s kapacitou akumulace energie 0,3 Wh nebo menší nepodléhají ADR. Kapacitou akumulace energie se rozumí energie zadržovaná kondenzátorem, jak je vypočtena použitím jmenovitého elektrického napětí a kapacitance. Všechny kondenzátory, pro něž tato položka platí, včetně kondenzátorů obsahujících elektrolyty, který nesplňuje klasifikační kritéria žádné třídy nebezpečných věcí, musí splňovat následující podmínky:
- (a) Kondenzátory, které nejsou zabudovány v zařízení, musí být přepravovány v nenabitěm stavu. Kondenzátory, které jsou zabudovány v zařízení, musí být přepravovány buď v nenabitěm stavu, nebo musí být chráněny proti zkratu;
 - (b) Každý kondenzátor musí být chráněn proti potenciálnímu nebezpečí zkratu při přepravě takto:
 - (i) Je-li kapacita akumulace energie kondenzátoru nejvýše 10 Wh, nebo je-li kapacita akumulace energie každého kondenzátoru v modulu nejvýše 10 Wh, musí být kondenzátor nebo modul chráněn proti zkratu nebo být opatřen kovovým páskem spojujícím svorky; a
 - (ii) Je-li kapacita akumulace energie kondenzátoru nebo kondenzátoru v modulu větší než 10 Wh, musí být kondenzátor nebo modul opatřen kovovým páskem spojujícím svorky;
 - (c) Kondenzátory obsahující nebezpečné věci musí být konstruovány tak, aby odolaly rozdílu tlaků 95 kPa;
 - (d) Kondenzátory musí být konstruovány a vyrobeny tak, aby mohl být bezpečně snížen tlak, který může narůst během jejich používání, pomocí větracího otvoru nebo slabého místa v plášti kondenzátoru. Jakákoliv kapalina, která se uvolní při větrání, musí být zadržena obalem nebo zařízením, v němž je kondenzátor zabudován; a
 - (e) Na kondenzátorech musí být vyznačena jejich kapacita akumulace energie ve Wh.
- Kondenzátory obsahující elektrolyty, který nesplňuje klasifikační kritéria žádné třídy nebezpečných věcí, i když jsou zabudovány v zařízení, nepodléhají jiným ustanovením ADR.

¹ Není-li země výroby smluvní stranou ADR, musí být schválení uznáno příslušným orgánem smluvní strany ADR.

Kondenzátory obsahující elektrolyt, který splňuje klasifikační kritéria kterékoli třídy nebezpečných věcí, s kapacitou akumulace energie 10 Wh nebo méně, nepodléhají jiným ustanovením ADR, pokud jsou schopny v nezabaleném stavu odolat při zkoušce volným pádem z výšky 1,2 metru na pevný povrch bez ztráty obsahu.

Kondenzátory obsahující elektrolyt, splňující klasifikační kritéria kterékoli třídy nebezpečných věcí, které nejsou zabudovány v zařízení a s kapacitou akumulace energie větší než 10 Wh, podléhají ustanovením ADR.

Kondenzátory zabudované v zařízení a obsahující elektrolyt, který splňuje klasifikační kritéria kterékoli třídy nebezpečných věcí, nepodléhají jiným ustanovením ADR, pokud je zařízení zabaleno v pevném vnějším obalu vyrobeném z vhodného materiálu a přiměřené pevnosti a konstrukce ve vztahu k zamýšlenému použití a takovým způsobem, aby se zamezilo náhodnému uvedení kondenzátorů do činnosti během přepravy. Velké robustní zařízení obsahující kondenzátory smí být podáno k přepravě nezabalené nebo na paletách, je-li kondenzátorům poskytována rovnocenná ochrana zařízením, v němž jsou obsaženy.

POZNÁMKA: *Kondenzátory, které svou konstrukcí udržují elektrické napětí na svorkách (např. asymetrické kondenzátory), nepatří pod tuto položku.*

362 (Vyhrazeno)

363 Tato položka platí také pro kapalná paliva, jiná než jsou kapalná paliva vyňatá z platnosti ustanovení ADR podle odstavců (a) nebo (b) v 1.1.3.3, nad množství stanovené ve sloupci (7a) tabulky A kapitoly 3.2, v nádržích, které jsou nedílnou součástí zařízení nebo stroje (např. generátory, kompresory, topné jednotky atd.) jako součást jejich původního konstrukčního typu. Nepodléhají žádným jiným ustanovením ADR, pokud splňují následující podmínky:

- (a) Nádrže splňují konstrukční požadavky příslušného orgánu země výroby²;
- (b) Všechny ventily nebo otvory (např. odvětrávací zařízení) nádrží obsahujících nebezpečné věci jsou během přepravy uzavřeny;
- (c) Stroj nebo zařízení je orientován(o) tak, aby se zamezilo nechtěnému úniku nebezpečných věcí, a zajištěn(o) prostředky schopnými zabránit stroji nebo zařízení v jakémkoli pohybu během přepravy, který by mohl změnit jejich orientaci nebo způsobit jejich poškození;
- (d) Pokud mají nádrže vnitřní objem větší než 60 litrů, nejvýše však 450 litrů, je stroj nebo zařízení označen(o) na jedné z vnějších stran bezpečnostními značkami podle 5.2.2 a pokud je vnitřní objem větší než 450 litrů, nejvýše však 1500 litrů, je stroj nebo zařízení označen(o) na všech čtyřech vnějších stranách bezpečnostními značkami podle 5.2.2; a
- (e) Pokud mají nádrže vnitřní objem větší než 1500 litrů, je stroj nebo zařízení označen(o) na všech čtyřech vnějších stranách velkými bezpečnostními značkami podle 5.3.1.1.1, požadavek uvedený v 5.4.1 platí a v přepravním dokladu je uveden následující dodatečný zápis: „Přeprava podle zvláštního ustanovení 363.

364 Tento předmět smí být přepravován podle ustanovení kapitoly 3.4, jestliže je kus ve stavu, jak je podáván k přepravě, schopen vyhovět při zkoušce podle Série zkoušek 6(d), části I Příručky zkoušek a kritérií, jak je stanoveno příslušným orgánem.

365 K vyrobeným nástrojům a předmětům obsahujícím rtuť viz UN 3506.

366 Vyrobené nástroje a předměty obsahující nejvýše 1 kg rtuti nepodléhají ADR.

367-499 (Vyhrazeno)

500 (Vypuštěno)

501 Naftalen, roztavený, viz UN 2304.

502 UN 2006 plasty na bázi nitrocelulózy, schopné samoohřevu, j.n. a UN 2002 celuloid, odpad jsou látkami třídy 4.2.

² Například dodržení příslušných ustanovení Směrnice 2006/42/ES Evropského parlamentu a Rady ze 17. května 2006 o strojích a pozměňující Směrnice 95/16/ES (Úřední věstník Evropské unie č. L 157z 9. června 2006, str. 0024-0086).

- 503 Fosfor bílý, roztavený, viz UN 2447.
- 504 UN 1847 sulfid draselný, hydratovaný, obsahující nejméně 30 % krystalové vody, UN 1849 sulfid sodný, hydratovaný, obsahující nejméně 30 % krystalové vody a UN 2949 hydrogensulfid sodný, obsahující nejméně 25 % krystalové vody jsou látkami třídy 6.
- 505 UN 2004 amid hořečnatý je látkou třídy 4.2.
- 506 Kovy alkalických zemin a slitiny kovů alkalických zemin v pyroforní formě jsou látkami třídy 4.2. UN 1869 hořčík nebo slitiny hořčíku s více než 50 % hořčíku, jako hrudky, třísky nebo pásky jsou látkami třídy 4.1.
- 507 UN 3048 pesticidy na bázi fosfidu hliníku s přísadami zamezujícími vyvíjení toxických hořlavých plynů jsou látkami třídy 6.1.
- 508 UN 1871 dihydrid titanu a UN 1437 hydrid zirkonia jsou látkami třídy 4.1. UN 2870 tetrahydridoboritan hlinitý je látkou třídy 4.2.
- 509 UN 1908 chloritan, roztok je látkou třídy 8.
- 510 UN 1755 kyselina chromová, roztok je látkou třídy 8.
- 511 UN 1625 dusičnan rtuťnatý, UN 1627 dusičnan rtuťný a UN 2727 dusičnan thallný jsou látkami třídy 6.1. Dusičnan thoričitý, tuhý, dusičnan uranly hexahydrát-roztok a dusičnan uranly, tuhý jsou látkami třídy 7.
- 512 UN 1730 chlorid antimonitý, kapalný, UN 1731 chlorid antimonitý, roztok, UN 1732 fluorid antimonitý a UN 1733 chlorid antimonitý jsou látkami třídy 8.
- 513 UN 0224 azid barnatý, suchý nebo vlhčený méně než 50 % hm. vody je látkou třídy 1. UN 1571 azid barnatý, vlhčený nejméně 50 % hm. vody je látkou třídy 4.1. UN 1854 slitiny barya, pyroforní, jsou látkami třídy 4.2. UN 1445 chlorečnan barnatý, tuhý, UN 1446 dusičnan barnatý, UN 1447 chloristan barnatý, tuhý, UN 1448 manganistan barnatý, UN 1449 peroxid barya, UN 2719 bromičnan barnatý, UN 2741 chlornan barnatý s více než 22 % aktivního chloru, UN 3405 chlorečnan barnatý, roztok a UN 3406 chloristan barnatý, roztok jsou látkami třídy 5.1. UN 1565 kyanid barnatý a UN 1884 oxid barnatý jsou látkami třídy 6.1.
- 514 UN 2464 dusičnan berylnatý je látkou třídy 5.1.
- 515 UN 1581 chlorpikrin a methylbromid, směs a UN 1582 chlorpikrin a methylchlorid, směs jsou látkami třídy 2.
- 516 UN 1912 methylchlorid a dichlormethan, směs je látkou třídy 2.
- 517 UN 1690 fluorid sodný, tuhý, UN 1812 fluorid draselný, tuhý UN 2505 fluorid amonný, UN 2674 hexafluorokřemičitan sodný a UN 2856 hexafluorokřemičitan, j.n., UN 3415 fluorid sodný, roztok a UN 3422 fluorid draselný, roztok jsou látkami třídy 6.1.
- 518 UN 1463 oxid chromový, bezvodý (kyselina chromová, tuhá) je látkou třídy 5.1.
- 519 UN 1048 bromovodík, bezvodý, je látkou třídy 2.
- 520 UN 1050 chlorovodík, bezvodý, je látkou třídy 2.
- 521 Tuhé chloritany a chlornany jsou látkami třídy 5.1.
- 522 UN 1873 kyselina chloristá, vodný roztok s více než 50 % hm., ale nejvýše 72 % hm. čisté kyseliny, je látkou třídy 5.1. Kyselina chloristá, vodný roztok s více než 72 % hm. čisté kyseliny, nebo směs kyseliny chloristé s jinými kapalinami než vodou nejsou přípuštěny k přepravě.
- 523 UN 1382 sulfid draselný, bezvodý a UN 1385 sulfid sodný, bezvodý, jakož i jejich hydráty s méně než 30 % krystalové vody, a UN 2318 hydrogensulfid sodný s méně než 25 % krystalové vody jsou látkami třídy 4.2.

- 524 UN 2858 hotové výrobky ze zirkonia s tloušťkou nejméně 18 μm jsou látkami třídy 4.1.
- 525 Roztoky anorganických kyanidů s celkovým obsahem iontů kyanidu vyšším než 30 % jsou přiřazeny k obalové skupině I, roztoky s celkovým obsahem iontů kyanidu vyšším než 3 %, nejvýše však 30 %, jsou přiřazeny k obalové skupině II a roztoky s celkovým obsahem iontů kyanidu vyšším než 0,3 %, nejvýše však 3 %, jsou přiřazeny k obalové skupině III.
- 526 UN 2000 celuloid je přiřazen ke třídě 4.1.
- 528 UN 1353 vlákna nebo tkaniny impregnované slabě nitrovanou celulózu, neschopné samoohřevu, jsou látkami třídy 4.1.
- 529 UN 0135 fulminát rtuťnatý, vlhčený nejméně 20 % hm. vody nebo směsi alkohol/ voda je látkou třídy 1. Chlorid rtuťný (kalomel) je látkou třídy 9 (UN 3077).
- 530 UN 3293 hydrazin, vodný roztok s nejvýše 37 % hm. hydrazinu je látkou třídy 6.1.
- 531 Směsi s bodem vzplanutí pod 23^o C, které obsahují více než 55 % nitrocelulózy s libovolným obsahem dusíku, nebo nejvýše 55 % nitrocelulózy s obsahem dusíku vyšším než 12,6 % (v suché hmotě) jsou látkami třídy 1 (viz UN 0340 nebo 0342) nebo třídy 4.1.
- 532 UN 2672 amoniak (čpavek), roztok s více než 10 %, ale nejvýše 35 % amoniaku je látkou třídy 8.
- 533 UN 1198 formaldehyd, roztok, hořlavý je látkou třídy 3. Formaldehydové roztoky, nehořlavé, obsahující méně než 25 % formaldehydu nepodléhají předpisům ADR.
- 534 Ačkoliv benzin může mít za určitých klimatických podmínek tenzi par při 50 °C větší než 110 kPa (1,10 bar), nejvýše však 150 kPa (1,50 bar), musí zůstat zařazen jako látka, která má při 50 °C tenzi par nejvýše 110 kPa (1,10 bar).
- 535 UN 1469 dusičnan olovnatý, UN 1470 chloristan olovnatý, tuhý a UN 3408 chloristan olovnatý, roztok jsou látkami třídy 5.1.
- 536 Naftalen, tuhý, viz UN 1334.
- 537 UN 2869 chlorid titanitý, směs, nesamozápalná je látkou třídy 8.
- 538 Síra (v tuhém stavu), viz UN 1350.
- 539 Roztoky isokyanátů s bodem vzplanutí 23 °C nebo vyšším jsou látkami třídy 6.1.
- 540 UN 1326 hafnium, prášek, vlhčený nejméně 25 % vody, UN 1352 titan, prášek, vlhčený nejméně 25 % vody, nebo UN 1358 zirkonium, prášek, vlhčený, nejméně 25 % vody, jsou látkami třídy 4.1.
- 541 Směsi nitrocelulózy, jejichž obsah vody, alkoholu nebo plastifikačních činidel je nižší než předepsané mezní hodnoty, jsou látkami třídy 1.
- 542 Talek (mastek) s tremolitem a/nebo aktinolitem je látkou spadající pod tuto položku.
- 543 UN 1005 amoniak (čpavek), bezvodý, UN 3318 amoniak (čpavek), roztok s více než 50 % amoniaku a UN 2073 amoniak (čpavek), roztok s více než 35 %, avšak nejvýše 50 % amoniaku, jsou látky třídy 2. Roztoky amoniaku (čpavku) s nejvýše 10 % amoniaku nepodléhají předpisům ADR.
- 544 UN 1032 dimethylamin, bezvodý, UN 1036 ethylamin, UN 1061 methylamin, bezvodý a UN 1083 trimethylamin, bezvodý, jsou látkami třídy 2.
- 545 UN 0401 sulfid dipikrylu (sirič dipikrylu) suchý nebo vlhčený méně než 10 % hm. vody je látkou třídy 1.
- 546 UN 2009 zirkonium, suché, hotové plechy, pásy nebo stočený drát, o tloušťce menší než 18 μm , je látkou třídy 4.2. Zirkonium, suché, hotové plechy, pásy nebo stočený drát, o tloušťce nejméně 254 μm , nepodléhá předpisům ADR.
- 547 UN 2210 maneb nebo UN 2210 maneb, přípravky, ve formě schopné samoohřevu jsou látkami třídy 4.2.

- 548 Chlorsilany, které ve styku s vodou vyvíjejí hořlavé plyny, jsou látkami třídy 4.3.
- 549 Chlorsilany s bodem vzplanutí pod 23° C, které ve styku s vodou nevyvíjejí žádné hořlavé plyny, jsou látkami třídy 3. Chlorsilany s bodem vzplanutí 23° C nebo vyšším, které ve styku s vodou nevyvíjejí žádné hořlavé plyny, jsou látkami třídy 8.
- 550 UN 1323 cer, desky, pruty nebo tyče, je látkou třídy 4.1.
- 551 Roztoky těchto isokyanátů s bodem vzplanutí pod 23° C jsou látkami třídy 3.
- 552 Kovy a slitiny kovů v práškové nebo jiné hořlavé formě, které jsou samozápalné, jsou látkami třídy 4.2. Kovy a slitiny v práškové nebo jiné hořlavé formě, které ve styku s vodou vyvíjejí hořlavé plyny, jsou látkou třídy 4.3.
- 553 Tyto směsi peroxidu vodíku a kyseliny peroctové nesmějí při laboratorních zkouškách (viz Příručku zkoušek a kritérií, část II, oddíl 20) vybuchnout v kavitovaném stavu, ani deflagrovat a nesmějí rovněž reagovat na zahřívání v uzavřeném prostoru, ani mít žádnou výbušnou sílu. Tento přípravek musí být tepelně stabilní (teplota samourychlujícího se rozkladu 60° C nebo vyšší pro kus o hmotnosti 50 kg) a musí obsahovat jako prostředek k znečistivění kapalinu, která se snáší s kyselinou peroctovou. Přípravky, které neodpovídají těmto kritériím, se považují za látky třídy 5.2 [viz Příručku zkoušek a kritérií, část II, odstavec 20.4.3 g].
- 554 Hydridy kovů, které ve styku s vodou vyvíjejí hořlavé plyny, jsou látkami třídy 4.3. UN 2870 tetrahydridoboritan hlinitý nebo UN 2870 tetrahydridoboritan hlinitý v přístrojích je látkou třídy 4.2.
- 555 Prach a prášek kovů, netoxické, v nesamozápalné formě, které však ve styku s vodou vyvíjejí hořlavé plyny, jsou látkami třídy 4.3.
- 556 Organokovové sloučeniny a jejich roztoky, které jsou samozápalné, jsou látkami třídy 4.2. Hořlavé roztoky obsahující organokovové sloučeniny v takových koncentracích, že ve styku s vodou nevyvíjejí hořlavé plyny v nebezpečných množstvích, ani nejsou samozápalné, jsou látkami třídy 3.
- 557 Prach a prášek kovů v pyroforní formě jsou látkami třídy 4.2.
- 558 Kovy a slitiny kovů v pyroforní formě jsou látkami třídy 4.2. Kovy a slitiny kovů, které ve styku s vodou nevyvíjejí žádné hořlavé plyny, nejsou pyroforní ani schopné samoohřevu, ale snadno se zapálí, jsou látkami třídy 4.1.
- 559 *(Vypuštěno)*
- 560 Látka zahřátá, kapalná, j.n. přepravovaná při teplotě nejméně 100° C (včetně roztavených kovů a roztavených solí), a, u látek s bodem vzplanutí, při teplotě pod jejich bodem vzplanutí, je látkou třídy 9 (UN 3257).
- 561 Chlorformiáty s převažujícími žíravými vlastnostmi jsou látkami třídy 8.
- 562 Samozápalné organokovové sloučeniny jsou látkami třídy 4.2. Organokovové sloučeniny, hořlavé, reagující s vodou jsou látkami třídy 4.3.
- 563 UN 1905 kyselina selenová je látkou třídy 8.
- 564 UN 2443 trichlorid vanadylu, UN 2444 chlorid vanadičitý a UN 2475 chlorid vanaditý jsou látkami třídy 8.
- 565 K této položce jsou přiřazeny nespécifikované odpady, které pocházejí z lékařských/veterinárních ošetření lidí/zvířat nebo z biologického výzkumu, u kterých je malá pravděpodobnost, že obsahují látky třídy 6.2. Dekontaminované klinické odpady nebo odpady pocházející z biologického výzkumu, které dříve obsahovaly infekční látky, nepodléhají předpisům třídy 6.2.
- 566 UN 2030 hydrazin, vodný roztok s více než 37 % hm. hydrazinu je látkou třídy 8.
- 567 *(Vypuštěno)*
- 568 Azid barnatý s obsahem vody pod předepsanou mezní hodnotou je látkou třídy 1, UN 0224.

- 569 - 579 (Vyhrazeno)
- 580 Cisternová vozidla, speciální vozidla a vozidla zvlášť vybavená pro přepravu ve volně loženém stavu musí být po obou bočních stranách a na zadní straně opatřeny označením podle oddílu 5.3.3. Cisternové kontejnery, přemístitelné cisterny, speciální kontejnery a kontejnery speciálně vybavené pro přepravu ve volně loženém stavu musí být opatřeny tímto označením na všech čtyřech stranách.
- 581 Tato položka zahrnuje směsi methylacetylenu a propadienu s uhlovodíky, které jako:
- směs P1 obsahují nejvýše 63 % obj. methylacetylenu a propadienu a nejvýše 24 % obj. propanu a propylenu, přičemž procentní podíl nasycených uhlovodíků C4 činí nejméně 14 % obj.;
- směs P2 obsahují nejvýše 48 % obj. methylacetylenu a propadienu a nejvýše 50 % obj. propanu a propylenu, přičemž procentní podíl nasycených uhlovodíků C4 činí nejméně 5 % obj.;
- jakož i směsi propadienu s 1 až 4% methylacetylenu.
- Ke splnění požadavků týkajících se údajů v přepravním dokladu (pododíl 5.4.1.1) smí být popřípadě použito jako technického názvu pojmenování "Směs P1" nebo "Směs P2".
- 582 Tato položka zahrnuje mimo jiné směsi plynů označené písmenem R..., které jako:
- směs F1 mají při 70 °C tenzi par nejvýše 1,3 MPa (13 bar) a při 50 °C hustotu, která se rovná nejméně hustotě dichlorfluormethanu (1,30 kg/l);
- směs F2 mají při 70 °C tenzi par nejvýše 1,9 MPa (19 bar) a při 50 °C hustotu, která se rovná nejméně hustotě dichlordifluormethanu (1,21 kg/l);
- směs F3 mají při 70 °C tenzi par nejvýše 3 MPa (30 bar) a při 50 °C hustotu, která se rovná nejméně hustotě chlordifluormethanu (1,09 kg/l).
- POZNÁMKA:** Trichlorfluormethan (chladicí plyn R11), 1,1,2-trichlor-1,2,2- trifluorethan (chladicí plyn R 113), 1,1,1-trichlor-2,2,2-trifluorethan (chladicí plyn R 113a), 1-chlor-1,2,2-trifluorethan (chladicí plyn R 133) a 1-chlor-1,1,2-trifluorethan (chladicí plyn R 133b) nejsou látkami třídy 2. Mohou však být součástí směsí F1 až F3.
- Ke splnění požadavků týkajících se údajů v přepravním dokladu (pododíl 5.4.1.1), smí být popřípadě použito jako technického názvu pojmenování "Směs F1", "Směs F2" nebo "Směs F3".
- 583 Tato položka zahrnuje mimo jiné následující směsi, které jako:
- směs A mají při 70 °C tenzi par nejvýše 1,1 MPa (11 bar) a při 50 °C hustotu nejméně 0,525 kg/l,
- směs A01 mají při 70 °C tenzi par nejvýše 1,6 MPa (16 bar) a při 50 °C hustotu nejméně 0,516 kg/l,
- směs A02 mají při 70 °C tenzi par nejvýše 1,6 MPa (16 bar) a při 50 °C hustotu nejméně 0,505 kg/l,
- směs A0 mají při 70 °C tenzi par nejvýše 1,6 MPa (16 bar) a při 50 °C hustotu nejméně 0,495 kg/l,
- směs A1 mají při 70 °C tenzi par nejvýše 2,1 MPa (21 bar) a při 50 °C hustotu nejméně 0,485 kg/l,
- směs B1 mají při 70 °C tenzi par nejvýše 2,6 MPa (26 bar) a při 50 °C hustotu nejméně 0,474 kg/l,
- směs B2 mají při 70 °C tenzi par nejvýše 2,6 MPa (26 bar) a při 50 °C hustotu nejméně 0,463 kg/l,
- směs B mají při 70 °C tenzi par nejvýše 2,6 MPa (26 bar) a při 50 °C hustotu nejméně 0,450 kg/l,
- směs C mají při 70 °C tenzi par nejvýše 3,1 MPa (31 bar) a při 50 °C hustotu nejméně 0,440 kg/l.
- Ke splnění požadavků týkajících se údajů v přepravním dokladu (pododíl 5.4.1.1) smí být popřípadě použito jako technického názvu těchto pojmenování:
- "směs A" nebo "butan"

- "směs A01" nebo "butan"
-
- "směs A02" nebo "butan"
-
- "směs A0" nebo "butan"
-
- "směs A1"
-
- "směs B1"
-
- "směs B2"
-
- "směs B"
-
- "směs C" nebo "propan".

Pro přepravu v cisternách smí být použito obchodních názvů "butan" nebo "propan" jen jako dodatků.

- 584 Tento plyn nepodléhá předpisům ADR, jestliže:
- je v plynném stavu,
 - obsahuje nejvýše 0,5 % vzduchu v plynném stavu;
 - je obsažen v kovových kapslích (sodors, sparklets), které jsou bez vad snižujících jejich pevnost;
 - je zaručena těsnost uzávěrů kapslí;
 - jedna kapsle obsahuje nejvýše 25 g tohoto plynu;
 - jedna kapsle obsahuje nejvýše 0,75 g tohoto plynu na cm³ vnitřního objemu.
- 585 Rumělka nepodléhá předpisům ADR.
- 586 Prášky hafnia, titanu a zirkonia musí obsahovat viditelný přebytek vody. Prášky hafnia, titanu a zirkonia, navlhčené, mechanicky vyrobené, s velikostí částic nejmeně 53 μm, nebo chemicky vyrobené, s velikostí částic nejmeně 840 μm, nepodléhají předpisům ADR.
- 587 Baryumstearát a titaničitan barnatý nepodléhají předpisům ADR.
- 588 Bromid hlinitý a chlorid hlinitý v tuhé hydratované formě nepodléhají předpisům ADR.
- 589 *(Vypuštěno)*
- 590 Chlorid železitý, hexahdrát nepodléhá předpisům ADR.
- 591 Síran olovnatý s nejvýše 3 % volné kyseliny nepodléhá předpisům ADR.
- 592 Prázdné obaly, včetně prázdných IBC a prázdných velkých obalů, prázdná cisternová vozidla, prázdné snímatelné cisterny, prázdné přemístitelné cisterny, prázdné cisternové kontejnery a prázdné malé kontejnery, nevyčištěné, které obsahovaly tuto látku, nepodléhají předpisům ADR.
- 593 Tento plyn, který je určen ke chlazení např. lékařských nebo biologických vzorků, nepodléhá předpisům ADR, je-li obsažen v dvoustěnných nádobách, které odpovídají ustanovením pododdílu 4.1.4.1, pokynu pro balení P203, odstavci (6) pro otevřené kryogenní nádoby, pokud není stanoveno jinak v 5.5.3.
- 594 Následující předměty, které jsou zhotoveny a naplněny podle předpisů státu výroby a jsou zabaleny do pevných vnějších obalů, nepodléhají předpisům ADR:
- UN 1044 přístroje hasící, jestliže jsou opatřeny ochranou proti neúmyslnému uvedení do činnosti;

- UN 3164 předměty pod pneumatickým nebo hydraulickým tlakem, které jsou zkonstruovány tak, aby odolaly větším namáháním než je vnitřní tlak plynu díky přenosu sil, vlastní odolnosti nebo konstrukci.
- 596 Kadmiová barviva, jako sulfidy kadmia, sulfoselenidy kadmia a kadmiové soli vyšších mastných kyselin (např. kadmiumstearát) nepodléhají předpisům ADR.
- 597 Kyselina octová, roztoky s nejvýše 10 % hm. čisté kyseliny nepodléhají předpisům ADR.
- 598 Následující předměty nepodléhají předpisům ADR:
- (a) Nové akumulátory, jestliže:
 - jsou zajištěny proti posunu, pádu a poškození;
 - jsou opatřeny zařízením na přenášení, ledaže by byly stohovány, např. na paletách;
 - nevykazují na vnější straně nebezpečné stopy louhů nebo kyselin;
 - jsou chráněny proti zkratům.
 - (b) Použité akumulátory, jestliže:
 - jejich skříň nevykazují žádné poškození;
 - jsou zajištěny proti netěsnosti, posunu, pádu a poškození, např. stohováním na paletách;
 - nevykazují na vnější straně nebezpečné stopy louhů nebo kyselin;
 - jsou chráněny proti zkratům.
- “Použité akumulátory“ jsou takové, které jsou přepravovány za účelem recyklace po normálním používání.
- 599 *(Vypuštěno)*
- 600 Oxid vanadičný, roztavený a ztuhlý, nepodléhá předpisům ADR.
- 601 Farmaceutické výrobky (léky) připravené k použití, které jsou látkami vyrobenými a zabalenými pro maloobchodní prodej nebo pro distribuci pro osobní potřebu nebo pro domácnost, nepodléhají předpisům ADR.
- 602 Sírníky fosforu obsahující žlutý nebo bílý fosfor nejsou připuštěny k přepravě.
- 603 Kyanovodík, bezvodý, který neodpovídá popisu pro UN číslo 1051 nebo UN číslo 1614, není připuštěn k přepravě. Kyanovodík (kyselina kyanovodíková) s méně než 3 % vody je stabilní, jestliže jeho hodnota pH činí $2,5 \pm 0,5$ a kapalina je čirá a bezbarvá.
- 604 *(Vypuštěno)*
- 605 *(Vypuštěno)*
- 606 *(Vypuštěno)*
- 607 Směsi dusičnanu draselného a dusitanu sodného se solí amonnou nejsou připuštěny k přepravě.
- 608 *(Vypuštěno)*
- 609 Tetranitromethan, který obsahuje hořlavé nečistoty, není připuštěn k přepravě.
- 610 Tato látka není připuštěna k přepravě, jestliže obsahuje více než 45 % kyanovodíku.

- 611 Dusičnan amonný s více než 0,2 % hořlavých látek (včetně organických látek jako ekvivalentů uhlíku) není přípustěn k přepravě, ledaže je součástí látek nebo předmětů třídy 1.
- 612 (Vyhrazeno)
- 613 Roztok kyseliny chlorečné s více než 10 % kyseliny chlorečné a směsi kyseliny chlorečné s jakoukoli kapalinou kromě vody nejsou k přepravě přípustěny.
- 614 2,3,7,8 - tetrachlordibenzo-p-dioxin (TCDD) v koncentracích považovaných podle kritérií pododdílu 2.2.61.1 za velmi toxické není přípustěn k přepravě.
- 615 (Vyhrazeno)
- 616 Látky obsahující více než 40 % kapalných esterů kyseliny dusičné musí vyhovět při zkoušce na výpotek, uvedené v oddílu 2.3.1.
- 617 Dodatečně k typu trhaviny je nutno uvést na kuse obchodní název dotyčné trhaviny.
- 618 V nádobách s 1,2 butadienem nesmí obsah kyslíku v plynné fázi překročit 50 ml/m³.
- 619-622 (Vyhrazeno)
- 623 UN 1829 oxid sírový musí být stabilizován přidáním inhibitorů. Oxid sírový, čistoty nejméně 99,95 %, smí být přepravován bez inhibitoru v cisternách, za podmínky, že jeho teplota je udržována na nejméně 32,5 °C. Při přepravě této látky v cisterně při teplotě nejméně 32,5 °C musí být v přepravním dokladu zápis "**Přeprava při nejnižší teplotě produktu 32,5 °C**".
- 625 Kusy obsahující tyto předměty musí být zřetelně označeny nápisem "**UN 1950 AEROSOLY**".
- 626-627 (Vyhrazeno)
- 632 Tato látka se považuje za samozápalnou (pyroforní).
- 633 Kusy a malé kontejnery s touto látkou musí být opatřeny následujícím nápisem: "**Udržovat vzdálenost od zápalných zdrojů**". Tento nápis musí být uveden v úředním jazyce země odeslání a kromě toho, jestliže tento jazyk není anglický, francouzský ani německý, také v anglickém, francouzském nebo německém jazyce, pokud případné dohody uzavřené mezi státy dotčenými přepravou nestanoví něco jiného.
- 634 (Vypuštěno)
- 635 Kusy obsahující tyto předměty musí být opatřeny bezpečnostní značkou podle vzoru č. 9 pouze tehdy, jestliže jsou předměty plně uzavřeny v obalu, v latěni nebo jiných prostředcích, které brání rychlé identifikaci těchto předmětů.
- 636 (a) Články obsažené v zařízeních nesmí být možno během přepravy vybit tak, aby napětí v otevřeném obvodu kleslo pod 2 volty nebo pod dvě třetiny napětí nevybitého článku, podle toho, která hodnota je nižší.
- (b) Až do mezilehlého zpracovatelského objektu použité lithiové články a baterie o celkové (brutto) hmotnosti nejvýše 500 g na každý článek nebo baterii, ať obsažené v zařízení nebo ne, shromážděné a podávané k přepravě za účelem jejich likvidace, společně s jinými nelithiovými články nebo bateriemi, nebo bez nich, nepodléhají žádným jiným ustanovením ADR, pokud splňují následující podmínky:
- (i) Jsou dodržena ustanovení pokynu pro balení P903b;
- (ii) Je zaveden systém zajištění kvality, aby bylo zajištěno, že celkové množství lithiových článků nebo baterií na dopravní jednotku nepřekročí 333 kg;
- (iii) Kusy musí být opatřeny nápisem: "**POUŽITÉ LITHIOVÉ ČLÁNKY**".
- 637 Geneticky změněné mikroorganismy a geneticky změněné organismy jsou takové, které nejsou nebezpečné pro člověka ani zvířata, které by však mohly zvířata, rostliny, mikrobiologické látky a ekosystémy změnit takovým způsobem, který se nemůže v přírodě vyskytovat. Geneticky změněné

mikroorganismy a geneticky změněné organismy nepodléhají ustanovením ADR, jsou-li schváleny k používání příslušnými orgány země původu, tranzitu a určení.³

Živých obratlovců ani bezobratlých živočichů nesmí být použito k tomu, aby přepravovali látky přiřazené pod toto UN číslo, ledaže by tyto látky nemohly být přepraveny jiným způsobem.

Pro přepravu snadno zkazitelných látek pod tímto UN číslem je nutno udat patřičné informace, např. "Chladit na + 2 °C/+4 °C" nebo "Přepravovat ve zmrzlém stavu" nebo "Nenechat zmrznout".

- 638 Tyto látky jsou příbuzné samovolně se rozkládajícím látkám (viz odstavec 2.2.41.1.19)
- 639 Viz pododdíl 2.2.2.3, klasifikační kód 2 F, UN 1965, poznámka 2.
- 640 Fyzikální a technické vlastnosti uvedené ve sloupci (2) tabulky A kapitoly 3.2 určují různé kódy cisteren pro přepravu látek téže obalové skupiny v cisternách ADR.
- K identifikaci těchto fyzikálních a technických vlastností látky přepravované v cisterně je nutno údaje vyžadované v přepravním dokladu doplnit pouze v případě přepravy v cisternách ADR takto:
- „Zvláštní ustanovení 640X“, kde „X“ je příslušné velké písmeno, které je uvedeno za odkazem na zvláštní ustanovení 640 ve sloupci (6) tabulky A kapitoly 3.2.
- Od těchto doplňkových údajů je však možno upustit v případě přepravy v typu cisterny, který pro látky určité obalové skupiny určitého UN čísla splňuje alespoň nejpřísnější požadavky.
- 642 Pokud se to v rámci pododdílu 1.1.4.2 nepřipouští, nesmí se tato položka Vzorových předpisů OSN použít pro přepravu roztoku hnojiv s volným amoniakem (čpavkem).
- 643 Litý asfalt nepodléhá předpisům platným pro třídu 9.
- 644 Přeprava této látky je dovolena za podmínky, že:
- hodnota pH naměřená v 10 % vodném roztoku přepravované látky je mezi 5 a 7;
 - roztok neobsahuje hořlavé látky v množství větším než 0,2 % nebo sloučeniny chloru v takovém množství, že obsah chloru překročí 0,02 %.
- 645 Klasifikační kód uvedený ve sloupci (3b) tabulky A kapitoly 3.2 se smí použít jen se souhlasem příslušného orgánu smluvní strany ADR uděleným před přepravou. Schválení musí být vydáno písemně jako osvědčení o schválení klasifikace (viz 5.4.1.2.1 (g)) a musí obdržet jediné jednací číslo. Je-li přiřazení k podtřídě provedeno podle postupu uvedeného v 2.2.1.1.7.2, může příslušný orgán požadovat, aby byla nedostatečná klasifikace ověřena na základě údajů získaných ze zkoušek série 6 Příručky zkoušek a kritérií, části I, oddíl 16.
- 646 Uhlí vyrobené parním aktivačním procesem nepodléhá předpisům ADR.
- 647 Přeprava octa a kyseliny octové potravinářské kvality s nejvýše 25 % hm. čisté kyseliny podléhá pouze těmto požadavkům:
- a) Obaly, včetně IBC a velkých obalů, a cisterny musí být vyrobeny z nerezové oceli nebo z plastu, který je trvale odolný proti žíravosti octa/kyseliny octové potravinářské kvality.
 - b) Obaly, včetně IBC a velkých obalů, a cisterny musí jejich vlastník podrobit nejméně jednou ročně vizuální inspekci. Výsledky inspekce musí být zaznamenány a záznamy uchovávány nejméně jeden rok. Poškozené obaly, včetně IBC a velkých obalů, a cisterny nesmějí být naplněny.
 - c) Obaly, včetně IBC a velkých obalů, a cisterny musí být plněny tak, aby produkt nepřetekl a neupěl na vnějším povrchu.

³ Viz zejména díl C směrnice Evropského parlamentu a Rady 2001/18/ES o záměrném uvolňování geneticky modifikovaných organismů do životního prostředí a o zrušení směrnice Rady 90/220/EHS (Úřední věstník Evropských společenství č. L 106 ze 17. dubna 2001, str. 8 - 14), v němž je stanoven schvalovací postup pro Evropská společenství.

- d) Těsnění a uzávěry musí být odolné proti octu/kyselině octové potravinářské kvality. Obaly, včetně IBC a velkých obalů, a cisterny musí být hermeticky utěsněny baličem nebo plničem tak, aby za normálních podmínek přepravy nedošlo k úniku.
- e) Smějí se používat skupinové obaly s vnitřními obaly ze skla nebo plastu (viz pokyn pro balení P001 v 4.1.4.1), které splňují všeobecná ustanovení pro balení v pododdílech 4.1.1.1, 4.1.1.2, 4.1.1.4, 4.1.1.5, 4.1.1.6, 4.1.1.7 a 4.1.1.8.

Ostatní ustanovení ADR se nepoužijí.

648 Předměty napuštěné tímto pesticidem, jako jsou lepenkové podložky, papírové proužky, kuličky vaty, plastové fólie, v hermeticky uzavřených obalech nepodléhají ustanovením ADR.

649 (Vypuštěno)

650 Odpady sestávající ze zbytků obalů, ztuhlých a kapalných zbytků barev mohou být přepravovány za podmínek obalové skupiny II. Kromě ustanovení UN čísla 1263, obalové skupiny II mohou být odpady baleny a přepravovány také za těchto podmínek:

- (a) Odpady mohou být baleny podle pokynu pro balení P002 pododdílu 4.1.4.1 nebo pokynu pro balení IBC06 pododdílu 4.1.4.2;
- (b) Odpady mohou být baleny do flexibilních IBC typů 13H3, 13H4 a 13H5 v přepravních obalových souborech s plnými stěnami;
- (c) Zkoušení obalů a IBC uvedených pod písmeny (a) nebo (b) se může provádět podle ustanovení kapitol 6.1, popřípadě 6.5, pro tuhé látky na úrovni parametrů obalové skupiny II;

Zkoušky musí být provedeny na obalech a IBC naplněných reprezentativním vzorkem odpadů, jak jsou připraveny k přepravě;

- (d) Přeprava ve volně loženém stavu je povolena ve vozidlech s plachtou, uzavřených kontejnerech nebo velkých kontejnerech s plachtou, vesměs plnostěnných. Nástavba vozidla nebo těleso kontejneru musí být těsné nebo musí být utěsněny, např. pomocí vhodného a dostatečně pevného vnitřního vyložení;
- (e) Jsou-li odpady přepravovány za podmínek tohoto zvláštního ustanovení, musí být podle odstavce 5.4.1.1.3 deklarovány v přepravním dokladu takto:
„UN 1263 ODPAD BARVA, 3, II, (D/E)“, nebo
„UN 1263 ODPAD BARVA, 3, OS II, (D/E)“.

651 Zvláštní ustanovení V2 (1) neplatí, jestliže čistá hmotnost výbušné látky na dopravní jednotku nepřekračuje 4000 kg, za podmínky, že čistá hmotnost výbušné látky na vozidlo nepřekročí 3000 kg.

652 Nádoby z austenitické nerezové oceli, ferritické a austenitické oceli (ocel Duplex) nebo svařovaného titanu, které nespĺňují požadavky kapitoly 6.2, ale byly vyrobeny a schváleny podle vnitrostátních leteckých předpisů pro použití jako palivové nádrže pro horkovzdušný balon nebo horkovzdušnou vzducholod', uvedené do provozu (datum první inspekce) před 1. červencem 2004, mohou být přepravovány po silnici, pokud splňují tyto podmínky:

- (a) Všeobecná ustanovení v 6.2.1 musí být dodržena;
- (b) Konstrukce a výroba nádob musí být schváleny pro použití v letectví národním úřadem pro leteckou dopravu;
- (c) Odchylkou od 6.2.3.1.2 musí být výpočtový tlak odvozen od redukované nejvyšší okolní teploty +40 °C; v tomto případě:
 - (i) odchylkou od 6.2.5.1 mohou být láhve vyrobeny z válcovaného a temperovaného čistého titanu obchodní kvality splňujícího minimální požadavky $R_m > 450$ MPa, $\epsilon_A > 20$ % (ϵ_A = prodloužení po přetržení);
 - (ii) láhve z austenitické nerezové oceli a ferritické a austenitické oceli (ocel Duplex) mohou být používány do úrovně napětí dosahující až 85 % minimální zaručené

meze pružnosti (Re) při výpočtovém tlaku odvozeném od redukované nejvyšší okolní teploty +40°C;

- (iii) nádoby musí být vybaveny zařízením pro vyrovnávání tlaku s nastaveným jmenovitým tlakem 26 barů; zkušební tlak těchto nádob musí být nejméně 30 barů;
- (d) Pokud se nepoužijí odchylky uvedené pod písmenem (c), musí být nádoby konstruovány pro základní teplotu 65°C a musí být vybaveny zařízením pro vyrovnávání tlaku s nastaveným jmenovitým tlakem stanoveným příslušným orgánem země používání;
- (e) Hlavní těleso nádob musí být pokryto vnější vodovzdornou ochrannou vrstvou o tloušťce nejméně 25 mm, vyrobenou z konstrukční buněčné pěny nebo podobného materiálu;
- (f) Během přepravy musí být láhev dobře upevněna v koši nebo dodatečném zajišťovacím prostředku;
- (g) Nádoby musí být označeny jasně viditelnou značkou informující, že jsou určeny jen pro použití v horkovzdušných balonech nebo horkovzdušných vzducholodích;
- (h) Doba používání (od data první inspekce) nesmí překročit 25 let.
- 653 Přeprava tohoto plynu v lahvích majících součin zkušební tlaku a vnitřního objemu nejvýše 15,2 MPa.litr (152 bar.litr) nepodléhá ostatním ustanovením ADR, jsou-li splněny tyto podmínky:
- Ustanovení pro výrobu a zkoušení lahví jsou dodržena;
 - Láhve jsou zabaleny do vnějších obalů, které splňují alespoň požadavky části 4 pro skupinové obaly. Všeobecná ustanovení pro balení v 4.1.1.1, 4.1.1.2 a 4.1.1.5 až 4.1.1.7 musí být dodržena;
 - Láhve nejsou baleny společně s jinými nebezpečnými věcmi;
 - Celková (brutto) hmotnost kusu nepřekračuje 30 kg; a
 - Každý kus je zřetelně a trvanlivě označen nápisem „UN 1006“ pro argon, stlačený, „UN 1013“ pro oxid uhličitý, „UN 1046“ pro helium, stlačené nebo „UN 1066“ pro dusík, stlačený. Toto označení musí být umístěno ve čtverci postaveném na vrchol, který je ohraničen čarou o rozměrech nejméně 100 x 100 mm.

- 654 Odpadové zapalovače shromažďované jednotlivě a zasilané podle 5.4.1.1.3 smějí být přepravovány pod touto položkou za účelem likvidace. Nemusí být chráněny proti neúmyslnému vyprázdnění za podmínky, že jsou učiněna opatření, aby se zamezilo nebezpečnému nárůstu tlaku a nebezpečné atmosféře.

Odpadové zapalovače, s výjimkou těch, které jsou netěsné nebo silně deformované, musí být baleny podle pokynu pro balení P003. Kromě toho platí následující ustanovení:

- musí se používat jen tuhé obaly o maximálním vnitřním objemu 60 litrů;
- obaly musí být naplněny vodou nebo jakýmkoli jiným vhodným ochranným materiálem, aby se předešlo zapálení;
- za normálních podmínek přepravy musí být všechna zažehovací zařízení zapalovačů plně pokryta ochranným materiálem;
- obaly musí být dostatečně odvětrávány, aby se předešlo vytvoření hořlavé atmosféry a nárůstu tlaku;
- kusy musí být přepravovány jen v odvětrávaných nebo nekrytých vozidlech nebo kontejnerech.

Netěsné nebo silně deformované zapalovače musí být přepravovány v záchranných obalech za podmínky, že jsou učiněna vhodná opatření k tomu, aby nedošlo k nebezpečnému nárůstu tlaku.

POZNÁMKA: Na odpadové zapalovače se nevztahuje zvláštní ustanovení 201 ani zvláštní ustanovení pro balení PP84 a RR5 pokynu pro balení P002 v 4.1.4.1.

- 655 Láhve a jejich uzávěry zkonstruované, vyrobené, schválené a označené podle směrnice 97/23/ES⁴ a používané pro dýchací přístroje smějí být přepravovány, aniž by odpovídaly kapitole 6.2, za podmínky, že jsou podrobovány inspekčním a zkouškám uvedeným v 6.2.1.6.1 a interval mezi zkouškami uvedený v pokynu pro balení P200 v pododdílu 4.1.4.1 není překročen. Tlak používaný při hydraulické tlakové zkoušce je tlak vyznačený na láhvi podle směrnice 97/23/ES⁴.
- 656 (Vypuštěno)
- 657 Tato položka se použije jen pro technicky čistou látku; ke směsím komponent LPG viz UN číslo 1965 nebo viz UN číslo 1075 ve spojení s POZNÁMKOU 2 v 2.2.2.3.
- 658 UN 1057 ZAPALOVAČE vyhovující normě EN ISO 9994:2006 + A1:2008 „Zapalovače – Bezpečnostní specifikace“ a UN 1057 NÁDOBKÝ S NÁPLNÍ DO ZAPALOVAČŮ smějí být přepravovány jen za dodržení ustanovení uvedených v 3.4.1 (a) až (h), 3.4.2 (s výjimkou celkové (brutto) hmotnosti 30 kg), 3.4.3 (s výjimkou celkové (brutto) hmotnosti 20 kg), 3.4.11 a 3.4.12, pokud jsou dodrženy následující podmínky:
- (a) Celková (brutto) hmotnost každého kusu je nejvýše 10 kg;
 - (b) Ve vozidle je přepravováno nejvýše 100 kg celkové (brutto) hmotnosti takových kusů; a
 - (c) Každý vnější obal je zřetelně a trvanlivě označen nápisem „UN 1057 ZAPALOVAČE“ nebo „UN 1057 NÁDOBKÝ S NÁPLNÍ DO ZAPALOVAČŮ“, jak je to vhodné.
- 659 Látky, pro které je ve sloupci (9a) a sloupci (11) tabulky A v kapitole 3.2 uveden kód PP86 nebo TP7, a vyžadují tedy, aby byl z výparného prostoru odstraněn vzduch, nesmějí být přepravovány pod tímto UN číslem, nýbrž musí být přepravovány pod svými příslušnými UN čísly, jak jsou uvedena v tabulce A kapitoly 3.2.
- POZNÁMKA:** Viz též 2.2.2.1.7.
- 660 Pro přepravu plynových palivových soustav zkonstruovaných pro zabudování do motorových vozidel, které obsahují tento plyn, nemusí být použita ustanovení pododdílu 4.1.4.1, kapitoly 5.2, kapitoly 5.4 a kapitoly 6.2 ADR, pokud jsou dodrženy následující podmínky:
- (a) Plynové palivové soustavy musí splňovat požadavky Nařízení EHS č. 67, revize 2⁵, Nařízení EHS č. 110, revize 1⁶ nebo Nařízení EHS č. 115⁷ nebo Nařízení (ES) č. 79/2009⁸ ve spojení s Nařízením (EU) č. 406/2010⁹, jak je to vhodné.
 - (b) Plynové palivové soustavy musí být těsné a nesmějí vykazovat žádné známky vnějšího poškození, které by mohlo ovlivnit jejich bezpečnost.

POZNÁMKA 1: Kritéria je možno nalézt v normě ISO 11623:2002 *Přepavitelné plynové láhve – Periodické inspekce a zkoušení kompozitních plynových lahví (nebo ISO DIS 19078 Plynové láhve – Inspekce instalace lahví a rekvalifikace vysokotlakých lahví pro skladování zemního plynu, používaného jako palivo pro samojízdná vozidla, v těchto vozidlech).*

4 Směrnice 97/23/ES Evropského parlamentu a Rady z 29. května 1997 o sblížení právních a správních předpisů členských států týkající se tlakových zařízení (PED) (Úřední věstník Evropských společenství č. L 181 z 9. července 1997, str. 1-55).

5 Nařízení EHS č. 67 (Jednotná ustanovení týkající se: I. schvalování zvláštní výbavy motorových vozidel používajících zkapalněné ropné plyny ve svém pohonném systému; II. schvalování vozidel opatřených zvláštní výbavou pro používání zkapalněných ropných plynů v jejich pohonném systému s ohledem na instalaci takové výbavy).

6 Nařízení EHS č. 110 (Jednotná ustanovení týkající se: I. zvláštních komponentů motorových vozidel používajících stlačený zemní plyn (CNG) ve svém pohonném systému; II. vozidel s ohledem na instalaci zvláštních komponentů schváleného typu pro používání stlačeného zemního plynu (CNG) v jejich pohonném systému).

7 Nařízení EHS č. 115 (Jednotná ustanovení týkající se schvalování: I. zvláštních upravených systémů pro LPG (zkapalněné ropné plyny) k instalaci do motorových vozidel pro použití LPG v jejich pohonném systému; II. zvláštních upravených systémů pro CNG (stlačený zemní plyn) k instalaci do motorových vozidel pro použití CNG v jejich pohonném systému).

8 Nařízení (ES) č. 79/2009 Evropského parlamentu a Rady ze 14. ledna 2009 o typovém schvalování motorových vozidel poháněných vodíkem a pozměňující Směrnice 2007/46/ES.

9 Nařízení Komise (EU) č. 406/2010 z 26. dubna 2010 zavádějící Nařízení (ES) č. 79/2009 Evropského parlamentu a Rady o typovém schvalování motorových vozidel poháněných vodíkem.

POZNÁMKA 2: Nejsou-li plynové palivové soustavy těsné nebo jsou nadměrně naplněné nebo vykazují poškození, které by mohlo ovlivnit jejich bezpečnost, směji být přepravovány jen v záchranných tlakových nádobách odpovídajících ADR.

- (c) Je-li plynová palivová soustava vybavena dvěma nebo více ventily v sérii, musí být dva ventily uzavřeny tak, aby byly za normálních podmínek přepravy plynotěsné. Existuje-li pouze jeden ventil, nebo jestliže jen jeden ventil funguje řádně, musí být všechny otvory, s výjimkou otvoru zařízení pro vyrovnávání tlaku, uzavřeny tak, aby byly za normálních podmínek přepravy plynotěsné.
- (d) Plynové palivové soustavy musí být přepravovány takovým způsobem, aby se zamezilo ucpání zařízení pro vyrovnávání tlaku nebo poškození ventilů nebo jakékoli jiné natlakované části plynové palivové soustavy a nechtěnému uvolnění plynu za normálních podmínek přepravy.
Plynová palivová soustava musí být zajištěna tak, aby se zamezilo jejímu sklouznutí, válení nebo vertikálnímu pohybu.
- (e) Plynové palivové soustavy musí splňovat ustanovení uvedená v 4.1.6.8 (a), (b), (c), (d) nebo (e).
- (f) Ustanovení kapitoly 5.2 o nápisech a bezpečnostních značkách musí být dodržena, ledaže jsou plynové palivové soustavy zasílány v manipulačním zařízení. V tomto případě musí být nápisy a bezpečnostní značky umístěny na manipulačním zařízení.
- (g) Dokumentace

Každá zásilka, která je přepravována podle tohoto zvláštního ustanovení, musí být doprovázena přepravním dokladem, obsahujícím alespoň následující údaje:

- (i) UN číslo plynu obsaženého v plynových palivových soustavách s předřazenými písmeny „UN“;
- (ii) Oficiální pojmenování pro přepravu plynu;
- (iii) Číslo vzoru bezpečnostní značky;
- (iv) Počet plynových palivových soustav;
- (v) V případě zkapalněných plynů čistá (netto) hmotnost v kg plynu každé plynové palivové soustavy a v případě stlačených plynů jmenovitý vnitřní objem v litrech každé plynové palivové soustavy, následovaný jmenovitým provozním tlakem;
- (vi) Názvy a adresy odesílatele a příjemce.

Údaje podle (i) až (v) musí být uvedeny podle jednoho z následujících příkladů:

Příklad 1: UN 1971 plyn zemní, stlačený, 2.1, 1 plynová palivová soustava 50 l celkem, 200 barů

Příklad 2: UN 1965 uhlovodíky, plynné, směs, zkapalněná, j.n., 2.1, 3 plynové palivové soustavy, každá po 15 kg čisté (netto) hmotnosti plynu

POZNÁMKA: Všechna ostatní ustanovení ADR musí být dodržena.

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Přeprava poškozených lithiových baterií, pokud nejsou shromažďovány a podávány k přepravě za účelem jejich likvidace podle zvláštního ustanovení 636, je povolena jen za dodatečných podmínek stanovených příslušným orgánem kterékoli smluvní strany ADR, který může také uznat schválení udělené příslušným orgánem země, která není smluvní stranou ADR, za podmínky, že toto schválení bylo uděleno v souladu s postupy platnými podle ADR nebo RID.

Směji být použity jen ty metody balení, které byly pro tyto věci schváleny příslušným orgánem.

Příslušný orgán může stanovit přísnější přepravní kategorii nebo kód omezení pro tunely, které musí být zahrnuty do schválení příslušného orgánu.

Kopie schválení příslušného orgánu musí doprovázet každou zásilku, nebo musí být v přepravním dokladu uveden odkaz na schválení příslušného orgánu.

Příslušný orgán smluvní strany ADR, který udělil schválení podle tohoto zvláštního ustanovení, musí o tom uvědomit sekretariát UNECE (EHK OSN) za účelem zveřejnění této informace prostřednictvím jeho webových stránek.

POZNÁMKA: Při udělování schválení musí být vzata v úvahu všechna doporučení Spojených národů týkající se technických požadavků na přepravu poškozených lithiových baterií.

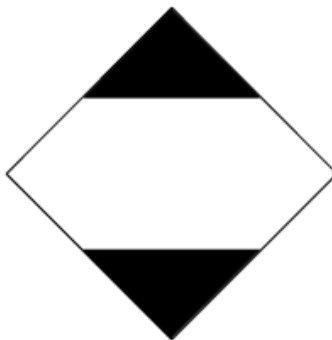
Za poškozené lithiové baterie se považují zejména:

- baterie identifikované výrobcem jako vadné z bezpečnostních důvodů;
- baterie s poškozenými nebo značně deformovanými plášti;
- baterie, u nichž dochází k úniku kapaliny nebo plynu; nebo
- baterie se závadami, které nemohou být diagnostikovány před jejich přepravou do místa jejich analýzy.

KAPITOLA 3.4

NEBEZPEČNÉ VĚCI BALENÉ V OMEZENÝCH MNOŽSTVÍCH

- 3.4.1** Tato kapitola obsahuje ustanovení platná pro přepravu nebezpečných věcí určitých tříd balených v omezených množstvích. Platný množství limit pro vnitřní obal nebo předmět je uveden pro každou látku ve sloupci (7a) tabulky A kapitoly 3.2. Kromě toho je v tomto sloupci uvedeno množství „0“ pro každou položku nebezpečných věcí, které není dovoleno přepravovat podle této kapitoly.
- Nebezpečné věci balené v takových omezených množstvích, splňujících ustanovení této kapitoly, nepodléhají žádným jiným ustanovením ADR, kromě příslušných ustanovení:
- (a) části 1, kapitol 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.8, 1.9;
 - (b) části 2;
 - (c) části 3, kapitol 3.1, 3.2, 3.3 (mimo zvláštní ustanovení 61, 178, 181, 220, 274, 625, 633 a 650 (e));
 - (d) části 4, odstavců 4.1.1.1, 4.1.1.2, 4.1.1.4 až 4.1.1.8;
 - (e) části 5, 5.1.2.1 (a)(i) a (b), 5.1.2.2, 5.1.2.3, 5.2.1.9, 5.4.2;
 - (f) části 6, konstrukčních požadavků v 6.1.4 a odstavců 6.2.5.1 a 6.2.6.1 až 6.2.6.3;
 - (g) části 7, kapitoly 7.1 a 7.2.1, 7.2.2, 7.5.1 (mimo 7.5.1.4), 7.5.2.4, 7.5.7, 7.5.8 a 7.5.9;
 - (h) 8.6.3.3 a 8.6.4.
- 3.4.2** Nebezpečné věci musí být zabaleny jen do vnitřních obalů uložených ve vhodných vnějších obalech. Smějí být použity meziobaly. Kromě toho musí být pro předměty podtřídy 1.4, skupiny snášlivosti S, plně dodržena ustanovení oddílu 4.1.5. Použití vnitřních obalů však není nutné pro přepravu předmětů, jako jsou aerosoly nebo „nádobky, malé, obsahující plyn“. Celková (brutto) hmotnost kusu nesmí překročit 30 kg.
- 3.4.3** S výjimkou předmětů podtřídy 1.4, skupiny snášlivosti S, podložky se smršťovací nebo průtažnou fólií splňující podmínky uvedené v 4.1.1.1, 4.1.1.2 a 4.1.1.4 až 4.1.1.8 jsou dovoleny jako vnější obaly pro předměty nebo vnitřní obaly obsahující nebezpečné věci přepravované podle této kapitoly. Vnitřní obaly, které jsou náchylné k rozbití nebo snadnému propíchnutí, jako ty, které jsou vyrobeny ze skla, porcelánu, kameniny nebo některých plastů, musí být uloženy ve vhodných meziobalech splňujících ustanovení uvedená v 4.1.1.1, 4.1.1.2 a 4.1.1.4 až 4.1.1.8 a zkonstruovaných tak, aby splňovaly konstrukční požadavky uvedené v 6.1.4. Celková (brutto) hmotnost kusu nesmí překročit 20 kg.
- 3.4.4** Kapalné věci třídy 8, obalové skupiny II ve vnitřních obalech ze skla, porcelánu nebo kameniny musí být uzavřeny ve snášlivém a tuhém meziobalu.
- 3.4.5 a 3.4.6** *(Vyhrazeno)*
- 3.4.7** S výjimkou letecké dopravy musí být kusy obsahující nebezpečné věci v omezených množstvích opatřeny dále uvedenou značkou.



Tato značka musí být snadno viditelná, čitelná a schopna odolávat působení nepříznivého počasí bez podstatného snížení čitelnosti.

Horní a dolní část a obvodová čára musí být černé. Střední plocha musí být bílá nebo musí mít barvu dostatečně kontrastní vůči podkladu. Minimální rozměry musí být 100 mm x 100 mm a minimální tloušťka čáry tvořící čtverec postavený na vrchol musí být 2 mm. Jestliže to vyžaduje velikost kusu, smí být tento rozměr zmenšen na nejméně 50 mm x 50 mm, pokud tato značka zůstane zřetelně viditelná.

3.4.8

Kusy obsahující nebezpečné věci podávané k přepravě leteckou dopravou podle ustanovení části 3, kapitoly 4 ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air musí být opatřeny dále uvedenou značkou.



Tato značka musí být snadno viditelná, čitelná a schopna odolávat působení nepříznivého počasí bez podstatného snížení čitelnosti. Horní a dolní část a obvodová čára musí být černé. Střední plocha musí být bílá nebo musí mít barvu dostatečně kontrastní vůči podkladu. Minimální rozměry musí být 100 mm x 100 mm. Minimální tloušťka čáry tvořící čtverec postavený na vrchol musí být 2 mm. Symbol „Y“ musí být umístěn ve středu značky a musí být zřetelně viditelný. Jestliže to vyžaduje velikost kusu, smí být tento rozměr zmenšen na nejméně 50 mm x 50 mm, pokud tato značka zůstane zřetelně viditelná.

3.4.9

Kusy obsahující nebezpečné věci a opatřené značkou uvedenou v 3.4.8 se považují za kusy splňující ustanovení oddílů 3.4.1 až 3.4.4 této kapitoly a nemusí být opatřeny značkou uvedenou v 3.4.7.

3.4.10

(Vyhrazeno)

3.4.11

Pokud jsou kusy obsahující nebezpečné věci balené v omezených množstvích uloženy v přepravním obalovém souboru, platí ustanovení uvedená v 5.1.2. Kromě toho musí být přepravní obalový soubor

označen značkami vyžadovanými touto kapitolou, ledaže jsou označení reprezentující všechny nebezpečné věci obsažené v přepravním obalovém souboru viditelná. Ustanovení uvedená v 5.1.2.1 (a)(ii) a 5.1.2.4 platí pouze v případě, že jsou v přepravním obalovém souboru obsaženy jiné nebezpečné věci, které nejsou baleny v omezených množstvích, a to pouze ve vztahu k těmto jiným nebezpečným věcem.

3.4.12 Před přepravou musí odesílatelé nebezpečných věcí balených v omezených množstvích předem informovat dopravce prokazatelnou formou o celkové (brutto) hmotnosti takových věcí, které se mají odesílat.

3.4.13 (a) Dopravní jednotky o největší povolené hmotnosti nad 12 tun přepravující nebezpečné věci balené v omezených množstvích musí být označeny podle 3.4.15 na přední a na zadní straně, s výjimkou případu, kdy dopravní jednotka obsahuje jiné nebezpečné věci, pro které je vyžadováno označení oranžovými tabulkami podle 5.3.2. V tomto posledním případě může být dopravní jednotka označena jen vyžadovaným označením oranžovými tabulkami, nebo jak označením oranžovými tabulkami podle 5.3.2, tak i označením podle 3.4.15.

(b) Kontejnery přepravující nebezpečné věci balené v omezených množstvích na dopravních jednotkách o největší povolené hmotnosti nad 12 tun musí být označeny podle 3.4.15 na všech čtyřech stranách, s výjimkou případu, kdy kontejner obsahuje jiné nebezpečné věci, pro které je vyžadováno označení velkými bezpečnostními značkami podle 5.3.1. V tomto posledním případě může být kontejner označen jen vyžadovanými velkými bezpečnostními značkami, nebo jak velkými bezpečnostními značkami podle 5.3.1, tak i označením podle 3.4.15.

Dopravní jednotka nemusí být označena, s výjimkou případu, kdy označení kontejnerů není viditelné zvnějšku dopravní jednotky, kterou jsou přepravovány. V tomto případě musí být stejné označení umístěno na přední a na zadní straně dopravní jednotky.

3.4.14 Od označení uvedených v 3.4.13 může být upuštěno, jestliže celková (brutto) hmotnost přepravovaných kusů obsahujících nebezpečné věci balené v omezených množstvích nepřekračuje 8 tun na dopravní jednotku.

3.4.15 Označení musí sestávat ze značky vyžadované v 3.4.7, jejíž minimální rozměry však musí být 250 mm x 250 mm.

KAPITOLA 3.5

NEBEZPEČNÉ VĚCI BALENÉ VE VYŇATÝCH MNOŽSTVÍCH

3.5.1 Vyňatá množství

3.5.1.1 Vyňatá množství nebezpečných věcí určitých tříd, jiných než předmětů, splňující ustanovení této kapitoly nepodléhají žádným jiným ustanovením ADR s výjimkou:

- (a) předpisů o školení v kapitole 1.3;
- (b) klasifikačních postupů a kritérií pro obalové skupiny v části 2;
- (c) předpisů o balení v 4.1.1.1, 4.1.1.2, 4.1.1.4 a 4.1.1.6.

POZNÁMKA: V případě radioaktivních látek platí předpisy pro radioaktivní látky ve vyjmutých kusech v 1.7.1.5.

3.5.1.2 Nebezpečné věci, které smějí být přepravovány ve vyňatých množstvích podle ustanovení této kapitoly, jsou ukázány ve sloupci (7b) tabulky A kapitoly 3.2 pomocí následujícího alfanumerického kódu:

Kód	Nejvyšší čisté množství na vnitřní obal (v gramech pro tuhé látky a v ml pro kapaliny a plyny)	Nejvyšší čisté množství na vnější obal (v gramech pro tuhé látky a v ml pro kapaliny a plyny, nebo součet gramů a ml v případě smíšeného balení)
E0	Není dovoleno jako vyňaté množství	Není dovoleno jako vyňaté množství
E1	30	1000
E2	30	500
E3	30	300
E4	1	500
E5	1	300

Pro plyny se objemem udaným pro vnitřní obaly míní hydraulický vnitřní objem vnitřní nádoby a objemem udaným pro vnější obaly se míní celkový hydraulický vnitřní objem všech vnitřních obalů v jednom vnějším obalu.

3.5.1.3 Jsou-li nebezpečné věci ve vyňatých množstvích, jimž jsou přiděleny rozdílné kódy, baleny společně, musí být celkové množství na vnější obal omezeno na to množství, které odpovídá nejrestriktivnějšímu kódu.

3.5.1.4 Vyňatá množství nebezpečných věcí přiřazená ke kódům E1, E2, E4 a E5 s nejvyšším čistým množstvím nebezpečných věcí na vnitřním obal omezeným na 1 ml pro kapaliny a plyny a na 1 g pro tuhé látky a s nejvyšším čistým množstvím nebezpečných věcí na vnější obal, které nepřevyšuje 100 g pro tuhé látky nebo 100 ml pro kapaliny a plyny, podléhají pouze:

- (a) ustanovením uvedeným v 3.5.2, s výjimkou toho, že se nevyžaduje meziobal v případě, že jsou vnitřní obaly bezpečně zabaleny ve vnějším obalu s fixačním materiálem takovým způsobem, že za normálních podmínek přepravy nemohou prasknout, být propíchnuty nebo propouštět svůj obsah; a pro kapaliny vnější obal obsahuje dostatečné množství absorpčního materiálu, aby absorboval celý obsah vnitřních obalů; a
- (b) ustanovením uvedeným v 3.5.3.

3.5.2 Obaly

Obaly používané pro přepravu nebezpečných věcí ve vyňatých množstvích musí splňovat následující požadavky:

- (a) Musí být vnitřní obal a každý vnitřní obal musí být vyroben z plastu (s minimální tloušťkou 0,2 mm, je-li používán pro kapaliny) nebo ze skla, porcelánu, kameniny, keramického materiálu nebo kovu (viz též 4.1.1.2) a uzávěr každého vnitřního obalu musí být bezpečně držen na svém místě drátem, páskou nebo jiným účinným prostředkem; každá nádoba mající hrdlo s lisovanými šroubovými závity musí mít těsné víčko závitového typu. Uzávěr musí být odolný vůči obsahu;
- (b) Každý vnitřní obal musí být bezpečně zabalen do meziobalu s fixačním materiálem takovým způsobem, aby se za normálních podmínek přepravy nemohl rozbít, být prorazen nebo propouštět svůj obsah. Meziobal musí úplně udržet obsah v případě rozbití nebo úniku, bez ohledu na orientaci kusu. Pro kapaliny musí meziobal obsahovat dostatek absorpčního materiálu k pohlcení celého obsahu vnitřního obalu. V takových případech může být absorpčním materiálem fixační materiál. Nebezpečné věci nesmějí nebezpečně reagovat s fixačním nebo absorpčním materiálem ani s materiálem obalů, ani redukovat celistvost nebo funkci materiálů;
- (c) Meziobal musí být bezpečně zabalen do pevného tuhého vnějšího obalu (ze dřeva, lepenky nebo jiného stejně pevného materiálu);
- (d) Každý typ kusu musí vyhovovat ustanovením v 3.5.3;
- (e) Každý kus musí být takové velikosti, aby na něm byl dostatek místa pro všechna potřebná označení; a
- (f) Smějí se používat přepravní obalové soubory a smějí obsahovat také kusy s nebezpečnými věcmi nebo věci nepodléhající předpisům ADR.

3.5.3 Zkoušky pro kusy

3.5.3.1

Kompletní kus, tak jak je připraven k přepravě, s vnitřními obaly naplněnými do nejméně 95 % jejich vnitřního objemu pro tuhé látky nebo 98 % pro kapaliny, musí být schopen odolat, jak se dokáže zkouškou, která je náležitě zdokumentována, bez rozbití nebo úniku z kterékoliv vnitřního obalu a bez významného snížení účinnosti:

- (a) pádům na pevný, nepružný, rovný a vodorovný povrch z výšky 1,8 m:
 - (i) má-li vzorek tvar bedny, musí padnout v každé z následujících orientací:
 - naplocho na dno;
 - naplocho na víko (horní stranu);
 - naplocho na nejdelší stranu;
 - naplocho na nejkratší stranu;
 - na roh;
 - (ii) má-li vzorek tvar sudu, musí padnout v každé z následujících orientací:
 - diagonálně na horní hranu, s těžištěm přímo nad bodem nárazu;
 - diagonálně na hranu dna;
 - naplocho na boční stranu;

POZNÁMKA: Každý z výše uvedených pádů může být proveden na různých, ale identických kusech.

- (b) síle působící na horní povrch po dobu 24 hodin, rovnající se celkové hmotnosti identických kusů, jsou-li nastohovány do výšky 3 m (včetně vzorku).

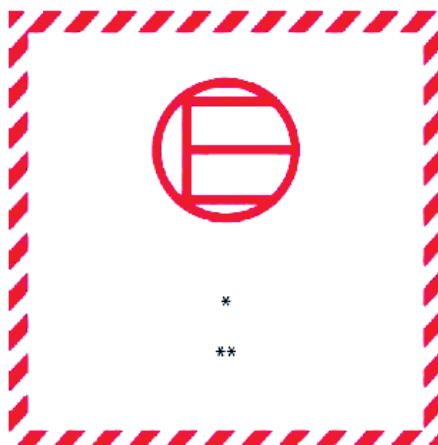
3.5.3.2

Pro účely zkoušení smějí být látky, které se mají přepravovat v obalu, nahrazeny jinými látkami, pokud by to neznehodnotilo výsledky zkoušek. Je-li v případě tuhých látek použita jiná látka, musí mít stejné fyzikální charakteristiky (hmotnost, velikost zrn atd.) jako látka, která se má přepravovat. Je-li při zkouškách pádem pro kapaliny použita jiná látka, měly by být její relativní hustota (měrná hmotnost) a viskozita obdobné relativní hustotě (měrné hmotnosti) a viskozitě látky, která se má přepravovat.

3.5.4 Značení kusů

3.5.4.1 Kusy obsahující vyňatá množství nebezpečných věcí připravené podle této kapitoly musí být trvanlivě a čitelně označeny značkou uvedenou v pododdlílu 3.5.4.2. První nebo jediné číslo bezpečnostní značky udané ve sloupci (5) tabulky A kapitoly 3.2 pro každou z nebezpečných věcí obsažených v kusu musí být uvedeno na této značce. Pokud není název odesílatele nebo příjemce uveden jinde na kusu, musí být tato informace uvedena na této značce.

3.5.4.2 Rozměry značky musí být nejméně 100 mm x 100 mm.



Značka pro vyňatá množství

Šrafování a symbol ve stejné barvě, černé nebo červené, na bílém nebo vhodném kontrastním podkladu

* *Na tomto místě musí být uvedeno první nebo jediné číslo bezpečnostní značky udané ve sloupci (5) tabulky A kapitoly 3.2.*

** *Na tomto místě musí být uveden název odesílatele nebo příjemce, pokud není uveden jinde na kusu.*

3.5.4.3 Přepravní obalový soubor obsahující nebezpečné věci ve vyňatých množstvích musí být opatřen označením vyžadovaným podle 3.5.4.1, pokud nejsou taková označení na kusech uvnitř přepravního obalového souboru jasně viditelná.

3.5.5 Maximální počet kusů ve vozidle nebo kontejneru

Počet kusů ve vozidle nebo kontejneru nesmí překročit 1000.

3.5.6 Dokumentace

Jestliže nebezpečné věci ve vyňatých množstvích doprovází doklad(y) (jako jsou nákladový list, letecký nákladní list nebo nákladní list CMR/CIM), musí alespoň jeden z těchto dokladů obsahovat prohlášení „NEBEZPEČNÉ VĚCI VE VYŇATÝCH MNOŽSTVÍCH“ a údaj o počtu kusů.

ČÁST 4

USTANOVENÍ O POUŽÍVÁNÍ OBALŮ A CISTEREN

KAPITOLA 4.1

POUŽITÍ OBALŮ, VČETNĚ IBC A VELKÝCH OBALŮ

4.1.1 Všeobecná ustanovení pro balení nebezpečných věcí do obalů, včetně IBC a velkých obalů

POZNÁMKA: Pro balení věcí tříd 2, 6.2 a 7 platí všeobecná ustanovení tohoto oddílu pouze tehdy, je-li to uvedeno v 4.1.8.2 (třída 6.2), 4.1.9.1.5 (třída 7) a v příslušných pokynech pro balení oddílu 4.1.4 (P 201a LP02 pro třídu 2 a P 620, P 621, IBC 620 a LP 621 pro třídu 6.2).

4.1.1.1 Nebezpečné věci musí být baleny do obalů, včetně IBC a velkých obalů, dobré kvality. Tyto musí být natolik pevné, aby odolávaly rázům a namáháním, které se mohou vyskytnout za normálních podmínek přepravy, včetně překládky mezi dopravními prostředky a mezi dopravními prostředky a sklady a rovněž při přemísťování z palet nebo přepravních obalových souborů k následné ruční nebo mechanizované manipulaci. Obaly, včetně IBC a velkých obalů, musí být vyrobeny a uzavřeny tak, aby bylo při normálních podmínkách přepravy zamezeno úniku obsahu z kusu připraveného k přepravě, zejména v důsledku vibrací, nebo změn teploty, vlhkosti nebo tlaku (např. z důvodu změny nadmořské výšky). Obaly, včetně IBC a velkých obalů, musí být uzavřeny v souladu s informacemi poskytnutými výrobcem. Na vnější straně obalů, IBC a velkých obalů nesmějí během přepravy ulpívat žádné nebezpečné zbytky. Tato ustanovení se vztahují na nové, opakovaně použitelné, obnovené nebo re-konstruované obaly, na nové, opakovaně použitelné, opravené nebo rekonstruované IBC a na nové opakovaně použitelné nebo rekonstruované velké obaly.

4.1.1.2 Části obalů, včetně IBC a velkých obalů, které přicházejí bezprostředně do styku s nebezpečnými věcmi:

- (a) nesmějí být těmito nebezpečnými věcmi narušovány ani významně zeslabovány;
- (b) a; nesmějí vyvolat žádný nebezpečný účinek, např. působit jako katalyzátor při reakci nebo reagovat s nebezpečnými věcmi
- (c) nesmějí dovolit propouštění nebezpečných věcí, které by mohlo představovat nebezpečí za normálních podmínek přepravy.

Je-li to nutné, musí být opatřeny vhodným vnitřním povlakem nebo úpravou.

POZNÁMKA: K chemické snášenlivosti plastových obalů, včetně IBC, vyrobených z polyetylénu viz pododdíl 4.1.1.21.

4.1.1.3 Pokud není v ADR stanoveno jinak, musí každý obal, včetně IBC a velkých obalů, s výjimkou vnitřních obalů, odpovídat konstrukčnímu typu, který vyhověl zkouškám podle odpovídajících předpisů oddílů 6.1.5, 6.3.5, 6.5.6 nebo 6.6.5. Obaly, pro které se zkoušky nevyžadují, jsou uvedeny v pododdílu 6.1.1.3.

4.1.1.4 U obalů, včetně IBC a velkých obalů, plněných kapalinami, musí zůstat dostatečný volný prostor, aby bylo zajištěno, že roztažnost kapaliny způsobená teplotami, které mohou nastat během přepravy, nezpůsobí ani únik kapaliny, ani trvalou deformaci obalu. Pokud nejsou předepsány specifické požadavky, obaly nesmějí být zcela naplněny kapalinami při teplotě 55 °C. Avšak v IBC musí být ponechán dostatečný volný prostor, aby se zajistilo, že při průměrné teplotě obsahu 50 °C nebude naplněna více než do 98 % svého hydraulického vnitřního objemu. Pokud není stanoveno jinak, nesmí nejvyšší stupeň plnění vztažený k plnici teplotě 15 °C překročit:

buď (a)

Bod varu (začátek varu) látky ve °C	<60	≥ 60 < 100	≥ 100 < 200	≥ 200 < 300	≥300
Stupeň plnění v % vnitřního objemu obalu	90	92	94	96	98

$$\text{nebo (b) stupeň plnění} = \frac{98}{1 + \alpha(50 - t_F)} \% \text{ vnitřního objemu obalu.}$$

V tomto vzorci značí α střední koeficient objemové roztažnosti kapaliny mezi 15 °C a 50 °C, to znamená pro maximální zvýšení teploty o 35 °C.

$$\alpha \text{ se vypočítá podle vzorce } \alpha = \frac{d_{15} - d_{50}}{35 \times d_{50}}$$

d_{15} a d_{50} značí relativní hustoty¹ kapaliny při 15 °C a 50 °C a t_F je střední teplota kapaliny při plnění.

4.1.1.5

Vnitřní obaly musí být zabaleny do vnějšího obalu tak, aby za normálních podmínek přepravy nedošlo k jejich rozbití nebo proděravění, nebo aby z nich nemohl obsah uniknout do vnějšího obalu. Vnitřní obaly obsahující kapaliny musí být zabaleny svými uzávěry směrem nahoru a musí být uloženy do vnějších obalů ve shodě s orientačními šipkami předepsanými v pododdíle 5.2.1.9. Křehké vnitřní obaly nebo takové, u kterých může snadno dojít k proděravění, jako jsou nádoby ze skla, porcelánu nebo kameniny nebo některých plastů atd., musí být zajištěny ve vnějších obalech vhodným fixačním materiálem. Při úniku obsahu nesmí dojít k podstatnému zhoršení ochranných vlastností fixačního materiálu ani vnějšího obalu.

4.1.1.5.1

Pokud byl vnější obal nebo velký obal s úspěchem podroben zkoušce s různými typy vnitřních obalů, mohou být takové druhy vnitřních obalů společně uloženy do tohoto vnějšího nebo velkého obalu. Kromě toho, pokud je dodržena rovnocenná úroveň provedení, jsou povoleny dále uvedené varianty bez dalšího zkoušení kusu:

a. Vnitřní obaly stejných nebo menších rozměrů mohou být používány, pokud:

- i. vnitřní obaly jsou podobné konstrukce jako zkoušené vnitřní obaly (např. kruhové, pravoúhlé atd.);
- ii. materiál konstrukce vnitřních obalů (sklo, plasty, kov atd.) poskytuje odolnost proti nárazu a stohovacím tlakům stejnou nebo vyšší než původně zkoušený vnitřní obal;
- iii. vnitřní obaly mají stejné nebo menší otvory a uzávěr je podobné konstrukce (např. šroubovací víčko, vtačné víčko atd.);
- iv. je použit dostatečný dodatečný fixační materiál k vyplnění volného prostoru a zabránění nekontrolovatelnému pohybu vnitřních obalů; a
- v. vnitřní obaly jsou orientovány ve vnějším obalu stejným způsobem jako ve zkoušeném kusu.

b. Menší počty zkoušených vnitřních obalů nebo alternativních typů vnitřních obalů uvedených výše v odstavci (a) mohou být používány, pokud je dostatečně doplněn fixační materiál k vyplnění volného prostoru a pro zabránění nekontrolovatelnému pohybu vnitřních obalů.

4.1.1.6

Nebezpečné věci nesmějí být baleny společně do téhož vnějšího obalu nebo do velkého obalu s nebezpečnými nebo jinými věcmi, jestliže spolu mohou nebezpečně reagovat a způsobit:

- (a) hoření nebo vývin značného tepla;
- (b) vývin hořlavých, dusivých, hoření podporujících nebo toxických plynů;
- (c) tvoření žíravých látek; nebo
- (d) tvoření nestálých látek.

POZNÁMKA: Ke zvláštním ustanovením pro společné balení viz oddíl 4.1.10.

4.1.1.7

Uzávěry obalů obsahujících navlhčené nebo zředěné látky musí být provedeny tak, aby procentuální podíl kapaliny (vody, rozpouštědla nebo flegmatizačního prostředku) neklesl v průběhu přepravy pod

¹ Pojem "relativní hustota" (d) se považuje za synonymum pojmu "měrná hmotnost" (SG) a používá se všude v této kapitole.

předepsané mezní hodnoty.

4.1.1.7.1 Pokud jsou velké nádoby pro volně ložené látky (IBC) vybaveny dvěma nebo více uzavíracími systémy za sebou, musí být uzavřen jako první ten, který je nejbližší k přepravované látce.

4.1.1.8 Jestliže může v obalu vzniknout tlak v důsledku uvolňování plynu z přepravované látky (vlivem zvýšení teploty nebo z jiného důvodu), může být obal nebo IBC, opatřen odvětrávacím zařízením, za podmínky, že uvolněný plyn nevyvolá nebezpečí například z důvodů své toxicity, své hořlavosti nebo uvolněného množství.

Vybavení odvětrávacím zařízením je nutné, jestliže může vzniknout nebezpečný přetlak v důsledku normálního rozkladu látek. Odvětrávací zařízení musí být takové konstrukce, aby se, pokud je obal nebo IBC v poloze určené pro přepravu, zabránilo úniku kapaliny a pronikání cizích látek za normálních podmínek přepravy.

POZNÁMKA: *Odvětrávání kusu není dovoleno pro leteckou dopravu.*

4.1.1.8.1 Kapaliny smějí být plněny jen do vnitřních obalů, které mají dostatečnou odolnost proti vnitřnímu tlaku, který může vzniknout za normálních podmínek přepravy.

4.1.1.9 Nové, rekonstruované nebo opakovaně použitelné obaly, včetně IBC a velkých obalů, nebo obnovené obaly a opravené nebo běžně udržované IBC musí být schopny vyhovět příslušným zkouškám předepsaným v oddílech 6.1.5, 6.3.5, 6.5.6 nebo 6.6.5. Před plněním a podáním k přepravě se musí každý obal, včetně IBC a velkých obalů, podrobit prohlídce, zda nevykazuje korozi, kontaminaci nebo jiné závady a všechny IBC musí být prohlédnuty s ohledem na správnou funkci provozní výstroje. Každý obal, který jeví známky snížené pevnosti oproti schválenému konstrukčnímu typu, nesmí být dále používán, nebo musí být obnoven tak, aby vyhověl zkouškám předepsaným pro konstrukční typ. Každá IBC, která jeví známky snížené pevnosti oproti vyzkoušenému konstrukčnímu typu, nesmí být dále používána, nebo musí být opravena nebo podrobena běžné údržbě tak, aby vyhověla zkouškám předepsaným pro konstrukční typ.

4.1.1.10 Kapaliny smějí být plněny jen do obalů, včetně IBC, které mají přiměřenou odolnost proti vnitřnímu tlaku, který může vzniknout za normálních podmínek přepravy. Obaly a IBC, na kterých je vyznačen hydraulický zkušební tlak, předepsaný v pododdílu 6.1.3.1 (d) a popřípadě v odstavci 6.5.2.2.1, musí být plněny jen kapalinou, jejíž tenze par:

- (a) je taková, že celkový přetlak v obalu nebo IBC (t.j. tenze par naplněné látky plus parciální tlak vzduchu nebo jiných inertních plynů, sníženo o 100 kPa) při 55 °C, zjištěný na základě nejvyššího stupně plnění dle pododdílu 4.1.1.4 a plnicí teploty 15 °C, nepřekračuje 2/3 vyznačeného zkušební tlaku; nebo
- (b) je při 50 °C menší než 4/7 součtu vyznačeného zkušební tlaku plus 100 kPa; nebo
- (c) je při 55 °C menší než 2/3 součtu vyznačeného zkušební tlaku plus 100 kPa.

IBC určené pro přepravu kapalin nesmějí být používány k přepravě kapalin, jejichž tenze par je vyšší než 110 kPa (1,1 baru) při teplotě 50 °C, nebo 130 kPa (1,3 baru) při teplotě 55 °C.

PŘÍKLADY ZKUŠEBNÍCH TLAKŮ PRO VYZNAČENÍ NA OBALY, VČETNĚ IBC, VYPOČÍTANÝCH DLE PODODDÍLU 4.1.1.10 c)

UN Číslo	Pojmenování	Třída	Obalová skupina	V_{p55} (kPa)	$(V_{p55} \times 1.5)$ (kPa)	$(V_{p55} \times 1.5)$ minus 100 (kPa)	Požadovaný nejnižší zkušební tlak (přetlak) podle 6.1.5.5.4.c) (kPa)	Nejnižší zkušební tlak (přetlak) pro vyznačení na obalu (kPa)
2056	Tetrahydrofuran	3	II	70	105	5	100	100
2247	n-Decan	3	III	1.4	2.1	-97.9	100	100
1593	Dichlormethan	6.1	III	164	246	146	146	150
1155	Diethylether	3	I	199	299	199	199	250

POZNÁMKA 1: Pro čisté kapaliny se tenze par při 55 °C (V_{p55}) často přebírá z tabulek uveřejněných ve vědecké literatuře.

POZNÁMKA 2: V tabulce uváděné nejnižší zkušební tlaky se vztahují pouze k údajům v pododdlíle 4.1.1.10 (c), což znamená, že vyznačený zkušební tlak musí být větší než 1,5-násobek tenze par při 55 °C minus 100 kPa. Jestliže je například zkušební tlak pro n-dekan stanoven podle odstavce 6.1.5.5.4 (a), nejnižší vyznačený zkušební tlak může být nižší.

POZNÁMKA 3: Pro diethylether je požadovaný nejnižší zkušební tlak podle odstavce 6.1.5.5.5 250 kPa.

4.1.1.11 Prázdné obaly, včetně IBC a velkých obalů, které obsahovaly nebezpečné věci, podléhají stejným předpisům jako naplněné obaly, pokud nebyla přijata odpovídající opatření vylučující jakéhokoli riziko.

4.1.1.12 Každý obal, specifikovaný v kapitole 6.1, určený pro kapaliny, musí úspěšně absolvovat vhodnou zkoušku těsnosti a být schopen splnit příslušnou úroveň zkoušky uvedenou v odstavci 6.1.5.4.3:

- (a) před prvním použitím pro přepravu;
- (b) po rekonstrukci nebo obnově obalu, před jeho opětovným použitím pro přepravu;

Pro tuto zkoušku nemusí být obal vybaven(a) svými vlastními uzávěry. Vnitřní nádoba kompozitního obalu může být zkoušena bez vnějšího obalu, za podmínky, že výsledky zkoušek nebudou ovlivněny. Tato zkouška není povinná pro:

- vnitřní obaly skupinových obalů nebo velkých obalů;
- vnitřní nádoby kompozitních obalů (sklo, porcelán nebo kamenina) označených symbolem "RID/ADR" podle pododdlílu 6.1.3.1 (a) (ii);
- obaly z jemného plechu označené symbolem "RID/ADR" podle pododdlílu 6.1.3.1 (a) (ii).

4.1.1.13 Obaly, včetně IBC, používané pro tuhé látky, které mohou zkapat při teplotách vyskytujících se během přepravy, musí být rovněž použitelné pro tyto látky v kapalném stavu.

4.1.1.14 Obaly, včetně IBC, používané pro práškové nebo zrnité látky musí být prachotěsné, nebo musí být opatřeny vložkou.

4.1.1.15 Pokud příslušný orgán neschválí jinak, je pro plastové sudy a kanystry, IBC z tuhého plastu a kompozitní IBC s vnitřní nádobou z plastu dovolená doba jejich používání pro přepravu nebezpečných látek 5 roků od data jejich výroby, s výjimkou kratší doby používání stanovené z důvodu druhu přepravované látky.

4.1.1.16 Je-li led použit jako chladicí prostředek, nesmí ovlivnit soudržnost obalu.

4.1.1.17 Obaly, včetně IBC a velkých obalů, značené podle 6.1.3, 6.2.2.7, 6.2.2.8, 6.3.1, 6.5.2 nebo 6.6.3, avšak které byly schváleny ve státě, který není smluvní stranou ADR, mohou být rovněž používány

pro přepravu dle ADR.

4.1.1.18 ***Výbušné látky a předměty, samovolně se rozkládající látky a organické peroxidy***

Pokud není zvláštním ustanovením v ADR stanoveno jinak, musí obaly, včetně IBC a velkých obalů, používané pro věci třídy 1, samovolně se rozkládající látky třídy 4.1 a organické peroxidy třídy 5.2 splňovat ustanovení pro středně nebezpečnou skupinu (obalovou skupinu II).

4.1.1.19 ***Použití záchranných obalů***

4.1.1.19.1 Poškozené, porušené nebo netěsné kusy nebo kusy, které neodpovídají předpisům, nebo nebezpečné věci, které se rozspaly nebo vytekly, mohou být přepravovány v záchranných obalech uvedených v odstavci 6.1.5.1.11. To nebrání používání obalů větších velikostí vhodného typu a úrovně provedení dle požadavků uvedených v odstavci 4.1.1.19.2 a 4.1.1.19.3.

4.1.1.19.2 Musí být učiněna vhodná opatření, která zamezí nadměrného pohybu poškozených nebo netěsných kusů uvnitř záchranného obalu. Pokud záchranný obal obsahuje kapaliny, musí být přidáno dostatečné množství inertního absorpčního materiálu pro eliminaci přítomnosti volné kapaliny.

4.1.1.19.3 Musí být učiněna vhodná opatření, aby se zamezilo nebezpečnému nárůstu tlaku.

4.1.1.20 ***Použití záchranných tlakových nádob***

4.1.1.20.1 V případě poškozených, vadných nebo netěsných tlakových nádob nebo tlakových nádob, které neodpovídají předpisům, je dovoleno použít záchranné tlakové nádoby podle 6.2.3.11.

***POZNÁMKA:** Záchranná tlaková nádoba smí být použita jako přepravní obalový soubor podle 5.1.2. Je-li použita jako přepravní obalový soubor, musí být označena podle 5.1.2.1 namísto 5.2.1.3.*

4.1.1.20.2 Tlakové nádoby musí být uloženy v záchranných tlakových nádobách přiměřené velikosti. Více než jedna tlaková nádoba smí být uložena v téže záchranné tlakové nádobě jen tehdy, jsou-li známy jejich obsahy a pokud spolu vzájemně nebezpečně nereagují (viz 4.1.1.6). Musí být učiněna vhodná opatření, aby se zamezilo pohybu tlakových nádob uvnitř záchranné tlakové nádoby, např. přepážkami, upevněním nebo fixačním (vycpávkovým) materiálem.

4.1.1.20.3 Tlaková nádoba smí být uložena v záchranné tlakové nádobě jestliže:

- (a) záchranná tlaková nádoba splňuje ustanovení uvedená v 6.2.3.11 a kopie osvědčení o schválení je k dispozici;
- (b) části záchranné tlakové nádoby, které jsou nebo pravděpodobně budou v přímém styku s nebezpečnými věcmi, nebudou těmito nebezpečnými věcmi poškozovány nebo zeslabovány a nevyvolají nebezpečný účinek (např. katalytickou reakci nebo reakci s nebezpečnými věcmi); a
- (c) obsahy uložených tlakových nádob jsou omezeny v tlaku a objemu tak, aby v případě jejich úplného vyprázdnění do záchranné tlakové nádoby tlak v záchranné tlakové nádobě při 65 °C nepřekročil zkušební tlak záchranné tlakové nádoby (pro plyny viz pokyn pro balení P200 (3) v 4.1.4.1). Zmenšení použitelného hydraulického vnitřního objemu záchranné tlakové nádoby, např. obsaženou výbavou nebo fixačním (vycpávkovým) materiálem, musí být přítom vzato v úvahu.

4.1.1.20.4 Záchranná tlaková nádoba musí být pro přepravu opatřena nápisy obsahujícími oficiální pojmenování pro přepravu a UN číslo s předřazenými písmeny „UN“ a bezpečnostní značkou (značkami), jak jsou vyžadovány pro kusy v kapitole 5.2, vztahujícími se k nebezpečným věcem obsaženým v uložené tlakové nádobě (nádobách).

4.1.1.20.5 Záchranné tlakové nádoby musí být vyčištěny, odplyněny a vizuálně prohlédnuty zevnitř i zvnějšku po každém použití. Musí být podrobovány periodickým inspekcím a zkouškám podle 6.2.3.5 alespoň jednou za každých pět let.

4.1.1.21 **Ověřování chemické snášenlivosti plastových obalů, včetně IBC, přiřazením plnicích látek ke standardním kapalinám**

4.1.1.21.1 Rozsah platnosti

Pro obaly z polyetylénu uvedené v odstavci 6.1.5.2.6 a pro IBC z polyetylénu uvedené v odstavci 6.5.6.3.5 může být chemická snášenlivost s plnicí látkou ověřena přiřazením ke standardním kapalinám podle postupů stanovených v odstavcích 4.1.1.19.3 až 4.1.1.19.5 a použitím seznamu v tabulce 4.1.1.19.6, za předpokladu, že jednotlivé konstrukční typy byly vyzkoušeny s těmito standardními kapalinami podle oddílu 6.1.5 nebo 6.5.6 s přihlédnutím k oddílu 6.1.6 a že jsou splněny podmínky uvedené v odstavci 4.1.1.19.2. Pokud přiřazení podle tohoto pododdílu není možné, musí být chemická snášenlivost ověřena zkouškou konstrukčního typu podle odstavce 6.1.5.2.5 nebo laboratorními zkouškami podle odstavce 6.1.5.2.7 pro obaly a podle odstavce 6.5.6.3.3, popřípadě 6.5.6.3.6 pro IBC.

POZNÁMKA: Bez ohledu na ustanovení tohoto pododdílu podléhá použití obalů, včetně IBC, pro určité plnicí látky omezením tabulky A kapitoly 3.2 a pokynů pro balení v kapitole 4.1.

4.1.1.21.2 Podmínky

Relativní hustoty plnicích látek nesmějí překročit relativní hustoty použité ke stanovení výšky pro zkoušku volným pádem provedenou s úspěchem podle odstavce 6.1.5.3.5 nebo 6.5.6.9.4 a hmotnosti pro zkoušku stohováním provedenou s úspěchem podle pododdílu 6.1.5.6 nebo, kde je to nutné, podle pododdílu 6.5.6.6 s přiřazenou standardní kapalinou (kapalinami). Tenze par plnicích látek při 50°C nebo 55°C nesmějí překročit tenze par použité ke stanovení tlaku pro zkoušku vnitřním (hydraulickým) tlakem provedenou s úspěchem podle odstavce 6.1.5.5.4 nebo 6.5.6.8.4.2 s přiřazenou standardní kapalinou (kapalinami). V případě, že jsou plnicí látky přiřazeny ke kombinaci standardních kapalin, nesmějí odpovídající hodnoty plnicích látek překročit nejnižší hodnoty odvozené od použitých výšek pádu, stohovacích hmotností a vnitřních zkušebních tlaků.

Příklad: UN 1736 Benzylchlorid je přiřazen ke kombinaci standardních kapalin „Směs uhlovodíků a smáčecí roztok“. Benzylchlorid má tenzi par 0,34 kPa při 50 °C a relativní hustotu přibližně 1,2. Zkoušky konstrukčního typu pro plastové sudy a kanystry byly často prováděny na nejnižších požadovaných zkušebních úrovních. V praxi to znamená, že zkouška stohováním se obvykle provádí se stohovací zátěží odpovídající jen relativní hustotě 1,0 pro „Směs uhlovodíků“ a relativní hustotě 1,2 pro „Smáčecí roztok“ (viz definici standardních kapalin v oddílu 6.1.6). V důsledku toho by chemická snášenlivost takového zkoušeného konstrukčního typu nebyla ověřena pro benzylchlorid z důvodu neodpovídající zkušební úrovně konstrukčního typu se standardní kapalinou „směs uhlovodíků“. (Vzhledem ke skutečnosti, že ve většině případů je použitý vnitřní hydraulický zkušební tlak nejméně 100 kPa, měla by být tenze par benzylchloridu pokryta takovou zkušební úrovní podle pododdílu 4.1.1.10.)

Všechny složky plnicí látky, která může být roztokem, směsí nebo přípravkem, jako jsou zvlhčovačla v čistících a desinfekčních prostředcích, bez ohledu na to, zda jsou, nebo nejsou nebezpečné, musí být zahrnuty do přiřazovacího postupu.

4.1.1.21.3 Přiřazovací postup

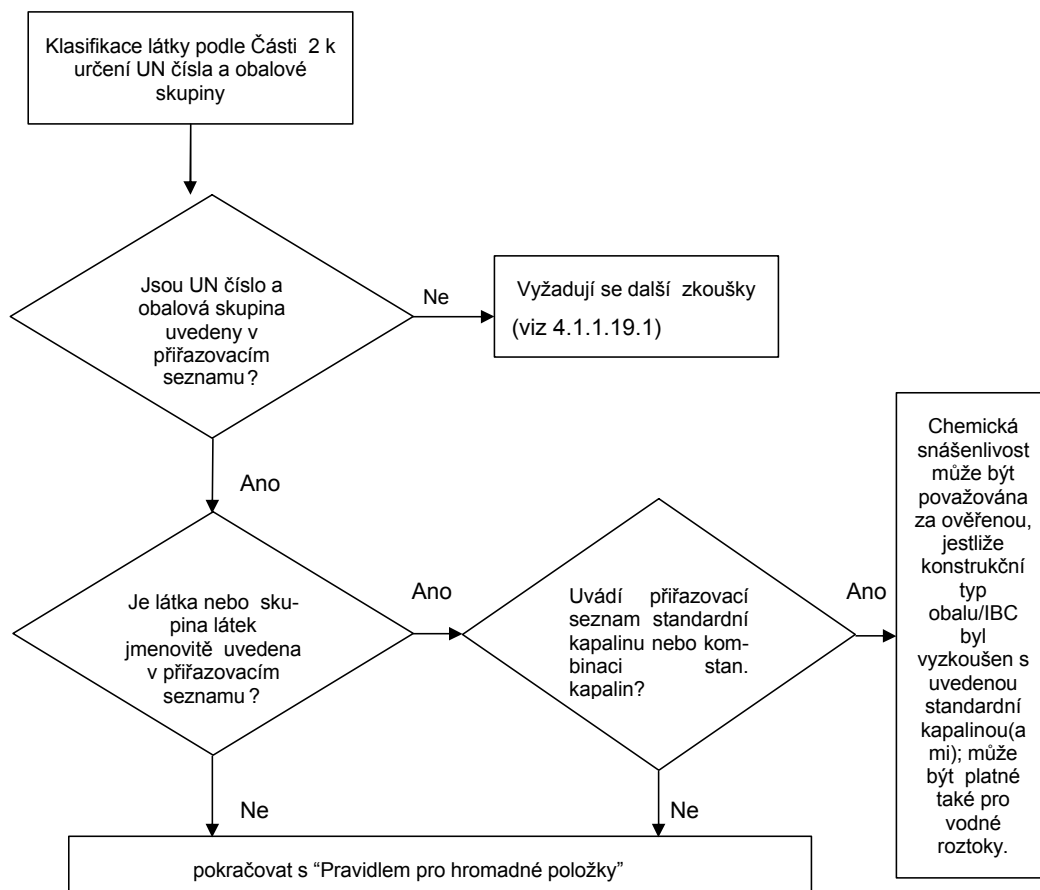
Pro přiřazení plnicích látek k látkám nebo skupinám látek uvedeným v odstavci 4.1.1.19.6 je nutno učinit následující kroky (viz též schéma v obr. 4.1.1.19.1):

- Zařadit plnicí látku podle postupů a kritérií části 2 (určení UN čísla a obalové skupiny);
- Najít UN číslo ve sloupci (1) tabulky 4.1.1.19.6, pokud je tam uvedeno;
- Vybrat řádku, která odpovídá z hlediska obalové skupiny, koncentrace, bodu vzplanutí, přítomnosti složek, které nejsou nebezpečné, atd. pomocí informací uvedených ve sloupcích (2a), (2b) a (4), pokud pro toto UN číslo existuje více než jen jedna položka;

Pokud to není možné, musí být chemická snášenlivost ověřena podle odstavce 6.1.5.2.5 nebo 6.1.5.2.7 pro obaly a podle odstavce 6.5.6.3.3 nebo 6.5.6.3.6 pro IBC (avšak v případě vodných roztoků viz odstavce 4.1.1.19.4).

- (d) Jestliže UN číslo a obalová skupina plnicí látky určené podle písmene (a) nejsou uvedeny v přiřazovacím seznamu, musí být chemická snášenlivost prokázána podle odstavce 6.1.5.2.5 nebo 6.1.5.2.7 pro obaly a podle odstavce 6.5.6.3.3 nebo 6.5.6.3.6 pro IBC;
- (e) Použít „Pravidlo pro hromadné položky“ popsané v odstavci 4.1.1.19.5, pokud je to udáno ve sloupci (5) zvoleného řádku;
- (f) Chemická snášenlivost plnicí látky se může považovat s ohledem na odstavce 4.1.1.19.1 a 4.1.1.19.2 za ověřenou, pokud je standardní kapalina nebo kombinace standardních kapalin přiřazena ve sloupci (5) a konstrukční typ je schválen pro tuto/tyto standardní kapalinu(y).

Obrázek 4.1.1.21.1: Schéma pro přiřazování plnicích látek ke standardním kapalinám



4.1.1.21.4 Vodné roztoky

Vodné roztoky látek a skupin látek přiřazených ke specifické standardní kapalině(nám) podle odstavce 4.1.1.19.3 smějí být rovněž přiřazeny k této (těmto) standardní(m) kapalině(nám), pokud jsou splněny tyto podmínky:

- (a) vodný roztok může být přiřazen podle kritérií v pododdílu 2.1.3.3 k témuž UN číslu jako látka uvedená v přiřazovacím seznamu; a
- (b) vodný roztok není zvlášť jmenovitě uveden na jiném místě v přiřazovacím seznamu

- v odstavci 4.1.1.19.6; a
- (c) mezi nebezpečnou látkou a rozpouštěcí vodou neprobíhá žádná chemická reakce.

Příklad: Vodné roztoky UN 1120 terc-butanolu:

- *Samotný čistý terc-butanol je v přiřazovacím seznamu přiřazen ke standardní kapalině „kyselina octová“.*
- *Vodné roztoky terc-butanolu mohou být zařazeny pod položku UN 1120 BUTANOLY podle pododdílu 2.1.3.3, neboť vodný roztok terc-butanolu se neliší od položek čistých látek, pokud jde o třídu, obalovou skupinu(y) a fyzikální stav. Navíc není položka „1120 BUTANOLY“ výslovně omezena na čisté látky a vodné roztoky těchto látek nejsou zvlášť jmenovitě uvedeny jinde v tabulce A kapitoly 3.2, ani v přiřazovacím seznamu.*
- *UN 1120 BUTANOLY nereagují za normálních podmínek přepravy s vodou.*

V důsledku toho mohou být vodné roztoky UN 1120 terc-butanolu přiřazeny ke standardní kapalině „kyselina octová“.

4.1.1.21.5 Pravidlo pro hromadné položky

Pro přiřazení plnicích látek, u nichž je ve sloupci (5) uvedeno „Pravidlo pro hromadné položky“, musí být učiněny následující kroky a splněny následující podmínky (viz též schéma v obr. 4.1.1.19.2):

- (a) Provést přiřazovací postup pro každou nebezpečnou složku roztoku, směsi nebo přípravku podle odstavce 4.1.1.19.3 s přihlédnutím k podmínkám v odstavci 4.1.1.19.2. V případě druhových položek mohou být zanedbány složky, o nichž je známo, že nemají škodlivý vliv na polyetylén s vysokou molekulární hustotou (např. tuhé pigmenty v UN 1263 BARVA nebo LÁTKA POMOCNÁ K VÝROBĚ BAREV).
- (b) Roztok, směs nebo přípravek nemůže být přiřazen ke standardní kapalině, jestliže:
- i) UN číslo a obalová skupina jedné nebo více nebezpečných složek nejsou uvedeny v přiřazovacím seznamu, nebo
 - (ii) ve sloupci (5) přiřazovacího seznamu je pro jednu nebo více složek uvedeno „Pravidlo pro hromadné položky“, nebo
 - (iii) (s výjimkou UN 2059 NITROCELULÓZA, HOŘLAVÝ ROZTOK) klasifikační kód jedné nebo více nebezpečných složek se liší od klasifikačního kódu roztoku, směsi nebo přípravku.
- (c) Jestliže jsou všechny nebezpečné složky uvedeny v přiřazovacím seznamu a jejich klasifikační kódy jsou v souladu s klasifikačním kódem roztoku, směsi nebo přípravku samého a všechny nebezpečné složky jsou přiřazeny k téže standardní kapalině nebo kombinaci standardních kapalin ve sloupci (5), může být chemická snášlivost roztoku, směsi nebo přípravku považována za ověřenou s ohledem na odstavce 4.1.1.19.1 a 4.1.1.19.2.
- (d) Jestliže jsou všechny nebezpečné složky uvedeny v přiřazovacím seznamu a jejich klasifikační kódy jsou v souladu s klasifikačním kódem roztoku, směsi nebo přípravku samého, ale ve sloupci (5) jsou uvedeny odlišné standardní kapaliny, může být chemická snášlivost považována za ověřenou s ohledem na odstavce 4.1.1.19.1 a 4.1.1.19.2 jen pro následující kombinace standardních kapalin:
- (i) voda/kyselina dusičná 55 %; s výjimkou anorganických kyselin s klasifikačním kódem C1, které jsou přiřazeny ke standardní kapalině „voda“;
 - (ii) voda/smáčecí roztok;
 - (iii) voda/kyselina octová;

- (iv) voda/směs uhlovodíků;
 - (v) voda/n-butylacetát – n-butylacetát-nasycený smáčecím roztokem.
- (e) V rozsahu platnosti tohoto pravidla se chemická snášenlivost nepovažuje za ověřenou pro jiné kombinace standardních kapalin než ty, které jsou uvedeny pod písmenem (d), ani pro všechny případy uvedené pod písmenem (b). V takových případech musí být chemická snášenlivost ověřena jiným způsobem (viz odstavec 4.1.1.19.3 (d)).

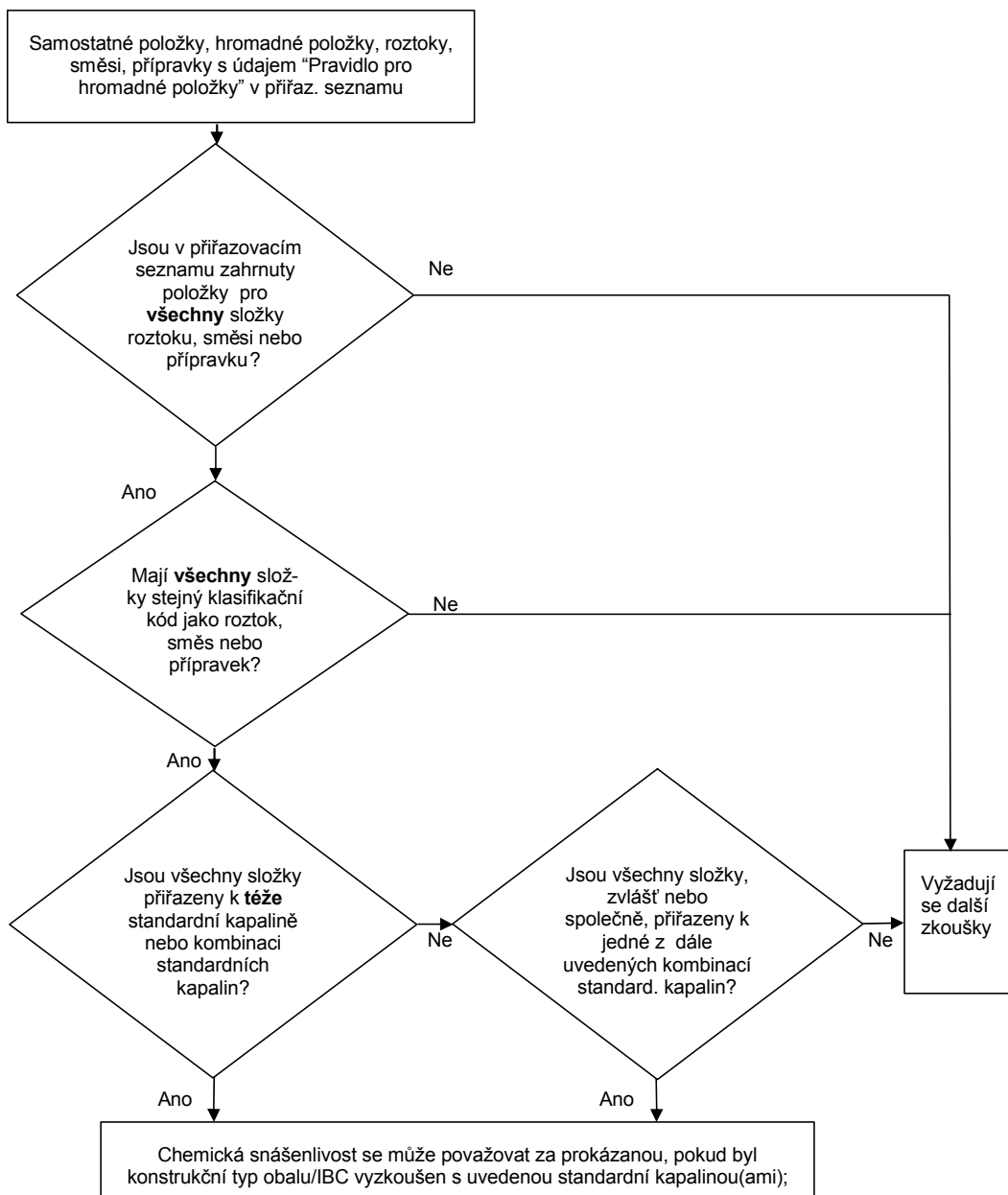
***Příklad 1:** Směs UN 1940 KYSELINY THIOGLYKOLOVÉ (50 %) a UN 2531 KYSELINY METHAKRYLOVÉ, STABILIZOVANÉ (50 %); klasifikace směsi: UN 3265 LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ORGANICKÁ, J.N.*

- *Jak UN čísla složek, tak i UN číslo směsi jsou zahrnuta v přiřazovacím seznamu;*
- *Jak složky, tak i směs mají stejný klasifikační kód: C3;*
- *UN 1940 KYSELINA THIOGLYKOLOVÁ je přiřazena ke standardní kapalině „kyselina octová“ a UN 2531 KYSELINA METHAKRYLOVÁ, STABILIZOVANÁ je přiřazena ke standardní kapalině „n-butylacetát/n-butylacetát-saturovaný smáčecím roztokem“. Podle odstavce d) to není dovolená kombinace standardních kapalin. Chemická snášenlivost směsi musí být ověřena jiným způsobem.*

***Příklad 2:** Směs UN 1793 ISOPROPYLFOSFÁT (50 %) a UN 1803 KYSELINA FENOLSULFONOVÁ, KAPALNÁ (50 %); klasifikace směsi: UN 3265 LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ORGANICKÁ, J.N.*

- *Jak UN čísla složek, tak i UN číslo směsi jsou zahrnuta v přiřazovacím seznamu;*
- *Jak složky, tak i směs mají stejný klasifikační kód: C3;*
- *UN 1793 ISOPROPYLFOSFÁT je přiřazen ke standardní kapalině „smáčecí roztok“ a UN 1803 KYSELINA FENOLSULFONOVÁ, KAPALNÁ je přiřazena ke standardní kapalině „voda“. Podle odstavce d) je toto jedna z dovolených kombinací standardních kapalin. V důsledku toho může být chemická snášenlivost pro tuto směs považována za ověřenou, za podmínky, že konstrukční typ obalu byl schválen pro standardní kapaliny „smáčecí roztok“ a „voda“.*

Obrázek 4.1.1.21.2: Schéma „Pravidla pro hromadné položky“



Dovolené kombinace standardních kapalin:

- voda/kyselina dusičná (55 %), kromě anorganických kyselin klasifikačního kódu C1, které jsou přiřazeny ke standardní kapalině "voda";
- voda/smáčecí roztok;
- voda/kyselina octová;
- voda/směs uhlovodíků;
- voda/n-butylacetát – n-butylacetát saturovaný smáčecím roztokem.

4.1.1.21.6 Přirázovací seznam

V následující tabulce (přirázovacím seznamu) jsou nebezpečné látky uvedeny v pořadí svých UN čísel. Zpravidla každý řádek se týká nebezpečné látky, samostatné položky nebo hromadné položky se specifickým UN číslem. Avšak některé po sobě jdoucí řádky mohou být použity pro totéž UN číslo, jestliže látky náležející k témuž UN číslu mají rozdílná pojmenování (např. jednotlivé isomery skupiny látek), rozdílné chemické vlastnosti, rozdílné fyzikální vlastnosti a/nebo rozdílné přepravní podmínky. V takových případech je samostatná položka nebo hromadná položka uvnitř určité obalové skupiny poslední z takových po sobě jdoucích řádků.

Sloupce (1) až (4) tabulky 4.1.1.19.6, v obdobné struktuře jako tabulka A kapitoly 3.2, jsou používány k identifikaci látky pro účely tohoto pododdílu. Poslední sloupec udává standardní kapaliny(y), ke které(ým) může být látka přiřazena.

Podrobné vysvětlivky k jednotlivým sloupcům:

Sloupec (1) UN číslo

Obsahuje UN číslo

- nebezpečné látky, pokud má tato látka své specifické UN číslo; nebo
- hromadné položky, k níž byly jmenovitě neuvedené nebezpečné látky přiřazeny podle kritérií („rozhodovacích stromů“) části 2.

Sloupec (2a) Oficiální pojmenování pro přepravu nebo technický název

Obsahuje pojmenování látky, pojmenování samostatné položky, která může zahrnovat různé isomery, nebo pojmenování hromadné položky samé.

Uvedené pojmenování se může lišit od příslušného oficiálního pojmenování pro přepravu.

Sloupec (2b) Popis

Obsahuje popisný text k vysvětlení rozsahu platnosti položky v těch případech, kdy klasifikace, přepravní podmínky a/nebo chemická snášenlivost látky mohou být proměnlivé.

Sloupec (3a) Třída

Obsahuje číslo třídy, pod jejíž název spadá nebezpečná látka. Toto číslo třídy se určí podle postupů a kritérií části 2.

Sloupec (3b) Klasifikační kód

Obsahuje klasifikační kód nebezpečné látky podle postupů a kritérií části 2.

Sloupec (4) Obalová skupina

Obsahuje číslo(a) obalové skupiny (obalových skupin) (I, II nebo III) přiřazené(ých) k nebezpečné látce na základě postupů a kritérií části 2. Některé látky nejsou přiřazeny k obalovým skupinám.

Sloupec (5) Standardní kapalina

Tento sloupec udává, jako konečnou informaci, buď jednu standardní kapalinu, nebo kombinaci standardních kapalin, k níž může být látka přiřazena, nebo odkaz na pravidlo pro hromadné položky v odstavci 4.1.1.19.5.

Tabulka 4.1.1.21.6: Přirázovací seznam

UN Číslo	Oficiální pojmenování pro přepravu nebo technický název	Popis	Třída	Klasifikační kód	Obalová skupina	Standardní kapalina
	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
1090	ACETON		3	F1	II	směs uhlovodíků Poznámka: platí jen, pokud se prokáže, že úroveň propustnosti obalu vůči látce, která se má přepravovat, je přijatelná.
1093	AKRYLONITRIL, STABILIZOVANÝ		3	FT1	I	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1104	AMYLACETÁTY	čisté isomery a směsi isomerů	3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1105	PENTANOLY	čisté isomery a směsi isomerů	3	F1	II/III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1106	AMYLAMIN	čisté isomery a směsi isomerů	3	FC	II/III	směs uhlovodíků a smáčecí roztok
1109	AMYLFORMIÁTY	čisté isomery a směsi isomerů	3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1120	BUTANOLY	čisté isomery a směsi isomerů	3	F1	II/III	kyselina octová
1123	BUTYLACETÁTY	čisté isomery a směsi isomerů	3	F1	II/III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1125	n-BUTYLAMIN		3	FC	II	směs uhlovodíků a smáčecí roztok
1128	n-BUTYLFORMIÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1129	n-BUTYRALDEHYD		3	F1	II	směs uhlovodíků
1133	LEPIDLA	s hořlavou kapalnou látkou	3	F1	I/II/III	Pravidlo pro hromadné položky
1139	OCHRANNÝ NÁTĚR, ROZTOK	včetně povrchových úprav, nebo nátěrů používaných k průmyslovým, nebo jiným účelům, jako jsou základní nátěry karoserií vozidel, vnitřní nátěry sudů	3	F1	I/II/III	Pravidlo pro hromadné položky
1145	CYKLOHEXAN		3	F1	II	směs uhlovodíků
1146	CYKLOPENTAN		3	F1	II	směs uhlovodíků
1153	ETHYLENGLYKOLDIETHYLETER		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem a směs uhlovodíků
1154	DIETHYLAMIN		3	FC	II	směs uhlovodíků a

UN Číslo	Oficiální pojmenování pro přepravu nebo technický název	Popis	Třída	Klasifikační kód	Obalová skupina	Standardní kapalina
	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
						smáčecí roztok
1158	DIISOPROPYLAMIN		3	FC	II	směs uhlovodíků a smáčecí roztok
1160	DIMETHYLAMIN, VODNÝ ROZTOK		3	FC	II	směs uhlovodíků a smáčecí roztok
1165	DIOXAN		3	F1	II	směs uhlovodíků
1169	EXTRAKTY, AROMATICKÉ, KAPALNÉ		3	F1	II/III	Pravidlo pro hromadné položky
1170	ETHANOL, ROZTOK (ETHYLALKOHOL, ROZTOK)	vodný roztok	3	F1	II/III	kyselina octová
1171	ETHYLENGLYKOL - MONOETHYLETHER		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem a směs uhlovodíků
1172	ETHYLENGLYKOL - MONOETHYLETHER - ACETÁT		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem a směs uhlovodíků
1173	ETHYLACETÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1177	2-ETHYLBUTYLACETÁT		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1178	2-ETHYLBUTYRALDEHYD		3	F1	II	směs uhlovodíků
1180	ETHYLBUTYRÁT		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1188	ETHYLENGLYKOL - MONOMETHYLETHER		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem a směs uhlovodíků
1189	ETHYLENGLYKOL - MONOMETHYLETHER - ACETÁT		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem a směs uhlovodíků
1190	ETHYLFORMIÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1191	OKTYLALDEHYDY	čisté isomery a směsi isomerů	3	F1	III	směs uhlovodíků
1192	ETHYLLAKTÁT		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1195	ETHYLPROPIONÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený

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	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
						n-butylacetátem
1197	EXTRAKTY OCHUCOVACÍ, KAPALNÉ		3	F1	II/III	Pravidlo pro hromadné položky
1198	FORMALDEHYD, ROZTOK, HOŘLAVÝ	vodný roztok, bod vzplanutí mezi 23°C a 60°C	3	FC	III	kyselina octová
1202	NAFTA MOTOROVÁ	vyhovující normě EN 590:2004, nebo s bodem vzplanutí ne vyšším než 100°C	3	F1	III	směs uhlovodíků
1202	OLEJ PLYNOVÝ	bod vzplanutí ne vyšší než 100°C	3	F1	III	směs uhlovodíků
1202	OLEJ TOPNÝ (LEHKÝ)	zvlášť lehký	3	F1	III	směs uhlovodíků
1202	OLEJ TOPNÝ (LEHKÝ)	vyhovující normě EN 590:2004, nebo s bodem vzplanutí ne vyšším než 100°C	3	F1	III	směs uhlovodíků
1203	BENZIN nebo PALIVO PRO ZÁŽEHOVÉ MOTORY		3	F1	II	směs uhlovodíků
1206	HEPTANY	čisté isomery a směsi isomerů	3	F1	II	směs uhlovodíků
1207	HEXALDEHYD	n-Hexaldehyd	3	F1	III	směs uhlovodíků
1208	HEXANY	čisté isomery a směsi isomerů	3	F1	II	směs uhlovodíků
1210	BARVA TISKAŘSKÁ, hořlavá nebo LÁTKY POMOČNÉ K VÝROBĚ TISKAŘSKÝCH BAREV	hořlavina, obsahující ředidla a rozpouštědla tiskařských barev	3	F1	I/II/III	Pravidlo pro hromadné položky
1212	ISOBUTANOL (ISOBUTYLALKOHOL)		3	F1	III	kyselina octová
1213	ISOBUTYLACETÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1214	ISOBUTYLAMIN		3	FC	II	směs uhlovodíků a smáčecí roztok
1216	ISOOKTENY		3	F1	II	směs uhlovodíků
1219	ISOPROPANOL (ISOPROPYLALKOHOL)	čisté isomery a směsi isomerů	3	F1	II	kyselina octová
1220	ISOPROPYLACETÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1221	ISOPROPYLAMIN		3	FC	I	směs uhlovodíků a smáčecí roztok
1223	PETROLEJ		3	F1	III	směs uhlovodíků
1224	3,3-Dimethyl-2-butanon		3	F1	II	směs uhlovodíků
1224	KETONY, KAPALNÉ, J.N.		3	F1	II/III	Pravidlo pro hromadné položky

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	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
1230	METHANOL		3	FT1	II	kyselina octová
1231	METHYLACETÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1233	METHYLAMYLACETÁT		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1235	METHYLAMIN, VODNÝ ROZTOK		3	FC	II	směs uhlovodíků a smáčecí roztok
1237	METHYLBUTYRÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1247	METHYL - METHAKRYLÁT, MONOMERNÍ, STABILIZOVANÝ		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1248	METHYLPROPIONÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1262	OKTANY	čisté isomery a směsi isomerů	3	F1	II	směs uhlovodíků
1263	BARVA nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV	včetně laků, emailů, mořidel, šelaků, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků, včetně ředidel a rozpouštědel	3	F1	I/II/III	Pravidlo pro hromadné položky
1265	PENTANY, kapalné	n-Pentan	3	F1	II	směs uhlovodíků
1266	VÝROBKY KOSMETICKÉ	s hořlavými rozpouštědly	3	F1	II/III	Pravidlo pro hromadné položky
1268	Těžký dehtový benzín	tenze par při 50 °C nepřesahuje 110 kPa	3	F1	II	směs uhlovodíků
1268	DESTILÁTY ROPNÉ, J.N. nebo PRODUKTY ROPNÉ, J.N.		3	F1	I/II/III	Pravidlo pro hromadné položky
1274	n-PROPANOL		3	F1	II/III	kyselina octová
1275	PROPIONALDEHYD		3	F1	II	směs uhlovodíků
1276	n-PROPYLACETÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1277	PROPYLAMIN	n-Propylamin	3	FC	II	směs uhlovodíků a smáčecí roztok
1281	PROPYLFORMIÁTY	čisté isomery a směsi isomerů	3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1282	PYRIDIN		3	F1	II	směs uhlovodíků
1286	OLEJ PRYSKYŘIČNÝ		3	F1	II/III	Pravidlo pro hromadné položky
1287	KAUČUK, ROZTOK		3	F1	II/III	Pravidlo pro hromadné položky

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	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
1296	TRIETHYLAMIN		3	FC	II	směs uhlovodíků a smáčecí roztok
1297	TRIMETHYLAMIN, VODNÝ ROZTOK	obsahující nejvýše 50 % hm. trimethylaminu	3	FC	I/II/III	směs uhlovodíků a smáčecí roztok
1301	VINYLACETÁT, STABILIZOVANÝ		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1306	PROSTŘEDKY OCHRANNÉ NA DŘEVO, KAPALNÉ		3	F1	II/III	Pravidlo pro hromadné položky
1547	ANILÍN		6.1	T1	II	kyselina octová
1590	DICHLORANILÍNY, KAPALNÉ	čisté isomery a směsi isomerů	6.1	T1	II	kyselina octová
1602	BARVIVO, KAPALNÉ, TOXICKÉ, J.N. nebo MEZIPRODUKT PŘI VÝROBĚ BARVIV, KAPALNÝ, TOXICKÝ, J.N.		6.1	T1	I/II/III	Pravidlo pro hromadné položky
1604	ETHYLENDIAMIN		8	CF1	II	směs uhlovodíků a smáčecí roztok
1715	ACETANHYDRID		8	CF1	II	kyselina octová
1717	ACETYLCHLORID		3	FC	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1718	BUTYLFOSFÁT		8	C3	III	smáčecí roztok
1719	Sírovodík	vodný roztok	8	C5	III	kyselina octová
1719	LÁTKA ŽIRAVÁ, ALKALICKÁ, KAPALNÁ, J.N.	anorganická	8	C5	II/III	Pravidlo pro hromadné položky
1730	CHLORID ANTIMONIČNÝ, KAPALNÝ	čistý	8	C1	II	voda
1736	BENZOYLCHLORID		8	C3	II	směs uhlovodíků a smáčecí roztok
1750	KYSELINA CHLOROCTOVÁ, ROZTOK	vodný roztok	6.1	TC1	II	kyselina octová
1750	KYSELINA CHLOROCTOVÁ, ROZTOK	směs mono- a dichloroctové kyseliny	6.1	TC1	II	kyselina octová
1752	CHLORACETYL - CHLORID		6.1	TC1	I	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1755	KYSELINA CHROMOVÁ, ROZTOK	vodný roztok obsahující nejvýše 30% kyseliny chromové	8	C1	II/III	kyselina dusičná
1760	Kyanamid	vodný roztok obsahující nejvýše 50% kyanamidu	8	C9	II	voda
1760	Kyselina O,O-Diethyl-		8	C9	II	n-butylacetát/ smáčecí roztok nasycený

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	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
	dithiofosforečná					n-butylacetátem
1760	Kyselina O,O-Diisopropyl-dithiofosforečná		8	C9	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1760	Kyselina O,O-Di-n-propyl-dithiofosforečná		8	C9	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1760	LÁTKA ŽÍRAVÁ, KAPALNÁ, J.N.	bod vzplanutí více než 60°C	8	C9	I/II/III	Pravidlo pro hromadné položky
1761	MĚĎ / ETHYLENDIAMIN, KOMPLEX, ROZTOK	vodný roztok	8	CT1	II/III	směs uhlovodíků a smáčecí roztok
1764	KYSELINA DICHLOROCTOVÁ		8	C3	II	kyselina octová
1775	KYSELINA FLUOROBORITÁ	vodný roztok obsahující nejvýše 50% kyseliny fluoroborité	8	C1	II	voda
1778	KYSELINA FLUOROKŘEMIČITÁ		8	C1	II	voda
1779	KYSELINA MRAVENČÍ s více než 85% hm. kyseliny		8	C3	II	kyselina octová
1783	HEXAMETHYLENDIAMIN, ROZTOK	vodný roztok	8	C7	II/III	směs uhlovodíků a smáčecí roztok
1787	KYSELINA JODOVODÍKOVÁ	vodný roztok	8	C1	II/III	voda
1788	KYSELINA BROMOVODÍKOVÁ	vodný roztok	8	C1	II/III	voda
1789	KYSELINA CHLOROVODÍKOVÁ	obsahující nejvýše 38% vodného roztoku	8	C1	II/III	voda
1790	KYSELINA FLUOROVODÍKOVÁ	obsahující nejvýše 60 % kyseliny fluorovodíkové	8	CT1	II	voda dovolená doba používání : nejvýše 2 roky
1791	CHLORNAN, ROZTOK	vodný roztok, obsahující zvlhčovačla obvyklá v obchodě	8	C9	II/III	kyselina dusičná a smáčecí roztok *
1791	CHLORNAN, ROZTOK	vodný roztok	8	C9	II/III	kyselina dusičná*
*) Pro UN 1791: Zkouška se musí provést jen s odvodušňovacími zařízeními. Při provádění zkoušky s kyselinou dusičnou jako standardní kapalinou, musí být použito odvodušňovací zařízení a těsnění odolné proti kyselinám. Je-li zkouška prováděna s roztoky chlornanů, jsou dovolena rovněž odvodušňovací zařízení a těsnění stejného konstrukčního typu, odolná proti chlornanu (např. silikonový kaučuk), která však nejsou odolná proti kyselině dusičné.						
1793	ISOPROPYLFOSFÁT		8	C3	III	smáčecí roztok
1802	KYSELINA CHLORISTÁ	vodný roztok s nejvýše 50 % hm. kyseliny	8	CO1	II	voda
1803	KYSELINA FENOLSULFONOVÁ, KAPALNÁ	směs isomerů	8	C3	II	voda
1805	KYSELINA FOSFOREČNÁ, ROZTOK		8	C1	III	voda
1814	HYDROXID DRASELNÝ,	vodný roztok	8	C5	II/III	voda

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(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
	ROZTOK					
1824	HYDROXID SODNÝ, ROZTOK	vodný roztok	8	C5	II/III	voda
1830	KYSELINA SÍROVÁ	obsahující více než 51 % kyseliny	8	C1	II	voda
1832	KYSELINA SÍROVÁ, POUŽITÁ	chemicky stabilní	8	C1	II	voda
1833	KYSELINA SÍŘIČITÁ		8	C1	II	voda
1835	TETRAMETHYLAMONIUM-HYDROXID, ROZTOK	vodný roztok, bod vzplanutí více než 60°C	8	C7	II	voda
1840	CHLORID ZINEČNATÝ, ROZTOK	vodný roztok	8	C1	III	voda
1848	KYSELINA PROPIONOVÁ s více než 10 % hm., ale nejvýše 90 % hm. kyseliny		8	C3	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1862	ETHYLKROTONÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1863	PALIVO PRO TRYSKOVÉ MOTORY		3	F1	I/II/III	směs uhlovodíků
1866	PRYSKYŘICE, ROZTOK	hořlavý	3	F1	I/II/III	Pravidlo pro hromadné položky
1902	DIISOOKTYLFOSFÁT		8	C3	III	smáčecí roztok
1906	KYSELINA SÍROVÁ, ODPADNÍ		8	C1	II	kyselina dusičná
1908	CHLORITAN, ROZTOK	vodný roztok	8	C9	II/III	kyselina octová
1914	BUTYLPROPIONÁTY		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1915	CYKLOHEXANON		3	F1	III	směs uhlovodíků
1917	ETHYLAKRYLÁT, STABILIZOVANÝ		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1919	METHYLAKRYLÁT, STABILIZOVANÝ		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1920	NONANY	čisté isomery a směsi isomerů, bod vzplanutí mezi 23°C a 60°C	3	F1	III	směs uhlovodíků
1935	KYANID, ROZTOK, J.N.	anorganický	6.1	T4	I/II/III	voda
1940	KYSELINA THIOGLYKOLOVÁ		8	C3	II	kyselina octová
1986	ALKOHOLY, HOŘLAVÉ, TOXICKÉ, J.N.		3	FT1	I/II/III	Pravidlo pro hromadné položky
1987	Cyklohexanol	technicky čistý	3	F1	III	kyselina octová
1987	ALKOHOLY, J.N.		3	F1	II/III	Pravidlo pro hromadné položky
1988	ALDEHYDY, HOŘLAVÉ,		3	FT1	I/II/III	Pravidlo pro hromadné

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	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
	TOXICKÉ, J.N.					položky
1989	ALDEHYDY, J.N.		3	F1	I/II/III	Pravidlo pro hromadné položky
1992	2,6-cis-Dimethyl-morfolin		3	FT1	III	směs uhlovodíků
1992	LÁTKA HOŘLAVÁ, KAPALNÁ, TOXICKÁ, J.N.		3	FT1	I/II/III	Pravidlo pro hromadné položky
1993	Vinyl ester kyseliny propionové		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1993	(1-Methoxy-2-propyl) acetát		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
1993	LÁTKA HOŘLAVÁ, KAPALNÁ, J.N.		3	F1	I/II/III	Pravidlo pro hromadné položky
2014	PEROXID VODÍKU, VODNÝ ROZTOK	s nejméně 20 %, ale nejvýše 60 % peroxidu vodíku (stabilizovaný podle potřeby)	5.1	OC1	II	kyselina dusičná
2022	KYSELINA KRESOLOVÁ	kapalná směs obsahující kresoly, xyleny a methylfenoly	6.1	TC1	II	kyselina octová
2030	HYDRAZIN, VODNÝ ROZTOK	obsahující ne méně než 37% ale ne více než 64% hm. hydrazinu	8	CT1	II	voda
2030	Hydrazin hydrát	vodný roztok s 64% hydrazinu	8	CT1	II	voda
2031	KYSELINA DUSIČNÁ	jiná než dýmavá, s ne více než 55% čisté kyseliny	8	CO1	II	kyselina dusičná
2045	ISOBUTYRALDEHYD		3	F1	II	směs uhlovodíků
2050	DIISOBUTYLEN, ISOMERNÍ SLOUČENINY		3	F1	II	směs uhlovodíků
2053	METHYL - ISOBUTYLKARBINOL		3	F1	III	kyselina octová
2054	MORFOLIN		8	CF1	I	směs uhlovodíků
2057	TRIPROPYLEN		3	F1	II/III	směs uhlovodíků
2058	VALERALDEHYD	čisté isomery a směsi isomerů	3	F1	II	směs uhlovodíků
2059	NITROCELULÓZA, HOŘLAVÝ ROZTOK		3	D	I/II/III	Pravidlo pro hromadné položky: odchylkou od obvyklého postupu se toto pravidlo může použít pro rozpouštědla klasifikačního kódu F1
2075	CHLORAL, BEZVODÝ, STABILIZOVANÝ		6.1	T1	II	smáčecí roztok
2076	KRESOLY, KAPALNÉ	čisté isomery a směsi isomerů	6.1	TC1	II	kyselina octová

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	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
2078	TOLUENDIISOKYANÁT	kapalný	6.1	T1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2079	DIETHYLENTRIAMIN		8	C7	II	směs uhlovodíků
2209	FORMALDEHYD, ROZTOK	vodný roztok s 37% Form- aldehydu, obsah methanolu: 8-10%	8	C9	III	kyselina octová
2209	FORMALDEHYD, ROZTOK	vodný roztok, obsahující nejméně 25 % formaldehydu	8	C9	III	voda
2218	KYSELINA AKRYLOVÁ, STABILIZOVANÁ		8	CF1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2227	n-BUTYLMETHAKRYLÁT, STABILIZOVANÝ		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2235	CHLORBENZYL - CHLORIDY, KAPALNÉ	para-Chlorobenzyl chlorid	6.1	T2	III	směs uhlovodíků
2241	CYKLOHEPTAN		3	F1	II	směs uhlovodíků
2242	CYKLOHEPTEN		3	F1	II	směs uhlovodíků
2243	CYKLOHEXYLACETÁT		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2244	CYKLOPENTANOL		3	F1	III	kyselina octová
2245	CYKLOPENTANON		3	F1	III	směs uhlovodíků
2247	n-DEKAN		3	F1	III	směs uhlovodíků
2248	DI-n-BUTYLAMIN		8	CF1	II	směs uhlovodíků
2258	1,2-PROPYLENDIAMIN		8	CF1	II	směs uhlovodíků a smáčecí roztok
2259	TRIETHYL - ENTETRAMIN		8	C7	II	voda
2260	TRIPROPYLAMIN		3	FC	III	směs uhlovodíků a smáčecí roztok
2263	DIMETHYLCYKLO - HEXANY	čisté isomery a směsi isomerů	3	F1	II	směs uhlovodíků
2264	N,N-DIMETHYLCYKLO - HEXYLAMIN		8	CF1	II	směs uhlovodíků a smáčecí roztok
2265	N,N- DIMETHYLFORMAMID		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2266	DIMETHYL-N- PROPYLAMIN		3	FC	II	směs uhlovodíků a smáčecí roztok
2269	3,3'- IMINOBISPROPYLAMIN		8	C7	III	směs uhlovodíků a smáčecí roztok
2270	ETHYLAMIN, VODNÝ ROZTOK	obsahující nejméně 50 %, ale nejvýše 70 % ethylaminu, bod vzplanutí pod 23°C, žravý, nebo slabě žravý	3	FC	II	směs uhlovodíků a smáčecí roztok

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	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
2275	2-ETHYLBUTANOL		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2276	2-ETHYLHEXYLAMIN		3	FC	III	směs uhlovodíků a smáčecí roztok
2277	ETHYLMETHAKRYLÁT, STABILIZOVANÝ		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2278	n-HEPTEN		3	F1	II	směs uhlovodíků
2282	HEXANOLY	čisté isomery a směsi isomerů	3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2283	ISOBUTYLMETHA - KRYLÁT, STABILIZOVANÝ		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2286	PENTAMETHYLHEPTAN		3	F1	III	směs uhlovodíků
2287	ISOHEPTEN		3	F1	II	směs uhlovodíků
2288	ISOHEXEN		3	F1	II	směs uhlovodíků
2289	ISOFORONDIAMIN		8	C7	III	směs uhlovodíků a smáčecí roztok
2293	4-METHOXY-4- METHYLPENTAN-2-ON		3	F1	III	směs uhlovodíků
2296	METHYLCYKLOHEXAN		3	F1	II	směs uhlovodíků
2297	METHYLCYKLO - HEXANON	čisté isomery a směsi isomerů	3	F1	III	směs uhlovodíků
2298	METHYLCYKLO - PENTAN		3	F1	II	směs uhlovodíků
2302	5-METHYLHEXAN-2-ON		3	F1	III	směs uhlovodíků
2308	KYSELINA NITROSYLSÍROVÁ, KAPALNÁ		8	C1	II	voda
2309	OKTADIENY		3	F1	II	směs uhlovodíků
2313	PIKOLINY	čisté isomery a směsi isomerů	3	F1	III	směs uhlovodíků
2317	DIKYANOMĚDNAN SODNÝ, ROZTOK	vodný roztok	6.1	T4	I	voda
2320	TETRAETHYLEN - PENTAMIN		8	C7	III	směs uhlovodíků a smáčecí roztok
2324	TRIISOBUTYLEN	směs C12-monoolefinů, bod vzplanutí mezi 23°C a 60°C	3	F1	III	směs uhlovodíků
2326	TRIMETHYLCYKLO - HEXYLAMIN		8	C7	III	směs uhlovodíků a smáčecí roztok
2327	TRIMETHYLHEXA - METHYLEN-DIAMINY	čisté isomery a směsi isomerů	8	C7	III	směs uhlovodíků a smáčecí roztok
2330	UNDEKAN		3	F1	III	směs uhlovodíků
2336	ALLYLFORMIÁT		3	FT1	I	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem

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	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
2348	BUTYLAKRYLÁTY, STABILIZOVANÉ		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2357	CYKLOHEXYLAMIN	, bod vzplanutí mezi 23°C a 60°C	8	CF1	II	směs uhlovodíků a smáčecí roztok
2361	DIISOBUTYLAMIN		3	FC	III	směs uhlovodíků a smáčecí roztok
2366	DIETHYLKARBONÁT		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2367	alfa-METHYLVALER - ALDEHYD		3	F1	II	směs uhlovodíků
2370	1-HEXEN		3	F1	II	směs uhlovodíků
2372	1,2-BIS(DIMETHYLAMINO) ETHAN		3	F1	II	směs uhlovodíků a smáčecí roztok
2379	1,3-DIMETHYLBUTYLAMIN		3	FC	II	směs uhlovodíků a smáčecí roztok
2383	DIPROPYLAMIN		3	FC	II	směs uhlovodíků a smáčecí roztok
2385	ETHYLISOBUTYRÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2393	ISOBUTYLFORMIÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2394	ISOBUTYLPROPIONÁT	bod vzplanutí mezi 23°C a 60°C	3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2396	METHAKRYLALDEHYD, STABILIZOVANÝ		3	FT1	II	směs uhlovodíků
2400	METHYLISOVALERÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2401	PIPERIDIN		8	CF1	I	směs uhlovodíků a smáčecí roztok
2403	ISOPROPENYLACETÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2405	ISOPROPYLBUTYRÁT		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2406	ISOPROPYLISO - BUTYRÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2409	ISOPROPYLPROPIONÁT		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2410	1,2,3,6-TETRAHYDROPYRIDIN		3	F1	II	směs uhlovodíků

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	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
2427	CHLOREČNAN DRASELNÝ, vodný roztok		5.1	O1	II/III	voda
2428	CHLOREČNAN SODNÝ, vodný roztok		5.1	O1	II/III	voda
2429	CHLOREČNAN VÁPENATÝ, vodný roztok		5.1	O1	II/III	voda
2436	KYSELINA THIOOCTOVÁ		3	F1	II	kyselina octová
2457	2,3-DIMETHYLBUTAN		3	F1	II	směs uhlovodíků
2491	ETHANOLAMIN		8	C7	III	smáčecí roztok
2491	ETHANOLAMIN, ROZTOK	vodný roztok	8	C7	III	smáčecí roztok
2496	ANHYDRID KYSELINY PROPIONOVÉ		8	C3	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2524	ETHYLORTHOFORMIÁT		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2526	FURFURYLAMIN		3	FC	III	směs uhlovodíků a smáčecí roztok
2527	ISOBUTYLAKRYLÁT, STABILIZOVANÝ		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2528	ISOBUTYLISOBUTYRÁT		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2529	KYSELINA ISOMÁSELNÁ		3	FC	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2531	KYSELINA METHAKRYLOVÁ, STABILIZOVANÁ		8	C3	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2542	TRIBUTYLAMIN		6.1	T1	II	směs uhlovodíků
2560	2-METHYLPENTAN-2-OL		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2564	KYSELINA TRICHLOROCTOVÁ, ROZTOK	vodný roztok	8	C3	II/III	kyselina octová
2565	DICYKLOHEXYLAMIN		8	C7	III	směs uhlovodíků a smáčecí roztok
2571	Kyselina ethylsírová		8	C3	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2571	KYSELINY ALKYL SíROVÉ		8	C3	II	Pravidlo pro hromadné položky
2580	BROMID HLINITÝ, ROZTOK	vodný roztok	8	C1	III	voda
2581	CHLORID HLINITÝ, ROZTOK	vodný roztok	8	C1	III	voda

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	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
2582	CHLORID ŽELEZITÝ, ROZTOK	vodný roztok	8	C1	III	voda
2584	Kyselina methan sulfonová	obsahující více než 5 % volné kyseliny sírové	8	C1	II	voda
2584	KYSELINY ALKYL-SULFONOVÉ, KAPALNÉ	obsahující více než 5 % volné kyseliny sírové	8	C1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2584	Kyselina benzen sulfonová	obsahující více než 5 % volné kyseliny sírové	8	C1	II	voda
2584	Kyselina toluen sulfonová	obsahující více než 5 % volné kyseliny sírové	8	C1	II	voda
2584	KYSELINY ARYL-SULFONOVÉ, KAPALNÉ	obsahující více než 5 % volné kyseliny sírové	8	C1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2586	Kyselina methan sulfonová	s nejvýše 5 % volné kyseliny sírové	8	C1	III	voda
2586	KYSELINY ALKYL-SULFONOVÉ, KAPALNÉ	s nejvýše 5 % volné kyseliny sírové	8	C1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2586	Kyselina benzen sulfonová	s nejvýše 5 % volné kyseliny sírové	8	C1	III	voda
2586	Kyselina toluen sulfonová	s nejvýše 5 % volné kyseliny sírové	8	C1	III	voda
2586	KYSELINY ARYL-SULFONOVÉ, KAPALNÉ	s nejvýše 5 % volné kyseliny sírové	8	C1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2610	TRIALLYLAMIN		3	FC	III	směs uhlovodíků a smáčecí roztok
2614	METHYLALLYL - ALKOHOL		3	F1	III	kyselina octová
2617	METHYLCYKLOHEXANOLY	čisté isomery a směsi isomerů, , bod vzplanutí mezi 23°C a 60°C	3	F1	III	kyselina octová
2619	BENZYLDIMETHYL - AMIN		8	CF1	II	směs uhlovodíků a smáčecí roztok
2620	AMYL-BUTYRÁTY	čisté isomery a směsi isomerů, , bod vzplanutí mezi 23°C a 60°C	3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2622	GLYCIDALDEHYD	bod vzplanutí pod 23°C	3	FT1	II	směs uhlovodíků
2626	KYSELINA CHLOREČNÁ, vodný roztok	s nejvýše 10 % kyseliny chlorečné	5.1	O1	II	kyselina dusičná
2656	CHINOLIN	bod vzplanutí nad 60°C	6.1	T1	III	voda
2672	AMONIAK (ČPAVEK), ROZTOK	vodný, s hustotou mezi 0,880 a 0,957 kg/l při 15 °C, s více než 10 %, ale nejvíce 35 % amoniaku (čpavku)	8	C5	III	voda
2683	SULFID AMONNÝ, ROZTOK	vodný roztok, , bod vzplanutí mezi 23°C a 60°C	8	CFT	II	kyselina octová

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	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
2684	3-DIETHYLAMINO - PROPYLAMIN		3	FC	III	směs uhlovodíků a smáčecí roztok
2685	N,N-DIETHYL - ETHYLEN DIAMIN		8	CF1	II	směs uhlovodíků a smáčecí roztok
2693	HYDROGENSIŘČITANY, VODNÝ ROZTOK, J.N.	anorganický	8	C1	III	voda
2707	DIMETHYLDIOXANY	čisté isomery a směsi isomerů	3	F1	II/III	směs uhlovodíků
2733	AMINY HOŘLAVÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY HOŘLAVÉ, ŽÍRAVÉ, J.N.		3	FC	I/II/III	směs uhlovodíků a smáčecí roztok
2734	Di-sek-butylamin		8	CF1	II	směs uhlovodíků
2734	AMINY KAPALNÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N. nebo POLYAMINY KAPALNÉ, ŽÍRAVÉ, HOŘLAVÉ, J.N.		8	CF1	I/II	směs uhlovodíků a smáčecí roztok
2735	AMINY KAPALNÉ, ŽÍRAVÉ, J.N. nebo POLYAMINY KAPALNÉ, ŽÍRAVÉ, J.N.		8	C7	I/II/III	směs uhlovodíků a smáčecí roztok
2739	ANHYDRID KYSELINY MÁSELNÉ		8	C3	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2789	KYSELINA OCTOVÁ, LEDOVÁ nebo KYSELINA OCTOVÁ, ROZTOK	vodný roztok, obsahující více než 80 % hm. kyseliny	8	CF1	II	kyselina octová
2790	KYSELINA OCTOVÁ, ROZTOK	vodný roztok, obsahující nejméně 10 % hm., ale nejvíce 80 % hm. kyseliny	8	C3	II/III	kyselina octová
2796	KYSELINA SÍROVÁ	obsahující nejvýše 51 % čisté kyseliny	8	C1	II	voda
2797	ELEKTROLYT PRO BATERIE, ALKALICKÝ	hydroxid sodný/draselný,, vodný roztok	8	C5	II	voda
2810	2-Chlór-6-fluorbenzyl chlorid	stabilizovaný	6.1	T1	III	směs uhlovodíků
2810	2-Fenylethanol		6.1	T1	III	kyselina octová
2810	Ethylen glykol monohexyl ether		6.1	T1	III	kyselina octová
2810	LÁTKA TOXICKÁ, KAPALNÁ, ORGANICKÁ, J.N.		6.1	T1	I/II/III	Pravidlo pro hromadné položky
2815	N-AMINOETHYL - PIPERAZIN		8	C7	III	směs uhlovodíků a smáčecí roztok
2818	POLYSULFID AMONNÝ, ROZTOK	vodný roztok	8	CT1	II/III	kyselina octová
2819	AMYLFOSFÁT		8	C3	III	smáčecí roztok
2820	KYSELINA MÁSELNÁ	n-kyselina máselná	8	C3	III	n-butylacetát/ smáčecí roztok nasycený

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(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
						n-butylacetátem
2821	FENOL, ROZTOK	vodný roztok, toxický, nealkalický	6.1	T1	II/III	kyselina octová
2829	KYSELINA KAPRONOVÁ	n-kyselina kapronová	8	C3	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2837	HYDROGENSULFÁTY, VODNÝ ROZTOK		8	C1	II/III	voda
2838	VINYLBUTYRÁT, STABILIZOVANÝ		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2841	DI-n-AMYLAMIN		3	FT1	III	směs uhlovodíků a smáčecí roztok
2850	TETRAMER PROPYLENU	směs C12-monoolefinů, bod vzplanutí mezi 23°C a 60°C	3	F1	III	směs uhlovodíků
2873	DIBUTYLAMINO - ETHANOL	N,N-Di-n-butylaminoethanol	6.1	T1	III	kyselina octová
2874	FURFURYLALKOHOL		6.1	T1	III	kyselina octová
2920	Kyselina O,O-Diethyl-dithiofosforečná	, bod vzplanutí mezi 23°C a 60°C	8	CF1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2920	Kyselina O,O-Dimethyl-dithiofosforečná	, bod vzplanutí mezi 23°C a 60°C	8	CF1	II	smáčecí roztok
2920	Bromovodík	33% roztok v ledové kyselině octové	8	CF1	II	smáčecí roztok
2920	Tetramethylamonium - hydroxid	vodný roztok, , bod vzplanutí mezi 23°C a 60°C	8	CF1	II	voda
2920	LÁTKA ŽÍRAVÁ, KAPALNÁ, HOŘLAVÁ, J.N.		8	CF1	I/II	Pravidlo pro hromadné položky
2922	Sulfid amonný	vodný roztok, , bod vzplanutí nad 60°C	8	CT1	II	voda
2922	Kresoly	vodný alkalický roztok, směs sodíku a draselných kresolátů,	8	CT1	II	kyselina octová
2922	Fenol	vodný alkalický roztok, směs sodíku a draselných fenolů	8	CT1	II	kyselina octová
2922	Hydrogendifluorid sodný	vodný roztok	8	CT1	III	voda
2922	LÁTKA ŽÍRAVÁ, KAPALNÁ, TOXICKÁ, J.N.		8	CT1	I/II/III	Pravidlo pro hromadné položky
2924	LÁTKA HOŘLAVÁ, KAPALNÁ, ŽÍRAVÁ, J.N.	slabě žíravá	3	FC	I/II/III	Pravidlo pro hromadné položky
2927	LÁTKA TOXICKÁ, KAPALNÁ, ŽÍRAVÁ, ORGANICKÁ, J.N.		6.1	TC1	I/II	Pravidlo pro hromadné položky

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(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
2933	METHYL-2-CHLORPROPIONÁT		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2934	ISOPROPYL-2-CHLORPROPIONÁT		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2935	ETHYL-2-CHLORPROPIONÁT		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2936	KYSELINA THIOMLÉČNÁ		6.1	T1	II	kyselina octová
2941	FLUORANILÍNY	čisté isomery a směsi isomerů	6.1	T1	III	kyselina octová
2943	TETRAHYDROFUR - FURYLAMIN		3	F1	III	směs uhlovodíků
2945	N-METHYLBUTYLAMIN		3	FC	II	směs uhlovodíků a smáčecí roztok
2946	2-AMINO-5-DIETHYLAMINO - PENTAN		6.1	T1	III	směs uhlovodíků a smáčecí roztok
2947	ISOPROPYLCHLOR - ACETÁT		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
2984	PEROXID VODÍKU, vodný roztok	s nejméně 8 %, ale méně než 20 % peroxidu vodíku (stabilizovaný podle potřeby)	5.1	O1	III	kyselina dusičná
3056	n-HEPTALDEHYD		3	F1	III	směs uhlovodíků
3065	NÁPOJE ALKOHOLICKÉ	s více než 24 % obj.	3	F1	II/III	kyselina octová
3066	BARVA nebo LÁTKA POMOČNÁ K VÝROBĚ BAREV	včetně laků, emailů, mořidel, šelaků, fermeží, leštidel, kapalných plnidel a kapalných základových složek laků, včetně ředidel a rozpouštědel	8	C9	II/III	Pravidlo pro hromadné položky
3079	METHAKRYLONITRIL, STABILIZOVANÝ		6.1	TF1	I	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3082	Alkohol C ₆ -C ₁₇ (sekundární) poly (3-6) ethoxylát		9	M6	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem a směs uhlovodíků
3082	Alkohol C ₁₂ -C ₁₅ poly (1-3) ethoxylát		9	M6	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem a směs uhlovodíků
3082	Alkohol C ₁₃ -C ₁₅ poly (1-6) ethoxylát		9	M6	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem a směs uhlovodíků
3082	Palivo pro letecké tryskové motory JP-5	bod vzplanutí nad 60°C	9	M6	III	směs uhlovodíků

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	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
3082	Palivo pro letecké tryskové motory JP-7	bod vzplanutí nad 60°C	9	M6	III	směs uhlovodíků
3082	Uhelný dehet	bod vzplanutí nad 60°C	9	M6	III	směs uhlovodíků
3082	Těžký dehtový benzín	bod vzplanutí nad 60°C	9	M6	III	směs uhlovodíků
3082	Kreosoty z uhlénoho dehtu	bod vzplanutí nad 60°C	9	M6	III	směs uhlovodíků
3082	Kreosoty z dřevěného dehtu	bod vzplanutí nad 60°C	9	M6	III	směs uhlovodíků
3082	Kresyldifenylfosfát		9	M6	III	smáčecí roztok
3082	Decyl akrylát		9	M6	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem a směs uhlovodíků
3082	Diisobutyl ftalát		9	M6	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem a směs uhlovodíků
3082	Di-n-butyl ftalát		9	M6	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem a směs uhlovodíků
3082	Uhlovodíky	kapalné,, bod vzplanutí nad 60°C, ohrožující životní prostředí	9	M6	III	Pravidlo pro hromadné položky
3082	Isodecyl difenyl fosfát		9	M6	III	smáčecí roztok
3082	Methylnaftalen	směs isomerů, kapalná	9	M6	III	směs uhlovodíků
3082	Triaryl fosfát	j.n.	9	M6	III	smáčecí roztok
3082	Triresyl fosfát	s nejvýše 3% ortho-isomerů	9	M6	III	smáčecí roztok
3082	Trixylenyl fosfát		9	M6	III	smáčecí roztok
3082	Alkyl dithiofosfát zinku	C3-C14	9	M6	III	smáčecí roztok
3082	Aryl dithiofosfát zinku	C7-C16	9	M6	III	smáčecí roztok
3082	LÁTKA OHROŽUJÍCÍ ŽIVOTNÍ PROSTŘEDÍ, KAPALNÁ, J.N.		9	M6	III	Pravidlo pro hromadné položky
3099	LÁTKA PODPORUJÍCÍ HOŘENÍ, KAPALNÁ, TOXICKÁ, J.N.		5.1	OT1	I/II/III	Pravidlo pro hromadné položky
3101 3103 3105 3107 3109 3111 3113 3115 3117 3119	PEROXID, ORGANICKÝ, TYP B, C, D, E nebo F, KAPALNÝ nebo PEROXID, ORGANICKÝ, TYP B, C, D, E nebo F, KAPALNÝ, S ŘÍZENÍM TEPLoty		5.2	P1		n-butylacetát/ smáčecí roztok nasycený n-butylacetátem a směs uhlovodíků a kyselina dusičná**

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	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
<p>**) Pro UN 3101, 3103, 3105, 3107, 3109, 3111, 3113, 3115, 3117, 3119 (terc.-butylhydroperoxid s obsahem více než 40 % peroxidu a kyseliny peroxyoctové jsou vyloučeny): Všechny organické peroxidy v technicky čisté formě nebo v roztoku v rozpouštědlech, pokud se týká jejich snášenlivosti, jsou pokryty standardní kapalinou "směs uhlovodíků" v tomto seznamu. Snášenlivost odvodušňovacích ventilů a těsnění s organickými peroxidy může být ověřena též nezávisle na zkoušce konstrukčního typu laboratorními zkouškami s kyselinou dusičnou.</p>						
3145	BUTYLFENOLY	kapalné, j.n.	8	C3	I/II/III	kyselina octová
3145	ALKYLFENOLY, KAPALNÉ, J.N.	včetně homologů C2-C12	8	C3	I/II/III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3149	PEROXID VODÍKU A Kyselina peroctová, SMĚS, STABILIZOVANÁ	s kyselinami (UN 2790 kyselina octová, UN 2796 kyselina sírová a/nebo UN 1805 kyselina fosforečná), vodou a nejvýše 5 % kyseliny peroctové	5.1	OC1	II	smáčecí roztok a kyselina dusičná
3210	CHLOREČNANY, anorganické, vodný roztok, j.n.		5.1	O1	II/III	voda
3211	CHLORISTANY, anorganické, vodný roztok, j.n.		5.1	O1	II/III	voda
3213	BROMIČNANY, anorganické, vodný roztok, j.n.		5.1	O1	II/III	voda
3214	MANGANISTANY, anorganické, vodný roztok, j.n.		5.1	O1	II	voda
3216	PERSÍRANY,, anorganické, vodný roztok, j.n.		5.1	O1	III	smáčecí roztok
3218	DUSIČNANY,, anorganické, vodný roztok, j.n.		5.1	O1	II/III	voda
3219	DUSITANY,, anorganické, vodný roztok, j.n.		5.1	O1	II/III	voda
3264	Chlorid měďnatý	vodný roztok, slabě žíravý	8	C1	III	voda
3264	Hydroxylamin sulfát	25% vodný roztok	8	C1	III	voda
3264	Kyselina fosforitá	vodný roztok	8	C1	III	voda
3264	LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, anorganická, j.n.	bod vzplanutí nad 60°C	8	C1	I/II/III	Pravidlo pro hromadné položky; není použitelné pro směsi obsahující následující složky: UN 1830, 1832, 1906 a 2308
3265	Kyselina methoxyoctová		8	C3	I	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3265	Allylanhydrid kyseliny jantarové		8	C3	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem

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(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
3265	Kyselina dithioglykolová		8	C3	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3265	Butyl fosfát	směs mono- a di-butyl fosfátů	8	C3	III	smáčecí roztok
3265	Kyselina kaprylová		8	C3	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3265	Kyselina isovalerová		8	C3	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3265	Kyselina pelargonová		8	C3	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3265	Kyselina pyruvátová		8	C3	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3265	Kyselina valerová		8	C3	III	kyselina octová
3265	LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ORGANICKÁ, J.N.	bod vzplanutí nad 60°C	8	C3	I/II/III	Pravidlo pro hromadné položky
3266	Hydrogensulfid sodný	vodný roztok	8	C5	II	kyselina octová
3266	Sulfid sodný	vodný roztok, slabě žíravý	8	C5	III	kyselina octová
3266	LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ANORGANICKÁ, J.N.	bod vzplanutí nad 60°C	8	C5	I/II/III	Pravidlo pro hromadné položky
3267	2,2'-(Butylimino)-bisethanol		8	C7	II	směs uhlovodíků a smáčecí roztok
3267	LÁTKA ŽÍRAVÁ, KAPALNÁ, ALKALICKÁ, ORGANICKÁ, J.N.	bod vzplanutí nad 60°C	8	C7	I/II/III	Pravidlo pro hromadné položky
3271	Ethylen glykol monobutyl ether	bod vzplanutí 60°C	3	F1	III	kyselina octová
3271	ETHERY, J.N.		3	F1	II/III	Pravidlo pro hromadné položky
3272	Terc-butyl ester kyseliny akrylové		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3272	Isobutyl propionát	bod vzplanutí pod 23°C	3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3272	Methyl valerát		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3272	Trimethyl orthoformiát		3	F1	II	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3272	Ethyl valerát		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem

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	3.1.2	3.1.2	2.2	2.2	2.1.1.3	
(1)	(2a)	(2b)	(3a)	(3b)	(4)	(5)
3272	Isobutyl isovalerát		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3272	n-Amyl propionát		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3272	n-Butylbutyrát		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3272	Methyl laktát		3	F1	III	n-butylacetát/ smáčecí roztok nasycený n-butylacetátem
3272	ESTERY, J.N.		3	F1	II/III	Pravidlo pro hromadné položky
3287	Dusitan sodný	40% vodný roztok	6.1	T4	III	voda
3287	LÁTKA TOXICKÁ, KAPALNÁ, anorganický, j.n.		6.1	T4	I/II/III	Pravidlo pro hromadné položky
3291	ODPAD KLINICKÝ NESPECIFIKOVANÝ, J.N.	kapalný	6.2	I3	II	voda
3293	HYDRAZIN, vodný roztok	s nejvýše 37 % hm. hydrazinu	6.1	T4	III	voda
3295	Hepteny	j.n.	3	F1	II	směs uhlovodíků
3295	Nonany	bod vzplanutí pod 23°C	3	F1	II	směs uhlovodíků
3295	Dekany	j.n.	3	F1	III	směs uhlovodíků
3295	1,2,3-Trimethylbenzen		3	F1	III	směs uhlovodíků
3295	UHLOVODÍKY, KAPALNÉ, J.N.		3	F1	I/II/III	Pravidlo pro hromadné položky
3405	CHLOREČNAN BARNATÝ, ROZTOK	vodný roztok	5.1	OT1	II/III	voda
3406	CHLORISTAN BARNATÝ, ROZTOK	vodný roztok	5.1	OT1	II/III	voda
3408	CHLORISTAN OLOVNATÝ, ROZTOK	vodný roztok	5.1	OT1	II/III	voda
3413	KYANID DRASELNÝ, ROZTOK	vodný roztok	6.1	T4	I/II/III	voda
3414	KYANID SODNÝ, ROZTOK	vodný roztok	6.1	T4	I/II/III	voda
3415	FLUORID SODNÝ, ROZTOK	vodný roztok	6.1	T4	III	voda
3422	FLUORID DRASELNÝ, ROZTOK	vodný roztok	6.1	T4	III	voda

4.1.2 Dodatečná všeobecná ustanovení pro používání IBC

4.1.2.1

Pokud jsou IBC používány pro přepravu kapalin s bodem vzplanutí nejvýše 60 °C (uzavřený kelímek) nebo sypkých látek náchylných k prachové explozi, musí být provedena opatření zabraňující nebezpečí elektrostatického výboje.

4.1.2.2

Každá kovová IBC, IBC z tuhého plastu a kompozitní IBC musí být podrobena příslušným prohlídkám a zkouškám podle pododílů 6.5.4.4 nebo 6.5.4.5:

- před uvedením do používání;
- poté v intervalech nepřesahujících dva a půl nebo pět let jak je stanoveno;

-po opravě nebo rekonstrukci, před opětovným použitím pro přepravu.

IBC nesmějí být plněny a podávány k přepravě po datu uplynutí doby platnosti poslední periodické zkoušky nebo inspekce. Avšak IBC naplněná před datem uplynutí doby platnosti poslední periodické zkoušky nebo inspekce, může být přepravena v období nejvýše tří měsíců po uplynutí tohoto data. Kromě toho může být IBC přepravena po datu uplynutí doby platnosti poslední periodické zkoušky nebo inspekce:

- (a) po vyprázdnění, ale před vyčištěním, pro účely provedení předepsané zkoušky nebo inspekce před opětovným naplněním; a
- (b) pokud neschválí jinak příslušný orgán, v období nepřekračujícím šest měsíců po datu uplynutí lhůty platnosti poslední periodické zkoušky nebo inspekce, aby se umožnilo vrácení nebezpečných věcí nebo zbytků k jejich vhodné likvidaci nebo recyklaci.

POZNÁMKA: K údajům v přepravním dokladu viz odstavec 5.4.1.1.11.

4.1.2.3

IBC typu 31H22 musí být naplněny nejméně do 80% objemu vnějšího obalu.

4.1.2.4

S výjimkou běžné údržby kovových IBC, IBC z tuhého plastu, kompozitních a flexibilních IBC prováděné vlastníkem IBC, jehož stát a jméno nebo schválená značka jsou trvale vyznačeny na IBC, musí subjekt provádějící běžnou údržbu trvale označit IBC v blízkosti UN kódu výrobce těmito údaji:

- (a) státem, v němž byla běžná údržba provedena; a
- (b) jménem nebo schválenou značkou subjektu provádějícího běžnou údržbu.

4.1.3 Všeobecná ustanovení týkající se pokynů pro balení

4.1.3.1

Pokyny pro balení platné pro nebezpečné věci třídy 1 až 9 jsou specifikovány v oddílu 4.1.4. Člení se do tří pododílů podle druhu obalů, kterých se týkají:

Pododíl 4.1.4.1 pro obaly jiné než IBC a velké obaly; tyto pokyny pro balení jsou označeny alfanumerickým kódem začínajícím písmenem "P" anebo, pokud jde o obaly specifické pro RID a ADR, písmenem "R";

Pododíl 4.1.4.2 pro IBC; tyto pokyny jsou označeny alfanumerickým kódem začínajícím písmeny "IBC";

Pododíl 4.1.4.3 pro velké obaly; tyto pokyny pro balení jsou označeny alfanumerickým kódem začínajícím písmeny "LP".

Všeobecně se v pokynech pro balení stanoví, že platí všeobecná ustanovení oddílů 4.1.1, 4.1.2 nebo 4.1.3, jak je to vhodné. Pokyny pro balení mohou též vyžadovat dodržení zvláštních ustanovení oddílů 4.1.5, 4.1.6, 4.1.7, 4.1.8 nebo 4.1.9, jak je to vhodné. Zvláštní ustanovení pro balení mohou být také specifikována v pokynech pro balení pro určité látky nebo předměty. Tato jsou rovněž označena alfanumerickým kódem začínajícím písmeny:

„PP“ pro obaly jiné než IBC a velké obaly, nebo „RR“, pokud jde o zvláštní ustanovení pro balení specifická pro RID a ADR;

„B“ pro IBC, nebo „BB“, pokud jde o zvláštní ustanovení pro balení specifická pro RID a ADR;

„L“ pro velké obaly.

Pokud není stanoveno jinak, každý obal musí splňovat odpovídající požadavky části 6. Obecně neřikají pokyny pro balení nic o snášenlivosti, proto uživatel nesmí zvolit obal bez ověření, že látka je snášenlivá se zvoleným obalovým materiálem (např. skleněné nádoby jsou nevhodné pro většinu fluoridů). Pokud jsou v pokynech pro balení dovoleny skleněné nádoby, jsou dovoleny rovněž obaly z porcelánu, užitkové keramiky a kameniny.

4.1.3.2 Sloupec (8) tabulky A kapitoly 3.2 uvádí pro každý předmět nebo látku pokyn (pokyny) pro balení, který(é) musí být použit(y). Ve sloupci (9a) jsou udána zvláštní ustanovení pro balení a ve sloupci (9b) zvláštní ustanovení pro společné balení (viz oddíl 4.1.10) vztahující se na jednotlivé látky nebo předměty.

4.1.3.3 V každém pokynu pro balení jsou uvedeny, pokud je to vhodné, informace o dovolených samostatných a skupinových obalech. Pro skupinové obaly jsou uvedeny dovolené vnější a vnitřní obaly, a pokud je to vhodné, rovněž nejvyšší množství dovolené pro každý vnitřní nebo vnější obal. Nejvyšší čistá (netto) hmotnost a nejvyšší vnitřní objem jsou definovány v oddílu 1.2.1.

4.1.3.4 Následující obaly nesmějí být použity, pokud jsou látky, které se mají přepravovat, náchylné ke zkapalnění během přepravy:

Obaly

Sudy:	1D a 1G
Bedny:	4A, 4B, 4C1, 4C2, 4D, 4F, 4G, 4H1 a 4H2
Pytle:	5L1, 5L2, 5L3, 5H1, 5H2, 5H3, 5H4, 5M1 a 5M2
Kompozitní obaly:	6HC, 6HD2, 6HG1, 6HG2, 6HD1, 6PC, 6PD1, 6PD2, 6PG1, 6PG2 a 6PH1

Velké obaly:

flexibilní plast	51H (vnější obal)
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IBC

všechny typy IBC

Pro látky obalové skupiny I:

Pro látky obalové skupiny II a III:

dřevěné:	11C, 11D a 11F
lepenkové:	11G
flexibilní:	13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 a 13M2
kompozitní:	11HZ2 a 21HZ2.

Pro účely tohoto pododdílu jsou látky a směsi látek mající bod tání nejvýše 45 °C považovány za tuhé látky náchylné ke zkapalnění během přepravy.

4.1.3.5 Pokud pokyny pro balení v této kapitole dovolují použití určitého typu obalu (např. 4G, 1A2), mohou být použity rovněž obaly, které mají stejný identifikační kód, následovaný písmeny "V", "U" nebo "W", označené podle předpisů části 6 (např. 4GV, 4GU nebo 4GW; 1A2V, 1A2U nebo 1A2W), za stejných podmínek a omezení, jaké platí pro použití tohoto typu obalu podle příslušných pokynů pro balení. Například skupinový obal označený kódem obalu "4GV" může být použit kdykoli je dovolen skupinový obal označený "4G", pokud jsou splněny požadavky příslušného pokynu pro balení vztahu k druhům vnitřních obalů a množstevním omezením.

4.1.3.6 Tlakové nádoby pro kapaliny a tuhé látky

4.1.3.6.1 Pokud není v ADR uvedeno jinak, jsou tlakové nádoby splňující:

- (a) příslušné požadavky kapitoly 6.2; nebo
- (b) národní nebo mezinárodní normy pro konstrukci, výrobu, zkoušky a prohlídky používané zemí, v níž se tlakové nádoby vyrábějí, za podmínky, že jsou splněna ustanovení pododdílu 4.1.3.6 a že u kovových lahví, trubkových nádob, tlakových sudů, svazků lahví a záchranných tlakových nádob je konstrukce taková, že je minimální poměr mezi tlakem při roztržení a zkušebním tlakem:
 - (i) 1,50 pro opakovaně plnitelné tlakové nádoby;
 - (ii) 2,00 pro tlakové nádoby, které nejsou opakovaně plnitelné,

dovoleny pro přepravu jakékoli kapalné nebo tuhé látky, kromě výbušnin, tepelně nestálých látek, organických peroxidů, samovolně se rozkládajících látek, látek, které mohou způsobit chemickou reakci, významný nárůst tlaku uvnitř obalu, a radioaktivních látek (jiných, než jsou dovoleny v oddíle 4.1.9).

Tento pododdíl se nevztahuje na látky uvedené v pododdíle 4.1.4.1, pokynu pro balení P200, tabulce 3.

4.1.3.6.2 Každý konstrukční typ tlakové nádoby musí být schválen příslušným orgánem země výroby, nebo jak je uvedeno v kapitole 6.2.

4.1.3.6.3 Není-li stanoveno jinak, musí se používat tlakové nádoby s nejnižším zkušebním tlakem 0,6 MPa.

4.1.3.6.4 Není-li uvedeno něco jiného, mohou být tlakové nádoby opatřeny nouzovým zařízením pro vyrovnávání tlaku zkonstruovaným pro zamezení roztržení nádoby v případě přeplnění nebo požáru.

Ventily tlakových nádob musí být zkonstruovány a vyrobeny takovým způsobem, aby byly schopny samy odolat poškození bez úniku obsahu, nebo musí být chráněny před poškozením, které by mohlo způsobit nežádoucí únik obsahu tlakové nádoby, jednou z metod popsanych v pododdíle 4.1.6.8 (a) až (e).

4.1.3.6.5 Tlaková nádoba nesmí být naplněna více než do 95 % svého vnitřního objemu při 50 °C. V nádobě musí být ponechán dostatečný volný prostor (dutina), aby bylo zaručeno, že tlaková nádoba nebude plná kapaliny při teplotě 55 °C.

4.1.3.6.6 Není-li uvedeno něco jiného, musí být tlakové nádoby podrobeny periodické prohlídce a zkoušce každých 5 let. Periodická prohlídka musí zahrnovat vnější prohlídku, vnitřní prohlídku nebo alternativní metodu se souhlasem příslušného orgánu, tlakovou zkoušku nebo rovnocennou nedestruktivní zkoušku se souhlasem příslušného orgánu, včetně kontroly veškerého příslušenství (např. těsnost ventilů, nouzové zařízení pro vyrovnávání tlaku nebo tavné prvky). Tlakové nádoby nesmějí být naplněny poté, kdy prošla lhůta pro provedení periodické prohlídky a zkoušky, ale smějí být přepraveny po vypršení této lhůty. Opravy tlakových nádob musí splňovat požadavky uvedené v pododdíle 4.1.6.11.

4.1.3.6.7 Před naplněním musí balič provést kontrolu tlakové nádoby a přesvědčit se, že je tlaková nádoba dovolena pro látku, která se má přepravovat, a že jsou splněny požadavky ADR. Uzavírací ventily se musí po naplnění uzavřít a musí zůstat během přepravy uzavřeny. Odesílatel musí ověřit těsnost uzávěru a výstroje.

4.1.3.6.8 Opakovaně plnitelné tlakové nádoby nesmějí být plněny látkou odlišnou od látky, kterou obsahovaly předtím, ledaže byly provedeny operace potřebné pro změnu použití nádoby.

4.1.3.6.9 Značení tlakových nádob pro kapaliny a tuhé látky podle pododdílu 4.1.3.6 (neodpovídajících požadavkům kapitoly 6.2) musí být v souladu s požadavky příslušného orgánu země výroby.

4.1.3.7 Obaly nebo IBC, které nejsou výslovně dovoleny příslušným pokynem pro balení, nesmějí být použity k přepravě látek nebo předmětů, ledaže jsou mezi smluvními stranami dohodnuty dočasná odchylna podle oddílu 1.5.1.

4.1.3.8 *Nebalené předměty, kromě předmětů třídy 1*

4.1.3.8.1 Pokud velké a robustní předměty nemohou být zabaleny podle předpisů kapitol 6.1 nebo 6.6 a musí být přepravovány prázdné, nevyčištěné a nezabalené, může příslušný orgán země původu² schválit takovou přepravu. Přitom musí příslušný orgán vzít v úvahu, že:

- (a) Velké a robustní předměty musí být dostatečně pevné, aby odolaly rázům a namáháním obvyklým během přepravy, včetně překládky mezi dopravními jednotkami a mezi dopravními jednotkami a sklady, jakož i při přemísťování z palety pro následnou ruční nebo mechanickou manipulaci;
- (b) Všechny uzávěry a otvory musí být utěsněny tak, aby nedošlo k úniku obsahu, který by mohl být za normálních podmínek přepravy způsoben vibracemi nebo změnami teploty, vlhkostí nebo tlaku (např. z důvodu změny nadmořské výšky). Na vnější straně velkých a robustních předmětů nesmějí ulpívat žádné nebezpečné zbytky;
- (c) Části velkých a robustních předmětů, které jsou v přímém styku s nebezpečnými věcmi:
 - (i) nesmějí být těmito nebezpečnými věcmi narušovány ani významně zeslabovány; a
 - (ii) nesmějí vyvolat žádný nebezpečný účinek, např. působit jako katalyzátor při reakci nebo reagovat s nebezpečnými věcmi;
- (d) Velké a robustní předměty obsahující kapaliny musí být uloženy a zajištěny tak, aby bylo zaručeno, že během přepravy nedojde ani k úniku obsahu, ani k trvalé deformaci předmětu;
- (e) Musí být upevněny v lůžkách nebo latěch nebo jiných manipulačních zařízeních nebo v dopravní jednotce nebo v kontejneru takovým způsobem, aby se nemohly uvolnit za normálních podmínek přepravy.

4.1.3.8.2 Nebalené předměty schválené příslušným orgánem podle ustanovení uvedených v odstavci 4.1.3.8.1 podléhají postupům pro odesílání části 5. Kromě toho musí odesílatel takových předmětů zajistit, aby kopie jakéhokoli takového schválení byla přiložena k přepravnímu dokladu.

POZNÁMKA: *Velký a robustní předmět může zahrnovat flexibilní palivové nádržové systémy, vojenskou výbavu, stroje nebo zařízení obsahující nebezpečné věci nad omezená množství podle oddílu 3.4.1.*

4.1.4 **Přehled pokynů pro balení**

POZNÁMKA: *Ačkoli následující pokyny pro balení používají stejný číselný systém, jaký je použit v IMDG Code a ve Vzorových předpisech OSN, mohou být v případě ADR v některých detailech rozdíly.*

²

Pokud země původu není smluvní stranou ADR, příslušný orgán prvního státu smluvní strany ADR, který přijde do styku se zásilkou.

4.1.4.1 Pokyny pro balení týkající se použití obalů (s výjimkou IBC a velkých obalů)

P 001		POKYN PRO BALENÍ (KAPALINY)			P 001
Jsou dovoleny následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:					
Skupinové obaly		Nejvyšší vnitřní objem/čistá (netto) hmotnost (viz pododdíl 4.1.3.3)			
Vnitřní obaly	Vnější obaly	Obalová skupina I	Obalová skupina II	Obalová skupina III	
ze skla 10 l z plastu 30 l z kovu 40 l	Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z plastu (1H1, 1H2) z překližky (1D) z lepenky (1G) Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva (4C1, 4C2) z překližky (4D) z rekonstruovaného dřeva (4F) z lepenky (4G) z pěnového plastu (4H1) z tuhého plastu (4H2) Kanistry z oceli (3A1, 3A2) z hliníku (3B1, 3B2) z plastu (3H1, 3H2)	250 kg 250 kg 250 kg 250 kg 150 kg 75 kg 250 kg 250 kg 250 kg 150 kg 150 kg 75 kg 75 kg 60 kg 150 kg 120 kg 120 kg 120 kg	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 120 kg 120 kg 120 kg	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 120 kg 120 kg 120 kg	
Samostatné obaly					
Sudy					
z oceli, s neodnímatelným víkem (1A1)		250 litrů	450 litrů	450 litrů	
z oceli, s odnímatelným víkem (1A2)		250 litrů ¹⁾	450 litrů	450 litrů	
z hliníku, s neodnímatelným víkem (1B1)		250 litrů	450 litrů	450 litrů	
z hliníku, s odnímatelným víkem (1B2)		250 litrů ¹⁾	450 litrů	450 litrů	
z kovu, jiného než ocel nebo hliník, s neodnímatelným víkem (1N1)		250 litrů	450 litrů	450 litrů	
z kovu, jiného než ocel nebo hliník, s odnímatelným víkem (1N2)		250 litrů ¹⁾	450 litrů	450 litrů	
z plastu, s neodnímatelným víkem (1H1)		250 litrů	450 litrů	450 litrů	
z plastu, s odnímatelným víkem (1H2)		250 litrů ¹⁾	450 litrů	450 litrů	

P 001	POKYN PRO BALENÍ (KAPALINY) (pokračování)			P 001
Kanystry	z oceli, s neodnímatelným víkem (3A1) z oceli, s odnímatelným víkem (3A2) z hliníku, s neodnímatelným víkem (3B1) z hliníku, s odnímatelným víkem (3B2) z plastu, s neodnímatelným víkem (3H1) z plastu, s odnímatelným víkem (3H2)	60 litrů 60 litrů ^{*)} 60 litrů 60 litrů ^{*)} 60 litrů 60 litrů ^{*)}	60 litrů 60 litrů 60 litrů 60 litrů 60 litrů 60 litrů	60 litrů 60 litrů 60 litrů 60 litrů 60 litrů 60 litrů
Kompozitní obaly	plastová nádoba s vnějším sudem z oceli nebo hliníku (6HA1, 6HB1) plastová nádoba s vnějším sudem z lepenky, plastu nebo překližky (6HG1, 6HH1, 6HD1) plastová nádoba s vnějším košem nebo bednou z oceli nebo hliníku nebo s vnější bednou z přírodního dřeva, překližky, lepenky nebo tuhého plastu (6HA2, 6HB2, 6HC, 6HD2, 6HG2 nebo 6HH2) skleněná nádoba s vnějším sudem z oceli, hliníku, lepenky, překližky, tuhého plastu nebo pěnové hmoty (6PA1, 6PB1, 6PG1, 6PD1, 6PH1 nebo 6PH2) nebo s vnějším košem nebo bednou z oceli nebo hliníku nebo s vnější bednou z přírodního dřeva nebo lepenky nebo s vnějším proutěným košem (6PA2, 6PB2, 6PC, 6PG2 nebo 6PD2)	250 litrů 120 litrů 60 litrů 60 litrů	250 litrů 250 litrů 60 litrů 60 litrů	250 litrů 250 litrů 60 litrů 60 litrů
*)Jsou dovoleny pouze látky s viskozitou vyšší než 2 680 mm ² /s.				
Tlakové nádoby pokud jsou dodržena všeobecná ustanovení v pododdíle 4.1.3.6., mohou být používány.				
Dodatečný požadavek Pro látky třídy 3, obalovou skupinu III, které vylučují malá množství oxidu uhličitého nebo dusíku, musí být obaly odvětrávány.				
Zvláštní ustanovení pro balení:				
PP 1	Pro UN čísla 1133, 1210, 1263 a 1866 a pro lepidla, tiskařské barvy, pomocné látky k výrobě tiskařských barev, barvy, pomocné látky k výrobě barev a roztoky pryskyřic, které jsou přiřazeny k UN 3082, nemusí kovové nebo plastové obaly pro látky obalových skupin II a III v množstvích nejvýše 5 litrů na obal vyhovět zkouškám kapitoly 6.1, pokud jsou přepravovány: (d) na paletách, v paletových bednách nebo jiných manipulačních jednotkách, např. samostatné obaly uložené nebo stohované na paletě a zajištěné přepásáním, průtažnou nebo smršťovací fólií nebo jiným vhodným způsobem, nebo (e) jako vnitřní obaly skupinových obalů, jejichž čistá (netto) hmotnost nepřesahuje 40 kg.			
PP 2	Pro UN číslo 3065 mohou být použity dřevěné sudy o nejvyšším vnitřním objemu 250 litrů, které nesplňují ustanovení kapitoly 6.1.			
PP 4	Pro UN číslo 1774 musí obaly splňovat parametry obalové skupiny II.			
PP 5	Pro UN číslo 1204 musí být obaly konstruovány tak, aby se zamezilo výbuchu z důvodu nárůstu vnitřního tlaku. Pro tyto látky nesmějí být použity lahve, trubkové nádoby a tlakové sudy.			
PP 6	<i>(Vypuštěno)</i>			
PP 10	Pro UN číslo 1791, obalovou skupinu II, musí mít obal odvětrávací zařízení.			
PP 31	Pro UN číslo 1131 musí být obaly hermeticky uzavřeny.			
PP 33	Pro UN číslo 1308, obalové skupiny I a II, jsou dovoleny jen skupinové obaly o nejvyšší celkové (brutto) hmotnosti 75 kg.			
PP 81	Pro UN číslo 1790 s více než 60 %, nejvýše však 85 % fluorovodíku a UN číslo 2031 s více než 55 % kyseliny dusičné je dovolená doba používání plastových sudů a kanystřů jako samostatných obalů dva roky od data jejich výroby.			
Zvláštní ustanovení pro balení, specifické pro RID a ADR:				
RR 2	Pro UN číslo 1261 nejsou dovoleny obaly s odnímatelným víkem.			

P 002		POKYN PRO BALENÍ (TUHÉ LÁTKY)			P 002
Jsou dovoleny následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3.					
Skupinové obaly		Nejvyšší čistá (netto) hmotnost (viz 4.1.3.3)			
Vnitřní obaly	Vnější obaly	Obalová skupina I	Obalová skupina II	Obalová skupina III	
ze skla 10 kg z plastu ^a 50 kg z kovu 50 kg z papíru ^{a, b, c} 50 kg z lepenky ^{a, b, c} 50 kg	Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z plastu (1H1, 1H2) z překližky (1D) z lepenky (1G)	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg	
^a Tyto vnitřní obaly musí být prachotěsné. ^b Tyto vnitřní obaly nesmějí být použity pro látky, které mohou zkapalnět během přepravy (viz pododíl 4.1.3.4). ^c Tyto vnitřní obaly nesmějí být použity pro látky obalové skupiny I.	Bedny z oceli (4A) z hliníku (4B) z přírodního dřeva (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z pěnového plastu (4H1) z tuhého plastu (4H2)	400 kg 400 kg 250 kg 250 kg 250 kg 125 kg 125 kg 60 kg 250 kg	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 60 kg 400 kg	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 60 kg 400 kg	
	Kanistry z oceli (3A1, 3A2) z hliníku (3B1, 3B2) z plastu (3H1, 3H2)	120 kg 120 kg 120 kg	120 kg 120 kg 120 kg	120 kg 120 kg 120 kg	
Samostatné obaly					
	Sudy z oceli (1A1 nebo 1A2 ^d) z hliníku (1B1 nebo 1B2 ^d) z kovu, jiného než ocel nebo hliník (1N1 nebo 1N2 ^d) z plastu (1H1 nebo 1H2 ^d) z lepenky (1G) ^e z překližky (1D) ^e	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg	
	Kanistry z oceli (3A1 nebo 3A2 ^d) z hliníku (3B1 nebo 3B2 ^d) z plastu (3H1 nebo 3H2 ^d)	120 kg 120 kg 120 kg	120 kg 120 kg 120 kg	120 kg 120 kg 120 kg	
	Bedny z oceli (4A) ^e z hliníku (4B) ^e z jiného kovu (4N) ^e z přírodního dřeva (4C1) ^e z překližky (4D) ^e z rekonstituovaného dřeva (4F) ^e z přírodního dřeva, prachotěsné (4C2) ^e z lepenky (4G) ^e z tuhého plastu (4H2) ^e	není dovoleno není dovoleno není dovoleno není dovoleno není dovoleno není dovoleno není dovoleno není dovoleno není dovoleno	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg	
	Pytle pytle (5H3, 5H4, 5L3, 5M2) ^e	není dovoleno	50 kg	50 kg	
^d Tyto obaly nesmějí být použity pro látky obalové skupiny I, které mohou zkapalnět během přepravy (viz pododíl 4.1.3.4).					
^e Tyto obaly nesmějí být použity pro látky, které mohou zkapalnět během přepravy (viz pododíl 4.1.3.4).					

P 002	POKYN PRO BALENÍ (TUHÉ LÁTKY) (pokračování)			P 002
Samostatné obaly (pokračování):	Nejvyšší čistá (netto) hmotnost (viz 4.1.3.3)			
Kompozitní obaly	Obalová skupina I	Obalová skupina II	Obalová skupina III	
plastová nádoba s vnějším sudem z oceli, hliníku, překližky, lepenky nebo plastu (6HA1, 6HB1, 6HG1 ^e , 6HD1 ^e nebo 6HH1)	400 kg	400 kg	400 kg	
plastová nádoba s vnějším košem nebo bednou z oceli nebo hliníku nebo s vnější bednou z přírodního dřeva, překližky, lepenky nebo tuhého plastu (6HA2, 6HB2, 6HC, 6HD2 ^e , 6HG2 ^e nebo 6HH2)	75 kg	75 kg	75 kg	
skleněná nádoba s vnějším sudem z oceli, hliníku, překližky nebo lepenky (6PA1, 6PB1, 6PD1 ^e nebo 6PG1 ^e) nebo s vnějším košem nebo bednou z oceli nebo hliníku nebo s vnější bednou z přírodního dřeva nebo lepenky nebo s vnějším proutěným košem (6PA2, 6PB2, 6PC, 6PD2 ^e nebo 6PG2 ^e) nebo s vnějším obalem z tuhého plastu nebo pěnového plastu (6PH2 nebo 6PH1 ^e)	75 kg	75 kg	75 kg	
^e Tyto obaly nesmějí být použity pro látky, které mohou zkapalet během přepravy (viz pododdíl 4.1.3.4).				
Tlakové nádoby mohou být používány, pokud jsou dodržena všeobecná ustanovení v pododdíle 4.1.3.6.				
Zvláštní ustanovení pro balení				
PP 6	<i>(Vypuštěno)</i>			
PP 7	Pro UN číslo 2000 smí být celuloid přepravován též bez obalu na paletách, obalený plastovou fólií a upevněný vhodnými prostředky, jako jsou ocelové pásy, jako vozová zásilka v uzavřených vozidlech nebo kontejnerech. Celková (brutto) hmotnost palety nesmí překročit 1000 kg.			
PP 8	Pro UN číslo 2002 musí být obaly konstruovány tak, aby se zamezilo výbuchu vlivem nárůstu vnitřního tlaku. Pro tyto látky nesmějí být použity lahve, trubkové nádoby a tlakové sudy.			
PP 9	Pro UN čísla 3175, 3243 a 3244 musí obaly odpovídat konstrukčnímu typu, který vyhověl při zkoušce těsnosti pro obalovou skupinu II. Pro UN 3175 se nevyžaduje zkouška těsnosti, pokud jsou kapaliny úplně nasáklé v tuhé látce a jsou v těsně uzavřených pytlích.			
PP 11	Pro UN číslo 1309, obalovou skupinu III, a UN číslo 1362 jsou dovoleny pytle 5H1, 5L1 a 5M1, pokud jsou zabaleny v plastových pytlích a jsou uloženy na paletách pod smršťovací nebo průtažnou fólií.			
PP 12	Pro UN čísla 1361, 2213 a UN číslo 3077 jsou dovoleny pytle 5H1, 5L1 a 5M1, pokud jsou přepravovány v uzavřených vozidlech nebo kontejnerech.			
PP 13	Pro předměty spadající pod UN číslo 2870 jsou dovoleny pouze skupinové obaly vyhovující parametrům obalové skupiny I.			
PP 14	Pro UN čísla 2211, 2698 a 3314 nemusí obaly nutně vyhovět zkouškám obalů dle kapitoly 6.1.			
PP 15	Pro UN čísla 1324 a 2623 musí obaly vyhovovat parametrům obalové skupiny III.			
PP 20	Pro UN číslo 2217 může být použita každá prachotěsná a proti roztržení odolná nádoba.			
PP 30	Pro UN číslo 2471 nejsou dovoleny vnitřní obaly z papíru nebo lepenky.			
PP 34	Pro UN číslo 2969 (celá zrna) jsou dovoleny pytle 5H1, 5L1 a 5M1.			
PP 37	Pro UN čísla 2590 a 2212 jsou dovoleny pytle 5M1. Všechny pytle jakéhokoliv druhu musí být přepravovány v uzavřených vozidlech nebo kontejnerech nebo být uloženy v uzavřených tuhých přepravních obalových souborech.			
PP 38	Pro UN číslo 1309, obalovou skupinu II, jsou pytle dovoleny pouze v uzavřených vozech nebo kontejnerech.			
PP 84	Pro UN číslo 1057 se musí použít tuhé vnější obaly splňující parametry obalové skupiny II. Obaly musí být zkonstruovány, vyrobeny a upraveny tak, aby se zabránilo pohybu, neúmyslnému zážehu prostředků nebo náhodnému uvolnění hořlavého plynu nebo kapaliny. POZNÁMKA: K odpadovým zapalovačům shromažďovaným jednotlivě viz kapitolu 3.3, zvláštní ustanovení 654.			
Zvláštní ustanovení pro balení, specifické pro RID a ADR				
RR 5	Bez ohledu na zvláštní ustanovení pro balení PP 84 musí být dodržena jen všeobecná ustanovení uvedená v pododdílech 4.1.1.1, 4.1.1.2 a 4.1.1.5 až 4.1.1.7, jestliže je celková (brutto) hmotnost kusu nejvýše 10 kg. POZNÁMKA: K odpadovým zapalovačům shromažďovaným jednotlivě viz kapitolu 3.3, zvláštní ustanovení 654.			

P 003	POKYN PRO BALENÍ	P 003
<p>Nebezpečné věci musí být uloženy do vhodných vnějších obalů. Obaly musí vyhovovat ustanovením uvedeným v pododdílech 4.1.1.1, 4.1.1.2, 4.1.1.4, 4.1.1.8 a v oddílu 4.1.3 a zkonstruovány tak, aby splnily konstrukční požadavky oddílu 6.1.4. Musí být použity vnější obaly vyrobené z vhodného materiálu a přiměřené pevnosti a konstrukce vzhledem k jejich vnitřnímu objemu a zamýšlenému použití. Pokud se tento pokyn pro balení použije pro přepravu předmětů nebo vnitřních obalů skupinových obalů, musí být obal zkonstruován a vyroben tak, aby se předešlo nezamýšlenému vypadnutí předmětů během normálních podmínek přepravy.</p>		
<p>Zvláštní ustanovení pro balení</p>		
<p>PP 16</p>	<p>Pro UN číslo 2800 musí být akumulátory chráněny před zkraty a musí být bezpečně zabaleny v pevných vnějších obalech.</p> <p><i>Poznámka 1: Akumulátory chráněné proti vytečení, které jsou nedílnou součástí mechanického nebo elektronického zařízení, nebo jsou nezbytné pro jeho provoz, musí být bezpečně upevněny v držáku akumulátoru na těchto zařízeních a chráněny proti poškození a zkratům.</i></p> <p><i>Poznámka 2: K použitým akumulátorům (UN číslo 2800) viz P 801a.</i></p>	
<p>PP17</p>	<p>Pro UN číslo 2037 nesmí čistá (netto) hmotnost kusů překročit 55 kg pro lepenkové obaly nebo 125 kg pro ostatní obaly.</p>	
<p>PP 19</p>	<p>Pro látky UN čísel 1364 a 1365 je dovolena přeprava v žociích.</p>	
<p>PP 20</p>	<p>Látky UN čísel 1363, 1386, 1408 a 2793 mohou být přepravovány v každé prachotěsné a proti roztržení odolné nádobě.</p>	
<p>PP 32</p>	<p>Látky UN čísel 2857 a 3358 mohou být přepravovány bez obalu v latěních nebo ve vhodných přepravních obalových souborech.</p>	
<p>PP 87</p>	<p>(Vypuštěno)</p>	
<p>PP 88</p>	<p>(Vypuštěno)</p>	
<p>PP90</p>	<p>Pro UN číslo 3506 musí být použity hermeticky uzavřené vnitřní vložky nebo pytle z pevného nepropustného a vůči propíchnutí odolného materiálu, nepropouštějícího rtuť, které zabrání úniku látky z kusu bez ohledu na polohu nebo orientaci kusu.</p>	
<p>Zvláštní ustanovení pro balení specifické pro RID a ADR:</p>		
<p>RR6</p>	<p>Pro UN číslo 2037 mohou být v případě přepravy vozové zásilky kovové předměty baleny také následujícím způsobem: Předměty musí být seskupeny do jednotek na podložkách a drženy na místě vhodným plastovým krytem; tyto jednotky musí být nastohovány a vhodně zajištěny na paletách.</p>	

P 004	POKYN PRO BALENÍ	P 004
Tento pokyn platí pro UN čísla 3473, 3476, 3477, 3478 a 3479.		
Jsou dovoleny následující obaly:		
(1) Pro zásobníky do palivových článků pokud jsou dodržena všeobecná ustanovení v 4.1.1.1, 4.1.1.2, 4.1.1.3, 4.1.1.6 a 4.1.3:		
Sudy (1A2, 1B2, 1N2, 1H2, 1D, 1G); Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Kanystry (3A2, 3B2, 3H2).		
Obaly musí vyhovovat parametrům obalové skupiny II.		
(2) Pro zásobníky do palivových článků balené se zařízením: pevné vnější obaly, které splňují všeobecná ustanovení v 4.1.1.1, 4.1.1.2, 4.1.1.6 a 4.1.3.		
Jsou-li zásobníky do palivových článků baleny se zařízením, musí být zabaleny do vnitřních obalů, nebo uloženy ve vnějším obalu s fixačním materiálem nebo dělicí stěnou (stěnami) tak, aby zásobníky do palivových článků byly chráněny proti poškození, které může být způsobeno pohybem nebo rozmístěním obsahu ve vnějším obalu.		
Zařízení musí být zajištěno proti pohybu uvnitř vnějšího obalu.		
Pro účely tohoto pokynu pro balení „zařízení“ znamená přístroj, vyžadující zásobníky do palivových článků, s nimiž je balen, ke své činnosti.		
(3) Pro zásobníky do palivových článků obsažené zařízením: pevné vnější obaly, které splňují všeobecná ustanovení v 4.1.1.1, 4.1.1.2, 4.1.1.6 a 4.1.3.		
Velká robustní zařízení (viz 4.1.3.8) obsahující zásobníky do palivových článků směji být přepravována bez obalu. Pro zásobníky do palivových článků obsažené v zařízení musí být celý systém chráněn proti zkratu a nechtěnému uvedení do činnosti.		

P 010		POKYN PRO BALENÍ		P 010
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení dle 4.1.1 a 4.1.3:				
Skupinové obaly				
Vnitřní obaly		Vnější obaly	Nejvyšší čistá (netto) hmotnost (viz 4.1.3.3)	
Sklo	1 litr	Sudy z oceli (1A1, 1A2) z plastu (1H1, 1H2) z překližky (1D) z lepenky (1G)	400 kg	
Ocel	40 litrů		400 kg	
			400 kg	
			400 kg	
		Bedny z oceli (4A) z přírodního dřeva (4C1, 4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z pěnového plastu (4H1) z tuhého plastu (4H2)	400 kg	
			400 kg	
			400 kg	
			400 kg	
			400 kg	
			60 kg	
			400 kg	
Samostatné obaly:			Nejvyšší vnitřní objem (viz 4.1.3.3)	
Sudy z oceli, s neodnímatelným víkem (1A1)			450 litrů	
Kanistry z oceli, s neodnímatelným víkem (3A1)			60 litrů	
Kompozitní obaly plastová nádoba v ocelových sudech (6HA1)			250 litrů	
Ocelové tlakové nádoby , pokud jsou dodržena všeobecná ustanovení v 4.1.3.6.				

P 099	POKYN PRO BALENÍ	P 099
Mohou být použity jen obaly schválené pro tyto věci příslušným orgánem. Kopie schválení příslušného orgánu musí doprovázet každou zásilku, nebo přepravní doklad musí obsahovat zápis, že byl obal schválen příslušným orgánem.		

P 101	POKYN PRO BALENÍ	P 101
Mohou být použity jen obaly schválené příslušným orgánem v zemi původu. Pokud země původu není smluvní stranou ADR, musí být obal schválen příslušným orgánem prvního státu, který je smluvní stranou ADR, do něhož zásilka dorazila. V přepravním dokladu musí být uvedena rozlišovací značka státu, používaná pro silniční motorová vozidla v mezinárodním provozu, pro který příslušný orgán plní svou funkci, a to takto: "Obal schválen příslušným orgánem“ (viz 5.4.1.2.1 (e))		

P 110(a)	POKYN PRO BALENÍ (VYHRAZENO)	P 110(a)
POZNÁMKA: Tento pokyn pro balení, uvedený ve Vzorových předpisech OSN, není dovolen pro přepravy dle ADR.		

P 110(b)	POKYN PRO BALENÍ		P 110(b)
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
Nádoby z kovu ze dřeva z pryže, vodivé z plastu, vodivého Pytle z pryže, vodivé z plastu, vodivého	Dělicí přepážky z kovu ze dřeva z plastu z lepenky	Bedny z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F)	
Zvláštní ustanovení pro balení			
PP 42 Pro UN čísla 0074, 0113, 0114, 0129, 0130, 0135 a 0224, musí být splněny následující podmínky: (a) Vnitřní obaly nesmějí obsahovat více než 50 g výbušné látky (množství odpovídající suché látce); (b) Komory vytvořené dělicími přepážkami nesmějí obsahovat více než jeden vnitřní obal, pevně uložený; a (c) Vnější obal může být rozdělen až na 25 komor.			

P 111	POKYN PRO BALENÍ		P 111
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
Pytle z vodotěsného papíru z plastu z pogumované textilní tkaniny Nádoby ze dřeva Balící materiály z plastu z pogumované textilní tkaniny	nejsou nutné	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z pěnového plastu (4H1) z tuhého plastu (4H2) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)	
Zvláštní ustanovení pro balení			
PP 43	Pro UN číslo 0159 se nevyžadují vnitřní obaly, pokud se jako vnější obaly použijí kovové (1A1, 1A2, 1B1, 1B2, 1N1 nebo 1N2) nebo plastové (1H1 nebo 1H2) sudy.		

P 112(a)	POKYN PRO BALENÍ (vlhčené tuhé látky 1.1D)		P 112(a)
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
<p>Pytle</p> <ul style="list-style-type: none"> z vícevrstvého vodovzdorného papíru z plastu z textilní tkaniny z pogumované textilní tkaniny z plastové tkaniny <p>Nádoby</p> <ul style="list-style-type: none"> z kovu z plastu ze dřeva 	<p>Pytle</p> <ul style="list-style-type: none"> z plastu z textilní tkaniny, s povlakem nebo vložkou z plastu <p>Nádoby</p> <ul style="list-style-type: none"> z kovu z plastu ze dřeva 	<p>Bedny</p> <ul style="list-style-type: none"> z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z pěnového plastu (4H1) z tuhého plastu (4H2) <p>Sudy</p> <ul style="list-style-type: none"> z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2) 	
<p>Dodatečný požadavek Meziobaly nejsou vyžadovány, pokud jsou jako vnější obal použity těsné sudy s odnímatelným víkem.</p>			
<p>Zvláštní ustanovení pro balení</p>			
PP 26	Pro UN čísla 0004, 0076, 0078, 0154, 0219 a 0394 musí být obaly bez olova.		
PP 45	Pro UN čísla 0072 a 0226 se nevyžadují meziobaly.		

P 112(b)	POKYN PRO BALENÍ (suché tuhé látky, jiné než práškovité 1.1D)	P 112(b)
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:		
Vnitřní obaly	Meziobaly	Vnější obaly
Pytle z kraftového papíru z vícevrstvého vodovzdorného papíru z plastu z textilní tkaniny z pogumované textilní tkaniny z plastové tkaniny	Pytle (jen pro UN číslo 0150) z plastu z textilní tkaniny, s povlakem nebo vložkou z plastu	Pytle z plastové tkaniny, prachotěsné (5H2) z plastové tkaniny, vodovzdorné (5H3) z plastové folie (5H4) z textilní tkaniny, prachotěsné (5L2) vodovzdorné (5L3) z vícevrstvého papíru, vodovzdorné (5M2) Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z pěnového plastu (4H1) z tuhého plastu (4H2) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)
Zvláštní ustanovení pro balení		
PP 26	Pro UN čísla 0004, 0076, 0078, 0154, 0216, 0219 a 0386 musí být obaly bez olova.	
PP 46	Pro UN číslo 0209 se pro vločkovitý nebo hrudkovitý TNT v suchém stavu doporučují prachotěsné pytle (5H2) a nejvyšší čistá (netto) hmotnost 30 kg.	
PP 47	Pro UN číslo 0222 nejsou vyžadovány vnitřní obaly, pokud je vnějším obalem pytel.	

P 112(c)	POKYN PRO BALENÍ (suché tuhé látky práškovité 1.1D)		P 112(c)
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
Pytle z vícevrstvého vodovzdorného papíru z plastu z plastové tkaniny Nádoby z lepenky z kovu z plastu ze dřeva	Pytle z vícevrstvého vodovzdorného papíru, s vnitřním povlakem z plastu Nádoby z kovu z plastu ze dřeva	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z tuhého plastu (4H2) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)	
Dodatečné požadavky			
1. Vnitřní obaly nejsou vyžadovány, pokud jsou jako vnější obaly použity sudy.			
2. Obaly musí být prachotěsné.			
Zvláštní ustanovení pro balení			
PP 26	Pro UN čísla 0004, 0076, 0078, 0154, 0216, 0219 a 0386 musí být obaly bez olova.		
PP 46	Pro UN číslo 0209 se pro vločkovitý nebo hrudkovitý TNT v suchém stavu doporučují prachotěsné pytle (5H2) a nejvyšší čistá (netto) hmotnost 30 kg.		
PP 48	Pro UN číslo 0504 se nesmějí použít kovové obaly.		

P 113	POKYN PRO BALENÍ		P 113
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
Pytle z papíru z plastu z pogumované textilní tkaniny Nádoby z lepenky z kovu z plastu ze dřeva	nejsou nutné	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z tuhého plastu (4H2) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)	
Dodatečný požadavek Tyto obaly musí být prachotěsné.			
Zvláštní ustanovení pro balení			
PP 49	Pro UN čísla 0094 a 0305 nesmí vnitřní obal obsahovat více než 50 g látky.		
PP 50	Pro UN číslo 0027 nejsou nutné vnitřní obaly, pokud jsou jako vnější obaly použity sudy.		
PP 51	Pro UN číslo 0028 mohou být použity jako vnitřní obaly archy kraftového nebo voskovaného papíru.		

P 114(a)	POKYN PRO BALENÍ (vlhčené tuhé látky)		P 114(a)
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
<p>Pytle</p> <ul style="list-style-type: none"> z plastu z textilní tkaniny z plastové tkaniny <p>Nádoby</p> <ul style="list-style-type: none"> z kovu z plastu ze dřeva 	<p>Pytle</p> <ul style="list-style-type: none"> z plastu z textilní tkaniny, s povlakem nebo vložkou z plastu <p>Nádoby</p> <ul style="list-style-type: none"> z kovu z plastu <p>Dělicí přepážky</p> <ul style="list-style-type: none"> ze dřeva 	<p>Bedny</p> <ul style="list-style-type: none"> z oceli (4A) z kovu, jiného než ocel nebo hliník (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z tuhého plastu (4H2) <p>Sudy</p> <ul style="list-style-type: none"> z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z lepenky (1G) z plastu (1H1, 1H2) 	
<p>Dodatečný požadavek Meziobaly se nevyžadují, pokud jsou jako vnější obaly použity těsné sudy s odnímatelným víkem.</p>			
<p>Zvláštní ustanovení pro balení</p>			
PP 26	Pro UN čísla 0077, 0132, 0234, 0235 a 0236 musí být obaly bez olova.		
PP 43	Pro UN číslo 0342 se nevyžadují vnitřní obaly, pokud se jako vnější obaly použijí kovové (1A1, 1A2, 1B1, 1B2, 1N1 nebo 1N2) nebo plastové (1H1 nebo 1H2) sudy.		

P 114(b)	POKYN PRO BALENÍ (suché tuhé látky)		P 114(b)
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly		Meziobaly	Vnější obaly
Pytle z kraftového papíru z plastu z prachotěsné textilní tkaniny z prachotěsné plastové tkaniny Nádoby z lepenky z kovu z papíru z plastu z prachotěsné plastové tkaniny ze dřeva	nejsou nutné	Bedny z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)	
Zvláštní ustanovení pro balení			
PP 26	Pro UN čísla 0077, 0132, 0234, 0235 a 0236 musí být obaly bez olova.		
PP 48	Pro UN čísla 0508 a 0509 se nesmějí používat kovové obaly.		
PP 50	Pro UN čísla 0160, 0161 a 0508 nejsou nutné vnitřní obaly, pokud jsou jako vnější obaly použity sudy.		
PP 52	Pro UN čísla 0160 a 0161, pokud je použito kovových sudů (1A1, 1A2, 1B1, 1B2, 1N1 nebo 1N2) jako vnějších obalů, musí být kovové obaly konstruovány tak, aby se předešlo riziku výbuchu z důvodu nárůstu vnitřního tlaku z vnitřních nebo vnějších příčin.		

P 115	POKYN PRO BALENÍ		P 115
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
Nádoby z plastu ze dřeva	Pytle z plastu v kovových nádobách Sudy z kovu Nádoby ze dřeva	Bedny z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)	
Zvláštní ustanovení pro balení			
PP 45	Pro UN číslo 0144 se nevyžadují meziobaly.		
PP 53	Pro UN čísla 0075, 0143, 0495 a 0497, jsou-li jako vnější obaly použity bedny, musí být vnitřní obaly uzavřeny zakrytými šroubovými uzávěry a nesmějí mít vnitřní objem větší než 5 litrů každý. Vnitřní obaly musí být obklopeny nehořlavými absorpčními fixačními materiály. Množství absorpčních fixačních materiálů musí být dostatečné k absorbování veškerého kapalného obsahu. Kovové nádoby musí být navzájem proloženy fixačním materiálem. Čistá (netto) hmotnost pohonné látky je omezena do 30kg na jeden kus, pokud jsou vnějšími obaly bedny.		
PP 54	Pro UN čísla 0075, 0143, 0495 a 0497, jsou-li jako vnější obaly použity sudy a jako meziobaly sudy, musí být tyto obklopeny nehořlavým fixačním materiálem v dostatečném množství k absorbování veškerého kapalného obsahu. Kompozitní obal, sestávající z plastové nádoby v kovovém sudu, může být použit namísto vnitřního obalu a meziobalu. Čistý objem pohonné látky na jeden kus nesmí překročit 120 litrů.		
PP 55	Pro UN číslo 0144 musí být vložen absorpční fixační materiál.		
PP 56	Pro UN číslo 0144 mohou být jako vnitřní obaly použity kovové nádoby.		
PP 57	Pro UN čísla 0075, 0143, 0495 a 0497 musí být jako meziobaly použity pytle, pokud jsou jako vnější obaly použity bedny.		
PP 58	Pro UN čísla 0075, 0143, 0495 a 0497 musí být jako meziobaly použity sudy, pokud jsou jako vnější obaly použity také sudy.		
PP 59	Pro UN číslo 0144 mohou být použity jako vnější obaly lepenkové bedny (4G)		
PP 60	Pro UN číslo 0144 nesmějí být použity hliníkové sudy (1B1 a 1B2) ani kovové sudy z jiného kovu než oceli nebo hliníku (1N1 a 1N2).		

P 116	POKYN PRO BALENÍ		P 116
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
<p style="text-align: center;">Vnitřní obaly</p> <p>Pytle z vodovzdorného a olejovzdorného papíru z plastu z textilní tkaniny, s povlakem nebo vložkou z plastu z prachotěsné plastové tkaniny</p> <p>Nádoby z vodovzdorné lepenky z kovu z plastu ze dřeva, prachotěsné</p> <p>Balicí materiály z vodovzdorného papíru z voskovaného papíru z plastu</p>	<p style="text-align: center;">Meziobaly</p> <p>není nutný</p>	<p style="text-align: center;">Vnější obaly</p> <p>Pytle z plastové tkaniny (5H1) z vícevrstvého vodovzdorného papíru (5M2) z plastové folie (5H4) z prachotěsné textilní tkaniny (5L2) z vodovzdorné textilní tkaniny (5L3)</p> <p>Bedny z oceli (4A) z hliníku (4B) jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z tuhého plastu (4H2)</p> <p>Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)</p> <p>Kanistry z oceli (3A1, 3A2) z plastu (3H1, 3H2)</p>	
Zvláštní ustanovení pro balení			
PP 61	Pro UN čísla 0082, 0241, 0331 a 0332 se nevyžadují vnitřní obaly, pokud jsou jako vnější obaly použity těsné sudy s odnímatelným víkem.		
PP 62	Pro UN čísla 0082, 0241, 0331 a 0332 se nevyžadují vnitřní obaly, pokud je výbušná látka obsažena v materiálu nepropustném pro kapaliny.		
PP 63	Pro UN číslo 0081 se nevyžadují vnitřní obaly, pokud je látka obsažena v tuhém plastu, nepropustném pro estery kyseliny dusičné.		
PP 64	Pro UN číslo 0331 se nevyžadují vnitřní obaly, pokud jsou jako vnější obaly použity pytle (5H2, 5H3 nebo 5H4).		
PP 65	Pro UN čísla 0082, 0241, 0331 a 0332 mohou být použity jako vnější obaly pytle (5H2 nebo 5H3).		
PP 66	Pro UN číslo 0081 nesmějí být jako vnější obaly použity pytle.		

P 130	POKYN PRO BALENÍ		P 130
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
nejsou nutné	nejsou nutné	<p>Bedny</p> <ul style="list-style-type: none"> z oceli (4A) z hliníku (4B) jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z pěnového plastu (4H1) z tuhého plastu (4H2) <p>Sudy</p> <ul style="list-style-type: none"> z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2) 	
Zvláštní ustanovení pro balení			
PP 67	<p>Následující ustanovení platí pro UN čísla 0006, 0009, 0010, 0015, 0016, 0018, 0019, 0034, 0035, 0038, 0039, 0048, 0056, 0137, 0138, 0168, 0169, 0171, 0181, 0182, 0183, 0186, 0221, 0243, 0244, 0245, 0246, 0254, 0280, 0281, 0286, 0287, 0297, 0299, 0300, 0301, 0303, 0321, 0328, 0329, 0344, 0345, 0346, 0347, 0362, 0363, 0370, 0412, 0424, 0425, 0434, 0435, 0436, 0437, 0438, 0451, 0488 a 0502:</p>		
<p>Rozměrné a robustní výbušné předměty, obvykle určené pro vojenské použití, bez svých rozněcovacích prostředků, nebo jejichž rozněcovací prostředky jsou opatřeny alespoň dvěma účinnými pojistnými zařízeními, mohou být přepravovány bez obalu. Pokud takové předměty mají hnací náplně, nebo jsou samohnací, jejich zapalovací systémy musí být chráněny proti namáháním za normálních podmínek přepravy. Negativní výsledek zkoušek série 4 provedených na nezabaleném předmětu ukazuje, že předmět může být uvažován pro přepravu bez obalu. Takové nezabalené předměty mohou být uchyceny v lůžkách nebo uloženy v latěních nebo jiných vhodných manipulačních prostředcích.</p>			

P 131	POKYN PRO BALENÍ		P 131
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
Pytle z papíru z plastu Nádoby z lepenky z kovu z plastu ze dřeva Cívky	nejsou nutné	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)	
Zvláštní ustanovení pro balení			
PP 68	Pro UN čísla 0029, 0267 a 0455 nesmějí být pytle a cívky použity jako vnitřní obaly.		

P 132(a)	POKYN PRO BALENÍ		P 132(a)
(Předměty sestávající z uzavřených kovových, plastových nebo lepenkových pouzder, která obsahují výbušnou trhavinu, nebo sestávají z plastem spojených výbušných trhavin)			
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
nejsou nutné	nejsou nutné	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z tuhého plastu (4H2)	

P 132(b)	POKYN PRO BALENÍ (Předměty bez uzavřených pouzder)	P 132(b)
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílů 4.1.5:		
Vnitřní obaly	Meziobaly	Vnější obaly
Nádoby z lepenky z kovu z plastu ze dřeva Balicí materiály z papíru z plastu	nejsou nutné	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z tuhého plastu (4H2)

P 133	POKYN PRO BALENÍ	P 133
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:		
Vnitřní obaly	Meziobaly	Vnější obaly
Nádoby z lepenky z kovu z plastu ze dřeva Fixační podložky vybavené dělicími přepážkami z lepenky z plastu ze dřeva	Nádoby z lepenky z kovu z plastu ze dřeva	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z tuhého plastu (4H2)
Dodatečný požadavek Nádoby se nevyžadují jako meziobaly, pokud jsou vnitřními obaly fixační podložky.		
Zvláštní ustanovení pro balení		
PP 69	Pro UN čísla 0043, 0212, 0225, 0268 a 0306 nesmějí být jako vnitřní obaly použity fixační podložky.	

P 134	POKYN PRO BALENÍ		P 134
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
<p>Pytle vodovzdorné</p> <p>Nádoby z lepenky z kovu z plastu ze dřeva</p> <p>Balicí materiály z vlnité lepenky</p> <p>Tuby z lepenky</p>	nejsou nutné	<p>Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z pěnového plastu (4H1) z tuhého plastu (4H2)</p> <p>Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)</p>	

P 135	POKYN PRO BALENÍ		P 135
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
<p>Pytle z papíru z plastu</p> <p>Nádoby z lepenky z kovu z plastu ze dřeva</p> <p>Balicí materiály z papíru z plastu</p>	<p>nejsou nutné</p>	<p>Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z pěnového plastu (4H1) z tuhého plastu (4H2)</p> <p>Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)</p>	

P 136	POKYN PRO BALENÍ		P 136
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
Pytle z plastu z textilní tkaniny Bedny z lepenky z plastu ze dřeva Dělicí přepážky ve vnějších obalech	nejsou nutné	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z tuhého plastu (4H2) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)	

P 137	POKYN PRO BALENÍ		P 137
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
Pytle z plastu Bedny z lepenky ze dřeva Pouzdra z lepenky z kovu z plastu Dělicí přepážky ve vnějších obalech	nejsou nutné	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)	
Zvláštní ustanovení pro balení			
PP 70	Pro UN čísla 0059, 0439, 0440 a 0441, pokud jsou kumulativní nálože baleny jednotlivě, musí kónické dutiny směřovat dolů a obal musí být označen "TOUTO STRANOU NAHORU". Pokud jsou kumulativní nálože baleny po párech, musí kónické dutiny směřovat proti sobě, aby se minimalizoval tryskový efekt v případě náhodného roznětu.		

P 138	POKYN PRO BALENÍ		P 138
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
Pytle z plastu	nejsou nutné	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z tuhého plastu (4H2) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)	
Dodatečný požadavek			
Pokud jsou konce předmětů těsně uzavřeny, nejsou vnitřní obaly nezbytné.			

P 139	POKYN PRO BALENÍ		P 139
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obal	
Pytle z plastu Nádoby z lepenky z kovu z plastu ze dřeva Cívky Balicí materiály z papíru z plastu	nejsou nutné	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z tuhého plastu (4H2) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)	
Zvláštní ustanovení pro balení			
PP 71	Pro UN čísla 0065, 0102, 0104, 0289 a 0290 musí být konce bleskovice utěsněny, např. pevně uchycenou zátkou tak, aby se výbušnina nemohla vysypat. Konce ohebné bleskovice musí být bezpečně upevněny.		
PP 72	Pro UN čísla 0065 a 0289 se nevyžadují vnitřní obaly, pokud jsou předměty ve svítcích.		

P 140	POKYN PRO BALENÍ		P 140
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
Pytle z plastu Nádoby ze dřeva Cívky Balicí materiály z kraftového papíru z plastu	nejsou nutné	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z tuhého plastu (4H2) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)	
Zvláštní ustanovení pro balení			
PP 73	Pro UN číslo 0105 se nevyžaduje žádný vnitřní obal, pokud jsou konce předmětů utěsněny.		
PP 74	Pro UN číslo 0101 musí být obal prachotěsný, ledaže je rozbuška v papírovém pouzdru a oba konce pouzdra jsou zakryty odnímatelnými čepičkami.		
PP 75	Pro UN číslo 0101 se nesmějí použít bedny nebo sudy z oceli, hliníku nebo jiného kovu.		

P 141	POKYN PRO BALENÍ		P 141
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
Nádoby z lepenky z kovu z plastu ze dřeva Fixační podložky vybavené dělicími přepážkami z plastu ze dřeva Dělicí přepážky ve vnějších obalech	nejsou nutné	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z tuhého plastu (4H2) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)	

P 142	POKYN PRO BALENÍ		P 142
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
Pytle z papíru z plastu Nádoby z lepenky z kovu z plastu ze dřeva Balicí materiály z papíru Fixační podložky vybavené dělicími přepážkami z plastu	nejsou nutné	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z tuhého plastu (4H2) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)	

P 143	POKYN PRO BALENÍ		P 143
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení v oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
Pytle z kraftového papíru z plastu z textilní tkaniny z pogumované textilní tkaniny Nádoby z lepenky z kovu z plastu ze dřeva Fixační podložky vybavené dělicími přepážkami z plastu ze dřeva	nejsou nutné	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z tuhého plastu (4H2) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z překližky (1D) z lepenky (1G) z plastu (1H1, 1H2)	
Dodatečný požadavek Namísto zde uvedených vnitřních a vnějších obalů mohou být použity kompozitní obaly (6HH2) (plastová nádoba s vnější bednou z tuhého plastu).			
Zvláštní ustanovení pro balení			
PP 76	Pro UN čísla 0271, 0272, 0415 a 0491, pokud je použito kovových obalů, musí být tyto kovové obaly konstruovány tak, aby se zamezilo riziku výbuchu z důvodu nárůstu vnitřního tlaku z vnitřních nebo vnějších příčin.		

P 144	POKYN PRO BALENÍ		P 144
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
Nádoby z lepenky z kovu z plastu ze dřeva Dělicí přepážky ve vnějších obalech	nejsou nutné	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva, jednoduché (4C1) s kovovou vložkou z překližky (4D) s kovovou vložkou z rekonstituovaného dřeva (4F) s kovovou vložkou z pěnové hmoty (4H1) z tuhého plastu (4H2) Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z plastu (1H1, 1H2)	
Zvláštní ustanovení pro balení			
PP 77	Pro UN čísla 0248 a 0249 musí být obaly chráněny proti vniknutí vody. Pokud jsou zařízení aktivovatelná vodou přepravována bez obalu, musí být opatřena nejméně dvěma nezávislými ochrannými prostředky proti vniknutí vody.		

P 200	POKYN PRO BALENÍ	P 200
<p>Druhy obalů: Lahve, trubkové nádoby, tlakové sudy a svazky lahví</p> <p>Lahve, trubkové nádoby, tlakové sudy a svazky lahví jsou dovoleny za podmínky, že jsou splněna zvláštní ustanovení pro balení oddílu 4.1.6 a ustanovení uvedená dále v odstavcích (1) až (11).</p>		
<p>Všeobecně</p> <p>(1) Tlakové nádoby musí být uzavřeny a být těsné tak, aby se zamezilo úniku plynů.</p> <p>(2) Tlakové nádoby obsahující toxické látky s LC₅₀ nejvýše 200 ml/m³ (ppm), jak je uvedeno v tabulce, nesmějí být vybaveny žádným zařízením na vyrovnávání tlaku. Zařízeními pro vyrovnávání tlaku musí být vybaveny UN tlakové nádoby používané pro přepravu UN 1013 oxidu uhličitého a UN 1070 oxidu dusného (rajského plynu).</p> <p>(3) Následující tři tabulky zahrnují stlačené plyny (tabulka 1), zkapalněné a rozpuštěné plyny (tabulka 2) a látky nespádající do třídy 2 (tabulka 3). Obsahují:</p> <p>(a) UN číslo, pojmenování a popis a klasifikační kód látky;</p> <p>(b) LC₅₀ pro toxické látky;</p> <p>(c) druhy tlakových nádob dovolených pro látku, označené písmenem „X“;</p> <p>(d) maximální lhůta pro periodickou inspekci tlakových nádob;</p> <p><i>POZNÁMKA: Pro tlakové nádoby, u nichž jsou použity kompozitní materiály, musí být periodická periodických inspekci stanovena příslušným orgánem nebo organizací pověřenou tímto orgánem, která udělil(a) typové schválení.</i></p> <p>(e) nejnižší zkušební tlak tlakových nádob;</p> <p>(f) nejvyšší provozní tlak tlakových nádob pro stlačené plyny nebo nejvyšší stupeň (stupně) plnění pro zkapalněné a rozpuštěné plyny;</p> <p>(g) zvláštní ustanovení pro balení, která jsou specifická pro určitou látku.</p>		
<p>Zkušební tlak, stupně plnění a požadavky na plnění</p> <p>(4) Požadovaný nejnižší zkušební tlak je 1 MPa (10 barů).</p> <p>(5) Tlakové nádoby nesmějí být v žádném případě plněny nad mezní hodnotu dovolenou v následujících ustanoveních:</p> <p>(a) Pro stlačené plyny nesmí být provozní tlak vyšší než dvě třetiny zkušební tlaku tlakových nádob. Omezení horní mezní hodnoty provozního tlaku jsou udána zvláštním ustanovením pro balení „o“. Vnitřní tlak při 65 °C nesmí v žádném případě překročit zkušební tlak.</p> <p>(b) Pro vysokotlaké zkapalněné plyny musí být stupeň plnění takový, aby ustálený tlak při 65 °C nepřekročil zkušební tlak tlakových nádob.</p> <p>Použití jiných zkušebních tlaků a stupňů plnění než těch, které jsou uvedeny v tabulce je dovoleno, s výjimkou případů, kdy platí zvláštní ustanovení pro balení „o“, za podmínky, že</p> <p>(i) je splněno kritérium zvláštního ustanovení pro balení „r“, pokud platí; nebo</p> <p>(ii) je splněno výše uvedené kritérium ve všech ostatních případech.</p> <p>Pro vysokotlaké zkapalněné plyny a směsi plynů, pro něž nejsou k dispozici příslušné údaje, se nejvyšší stupeň plnění (FR) určí takto:</p> $FR = 8,5 \times 10^{-4} \times d_g \times P_n$ <p>Kde</p> <p>FR = nejvyšší stupeň plnění</p> <p>d_g = hustota plynu (při 15°C, 1 bar) (v kg/m³)</p> <p>P_n = nejnižší zkušební tlak (v barech).</p>		

P 200	POKYN PRO BALENÍ (pokračování)	P 200
<p>Pokud není známa hustota plynu, určí se nejvyšší stupeň plnění následovně:</p> $FR = \frac{P_h \times MM \times 10^{-3}}{R \times 338}$ <p>kde</p> <p>FR = nejvyšší stupeň plnění (v kg . l⁻¹) P_h = nejnižší zkušební tlak (v barech) MM = molekulární hmotnost (v g.mol⁻¹) R = 8,31451 x 10⁻² bar.l.mol⁻¹.K⁻¹ (plynová konstanta).</p> <p>Pro směsi plynů se průměrná molekulární hmotnost určuje v závislosti na objemových koncentracích jednotlivých komponentů.</p> <p>(c) Pro nízkotlaké zkvalněné plyny se nejvyšší hmotnost obsahu na litr hydraulického vnitřního objemu musí rovnat 0,95 násobku hustoty kapalné fáze při 50 °C; vedle toho, kapalná fáze nesmí naplnit tlakovou nádobu při teplotě do 60 °C. Zkušební tlak tlakové nádoby musí být nejméně roven tenzi par (absolutní) kapaliny při 65°C, minus 100 kPa (1 bar).</p> <p>Pro nízkotlaké zkvalněné plyny a směsi plynů, pro něž nejsou k dispozici příslušné údaje, se nejvyšší stupeň plnění určí následovně:</p> $FR = (0,0032 \times BP - 0,24) \times d_1$ <p>kde</p> <p>FR= nejvyšší stupeň plnění (v kg/l) BP= bod varu (ve stupních K) d₁= hustota kapaliny při bodu varu (v kg/l).</p> <p>(d) Pro UN 1001 acetylen, rozpuštěný a UN 3374 acetylen, bez rozpouštědla, viz (10), zvláštní ustanovení pro balení „p“.</p> <p>(6) Jiný zkušební tlak a stupeň plnění smí být použity, pokud jsou splněny všeobecné požadavky uvedené v odstavcích (4) a (5) výše.</p> <p>(7) (a) Plnění tlakových nádob smí být prováděno pouze speciálně vybavenými středisky s kvalifikovaným personálem používajícím vhodné postupy.</p> <p>Tyto postupy by měly zahrnovat ověření:</p> <ul style="list-style-type: none"> - zda nádoby a jejich výstroj odpovídají předpisům; - zda jsou kompatibilní s látkou, která se má přepravovat; - zda nejsou poškozeny tak, že by mohly ohrozit bezpečnost; - zda je dodržen stupeň plnění, popřípadě plnicí tlak; - zda značení a identifikace nádob odpovídá předpisům. <p>(b) LPG, který se má plnit do nádob, musí být vysoké kvality; toto se považuje za splněné, jestliže je tento LPG v souladu s mezemi korozivity, jak je stanoveno v normě ISO 9162:1989.</p> <p>Periodické inspekce</p> <p>(8) Opakovaně plnitelné tlakové nádoby musí být podrobeny periodickým inspekcím podle ustanovení pododdílu 6.2.1.6 a popřípadě 6.2.3.5.</p> <p>(9) Pokud nejsou v následujících tabulkách uvedena zvláštní ustanovení vztahující se k určitým látkám, musí být periodické inspekce prováděny:</p> <p>(a) každých 5 let v případě tlakových nádob určených pro přepravu plynů klasifikačních kódů 1T, 1TF, 1TO, 1TC, 1TFC, 1TOC, 2T, 2TO, 2TF, 2TC, 2TFC, 2TOC, 4A, 4F a 4TC;</p>		

P 200	POKYN PRO BALENÍ (pokračování)	P 200
	<p>(b) každých 5 let v případě tlakových nádob určených pro přepravu látek jiných tříd;</p> <p>(c) každých 10 let v případě tlakových nádob určených pro přepravu plynů klasifikačních kódů 1A, 1O, 1F, 2A, 2O a 2F.</p> <p>Odchylně od tohoto odstavce, musí být periodické prohlídky tlakových nádob vyrobených z kompozitních materiálů (kompozitní tlakové nádoby) prováděny ve lhůtách určených příslušným orgánem nebo organizací pověřenou tímto orgánem, který (která) udělil(a) typové schválení.</p>	
	<p>Zvláštní ustanovení pro balení:</p>	
	<p>(10) Snášlivost materiálů</p> <p>a: Tlakové nádoby ze slitiny hliníku se nesmějí použít</p> <p>b: Ventily z mědi se nesmějí používat.</p> <p>c: Kovové díly, které přicházejí do styku s obsahem nesmějí obsahovat více než 65 % mědi.</p> <p>d: Jsou-li používány ocelové tlakové nádoby, jsou dovoleny pouze ty, které mají značku „H“ podle 6.2.2.7.4 (p).</p>	
	<p>Předpisy pro toxické látky s LC₅₀ nejvýše 200 ml/m³ (ppm)</p>	
	<p>k: Otvory ventilů musí být opatřeny plynotěsnými zátkami nebo kloboučky zadržujícími tlak se závitými hodíci se k závitům otvorů ventilů. Tyto zátky nebo kloboučky musí být vyrobeny z materiálu, na který nemůže obsah tlakové nádoby negativně působit.</p>	
	<p>Každá lahev ve svazku lahví musí být opatřena vlastním ventilem, který musí být během přepravy uzavřen. Po naplnění musí být sběrné potrubí vyprázdněno, pročištěno a uzavřeno zátkou.</p>	
	<p>Svazky obsahující UN 1045 fluor, stlačený, mohou být vybaveny uzavíracím ventilem pro skupinu lahví nepřekračující 150 litrů celkového hydraulického vnitřního objemu, namísto uzavíracího ventilu na každé láhvi.</p>	
	<p>Láhve a jednotlivé láhve ve svazku musí mít zkušební tlak nejméně 200 barů a minimální tloušťku stěny 3,5 mm pro slitinu hliníku nebo 2 mm pro ocel. Jednotlivé láhve nesplňující tento požadavek musí být přepravovány v tuhém vnějším obalu schopném účinně chránit láhve a jejich příslušenství a vyhovujícím parametrem obalové skupiny I. Tlakové sudy musí mít minimální tloušťku stěny stanovenou příslušným orgánem.</p>	
	<p>Tlakové nádoby nesmějí být opatřeny zařízením pro vyrovnávání tlaku.</p>	
	<p>Lahve a jednotlivé lahve ve svazku mají nejvyšší hydraulický vnitřní objem omezen na 85 litrů.</p>	
	<p>Každý ventil musí být schopen odolat zkušebnímu tlaku tlakové nádoby a musí být spojen přímo s tlakovou nádobou buď kuželovým závitěm, nebo jinými prostředky, které splňují požadavky normy ISO 10692-2:2001.</p>	
	<p>Každý ventil musí být buď bez těsnění s neperforovanou membránou nebo musí být typu, který zamezí úniku těsněním nebo kolem těsnění.</p>	
	<p>Přeprava v pouzdrech není dovolena.</p>	
	<p>Každá tlaková nádoba musí být po naplnění přezkoušena na těsnost.</p>	
	<p>Specifická ustanovení pro plyny</p>	
	<p>l: UN 1040 ethylenoxid smí být balen též do hermeticky uzavřených vnitřních obalů ze skla nebo z kovu uložených s vhodným fixačním materiálem do lepenkových, dřevěných nebo kovových beden, které splňují parametry obalové skupiny I. Nejvyšší dovolené množství ve vnitřním obalu ze skla je 30 g a nejvyšší dovolené množství ve vnitřním obalu z kovu je 200 g. Po naplnění musí být každý vnitřní obal přezkoušen na těsnost tím, že se vloží do horké vodní lázně při teplotě a na dobu, které jsou dostatečné k tomu, aby se zajistilo dosažení vnitřního tlaku rovnajícího se tenzi par ethylenoxidu při 55 °C. Nejvyšší čistá (netto) hmotnost ve vnějším obalu nesmí překročit 2,5 kg.</p>	

- m: Tlakové nádoby se plní do provozního tlaku nepřevyšujícího 5 barů.
- n: Láhve a jednotlivé láhve ve svazku lahví nesmějí obsahovat více než 5 kg plynu. Jsou-li svazky lahví obsahující UN 1045 fluor, stlačený rozděleny do skupin lahví podle zvláštního ustanovení pro balení „k“, smí každá skupina obsahovat nejvýše 5 kg plynu.
- o: Provozní tlak ani stupeň plnění uvedené v tabulkách nesmějí být v žádném případě překročeny.
- p: Pro UN 1001 acetylen, rozpuštěný a UN 3374 acetylen, bez rozpouštědla: lahve musí být naplněny homogenním monolitickým porézním materiálem; provozní tlak a množství acetyleny nesmějí překročit hodnoty předepsané ve schválení nebo popřípadě v normách ISO 3807-1:2000 nebo ISO 3807-2:2000.

Pro UN 1001 acetylen, rozpuštěný: lahve musí obsahovat množství acetonu nebo vhodného rozpouštědla, jak je stanoveno ve schválení (viz ISO 3807-1:2000 nebo ISO 3807-2:2000); lahve opatřené zařízeními pro vyrovnávání tlaku nebo spojené navzájem sběrným potrubím musí být přepravovány ve svislé poloze.

Alternativně pro UN 1001 acetylen, rozpuštěný: lahve, které nejsou tlakovými nádobami certifikovanými podle UN, smějí být naplněny nemonolitickým porézním materiálem; provozní tlak, množství acetyleny a množství rozpouštědla nesmějí překročit hodnoty předepsané ve schválení. Maximální lhůta pro periodickou inspekci lahví nesmí překročit pět let.

Zkušební tlak 52 barů se použije pouze u lahví odpovídajících normě ISO 3807-2:2000.

- q: Otvory ventilů tlakových nádob pro pyroforní plyny nebo pro hořlavé směsi plynů obsahující více než 1 % pyroforních sloučenin musí být opatřeny plynotěsnými zátkami nebo kloboučky, které musí být vyrobeny z materiálu, na který nemůže obsah tlakové nádoby negativně působit. Jsou-li tyto tlakové nádoby spojeny sběrným potrubím do svazku, musí být každá z těchto tlakových nádob opatřena vlastním ventilem, který musí být během přepravy uzavřen, a otvor ventilu sběrné trubky musí být opatřen plynotěsnou zátkou nebo kloboučkem zadržujícími tlak. Plynotěsné zátky nebo kloboučky musí mít závit, které se hodí k závitům otvorů ventilů. Přeprava v pouzdech není dovolena.
- r: Stupeň plnění tohoto plynu musí být omezen tak, aby v případě, že dojde k úplnému rozkladu, tlak nepřekročil dvě třetiny zkušebního tlaku tlakové nádoby.
- ra: Tento plyn smí být balen též do pouzder za následujících podmínek:
- (a) Hmotnost plynu nesmí překročit 150 g na pouzdro;
 - (b) Pouzdra musí být bez kazů, které by mohly zhoršit pevnost;
 - (c) Těsnost uzávěru musí být zajištěna dodatečným prostředkem (kloboučkem, korunkou, zaplombováním, ovázáním atd.); schopným zabránit jakémukoliv úniku z uzávěrového systému během přepravy.
 - (d) Pouzdra musí být vložena do vnějšího obalu dostatečné pevnosti. Kus nesmí vážit více než 75 kg.
- s: Tlakové nádoby z hliníkových slitin musí být:
- vybaveny jen ventily z mosazi nebo z nerezové oceli; a
 - vyčištěny od uhlovodíkové kontaminace a nekontaminovány olejem. Tlakové nádoby certifikované podle UN musí být vyčištěny podle normy ISO 11621:1997.
- ta: Jiná kritéria mohou být použita pro plnění svařovaných ocelových lahví určených pro přepravu látek UN čísla 1965:
- (a) se souhlasem příslušných orgánů států, kde se přeprava uskutečňuje, a
 - (b) při vyhovění ustanovením vnitrostátního předpisu nebo normy uznávaným příslušnými orgány.

Pokud se kritéria pro plnění liší od kritérií uvedených v P200 (5), musí přepravní doklad obsahovat prohlášení „Přeprava podle pokynu pro balení P200, zvláštního ustanovení pro balení t“ a údaj základní teploty použité pro výpočet stupně plnění.

Periodická inspekce

- u: Interval mezi periodickými zkouškami může být prodloužen na 10 let u tlakových nádob z hliníkových slitin. Tato odchylka se může použít pro UN tlakové nádoby jen tehdy, pokud byla slitina tlakové nádoby podrobena zkoušce napěťové koroze, jak je uvedeno v normě ISO 7866:1999.

- v: (1) Interval mezi inspekci ocelových lahví, kromě opakovaně plnitelných svařovaných ocelových lahví na plyny UN čísel 1011, 1075, 1965, 1969 nebo 1978, smí být prodloužen na 15 let:
- (a) se souhlasem příslušného orgánu (orgánů) země (zemí), kde se provádí periodická inspekce a přeprava; a
 - (b) podle požadavků technického předpisu nebo normy uznávaných příslušným orgánem.
- (2) Pro opakovaně plnitelné svařované ocelové láhve na plyny UN čísel 1011, 1075, 1965, 1969 nebo 1978 smí být interval mezi inspekci prodloužen na 15 let, jestliže jsou použita ustanovení odstavce (12) tohoto pokynu pro balení.

Předpisy pro J.N. položky a pro směsi

- z: Výrobní materiály tlakových nádob a jejich výstroje se musí snášet s jejich obsahem a nesmějí s ním reagovat za vytváření škodlivých nebo nebezpečných sloučenin.

Zkušební tlak a stupeň plnění musí být vypočteny podle příslušných ustanovení odstavce (5).

Toxické látky s LC_{50} nejvýše 200 ml/m^3 nesmějí být přepravovány v trubkových nádobách, tlakových sudech nebo MEGC a musí splňovat požadavky zvláštního ustanovení pro balení „k“. Avšak směs oxidu dusnatého a oxidu dusičitého (UN 1975) smí být přepravována v tlakových sudech..

U tlakových nádob obsahujících pyroforní plyny nebo hořlavé směsi plynů s více než 1 % pyroforních sloučenin musí být splněny požadavky zvláštního ustanovení pro balení „q“.

Musí se učinit potřebné kroky k zamezení nebezpečným reakcím (tj. polymeraci nebo rozkladu) během přepravy. Pokud je to nutné, vyžaduje se stabilizace nebo přidání inhibitoru.

Směsi obsahující UN 1911 diboran se plní do takového tlaku, aby v případě úplného rozkladu diboranu nebyly překročeny dvě třetiny zkušební tlaku tlakové nádoby.

Směsi obsahující UN 2192 german, jiné než směsi do 35% germanu ve vodíku nebo dusíku nebo do 28 % germanu v heliu nebo argonu, musí být plněny do takového tlaku, aby v případě, že dojde k úplnému rozkladu germanu, nebyly překročeny dvě třetiny zkušební tlaku tlakové nádoby.

Předpisy pro látky nespádající do třídy 2

- ab: Tlakové nádoby musí splňovat tyto podmínky:

- (i) Tlaková zkouška musí zahrnovat prohlídku vnitřku tlakových nádob a kontrolu výstroje;
- (ii) Navíc musí být každé dva roky zkontrolována vhodnými prostředky (např. ultrazvukem) odolnost proti korozi a ověřen stav výstroje;
- (iii) Tloušťka stěn nesmí být menší než 3 mm.

- ac: Zkoušky a inspekce musí být provedeny pod dohledem znalce schváleného příslušným orgánem.

- ad: Tlakové nádoby musí splňovat tyto podmínky:

- (i) Tlakové nádoby musí být zkonstruovány pro výpočtový tlak nejméně 2,1 MPa (21 barů) (přetlak);
- (ii) Kromě značení pro opakovaně plnitelné nádoby musí být na tlakových nádobách uvedeny jasně čitelnými a trvanlivými písmeny a číslicemi následující údaje:
 - UN číslo a oficiální pojmenování pro přepravu látky podle oddílu 3.1.2;
 - nejvyšší dovolená hmotnost při plnění a vlastní hmotnost tlakové nádoby, včetně výstroje, která je na nádobě během plnění, nebo celková (brutto) hmotnost.

P 200	POKYN PRO BALENÍ (pokračování)		P 200
(11) Příslušné požadavky tohoto pokynu pro balení jsou splněny při použití následujících norem:			
Příslušný požadavek	Číslo	Název normy	
(7)	EN 1919:2000	Převážitelné plynové lahve – Lahve na plyny (kromě acetylenu a LPG). Inspekce v době plnění	
(7)	EN 1920:2000	Převážitelné plynové lahve – Lahve na stlačené plyny (kromě acetylenu). Inspekce v době plnění	
(7)	EN 13365:2002+A1 :2005	Převážitelné plynové lahve – Svazky lahví pro stálé a zkvalněné plyny (kromě acetylenu) – Inspekce v době plnění	
(10) p	EN ISO 11372:2011	Plynové láhve – Láhve na acetylen – Plnicí podmínky a kontrola během plnění (ISO 11372:2010)	
(10)p	EN 12755:2000	Převážitelné plynové lahve -Plnicí podmínky pro svazky acetylenových Lahví	
(7) a (10) ta (b)	EN 1439:2008 (kromě 3.5 a přílohy C)	Zařízení pro LPG a jejich příslušenství – Převážitelné opakovaně plnitelné svařované ocelové láhve na zkvalněný ropný plyn (LPG) – Postupy pro kontrolu před, během a po naplnění	
(7) a (10) ta (b)	EN 14794:2005	Zařízení pro LPG a jejich příslušenství – Převážitelné opakovaně plnitelné hliníkové láhve na zkvalněný ropný plyn (LPG) – Postup pro kontrolu před, během a po naplnění	
(12) Interval 15 let pro periodickou inspekci opakovaně plnitelných svařovaných ocelových lahví smí být povolen podle zvláštního ustanovení pro balení v (2) odstavce (10), jsou-li použita následující ustanovení.			
1. Všeobecná ustanovení			
1.1 K aplikaci tohoto oddílu nesmí příslušný orgán přenést své úkoly a povinnosti na organizace Xb (inspekční organizace typu B) ani na organizace IS (vlastní inspekční služby).			
1.2 Vlastník lahví musí požádat příslušný orgán o povolení intervalu 15 let a musí prokázat, že jsou splněny požadavky pododstavců 2, 3 a 4.			
1.3 Láhve vyrobené od 1. ledna 1999 musely být vyrobeny ve shodě s následujícími normami:			
<ul style="list-style-type: none"> - EN 1442; nebo - EN 13322-1; nebo - Příloha I, části 1 až 3 směrnice Rady 84/527/EHS^a jak jsou platné podle tabulky v 6.2.4 ADR.			
Jiné láhve vyrobené před 1. lednem 2009 v souladu s ADR podle technického předpisu přijatého národním příslušným orgánem smí být schváleny pro interval 15 let, pokud představují úroveň bezpečnosti rovnocennou s úrovní bezpečnosti lahví odpovídajících ustanovením ADR platným v době podání žádosti.			
1.4 Vlastník musí poskytnout příslušnému orgánu dokumentaci prokazující, že láhve vyhovují ustanovením pododstavce 1.3. Příslušný orgán musí ověřit, že jsou tyto podmínky splněny.			

^a Směrnice Rady o sblížení zákonů členských států týkající se svařovaných plynových lahví z nelegované oceli, uveřejněná v Úředním věstníku Evropských společností, č. L 300 ze dne 19.11.1984.

P 200	POKYN PRO BALENÍ (pokračování)	P 200
<p>1.5 Příslušný orgán musí překontrolovat, zda byla ustanovení pododstavců 2 a 3 splněna a správně použita. Jsou-li všechna ustanovení splněna, povolí interval 15 let pro láhve. V tomto povolení musí být jasně identifikován typ láhve (jak je uveden v typovém schválení) nebo skupina lahví (viz POZNÁMKU), na něž se povolení vztahuje. Povolení musí být vydáno vlastníkov; příslušný orgán si ponechá kopii. Vlastník musí uchovávat dokumenty dokud platí pro láhve povolení intervalu 15 let.</p>		
<p>POZNÁMKA: Skupina lahví je definována daty výroby identických lahví po dobu, během níž se platná ustanovení ADR a technického předpisu přijatého příslušným orgánem ve svém technickém obsahu nezměnila. Příklad: Láhve identické konstrukce a objemu, které byly vyráběny podle ustanovení ADR platných mezi 1. lednem 1985 a 31. prosincem 1988 v kombinaci s technickým předpisem přijatým příslušným orgánem platným po totéž období, tvoří jednu skupinu ve smyslu ustanovení tohoto odstavce.</p>		
<p>1.6 Příslušný orgán musí kontrolovat vlastníka lahví z hlediska dodržování ustanovení ADR a uděleného povolení podle potřeby, avšak alespoň každé tři roky, nebo když dojde ke změnám v postupech.</p>		
<p>2. Provozní ustanovení</p>		
<p>2.1 Láhve, jimž bylo uděleno povolení intervalu 15 let pro periodickou inspekci, musí být plněny jen v plnicích střediscích používajících dokumentovaný systém kvality, aby bylo zajištěno, že všechna ustanovení odstavce (7) tohoto pokynu pro balení a požadavky a odpovědnosti uvedené v normě EN 1439:2008 jsou splněny a správně použity.</p>		
<p>2.2 Příslušný orgán musí ověřit, zda jsou tyto požadavky splněny, a kontrolovat to podle potřeby, avšak alespoň každé tři roky, nebo když dojde ke změnám v postupech.</p>		
<p>2.3 Vlastník musí poskytnout příslušnému orgánu dokumentaci prokazující, že plnicí středisko vyhovuje ustanovením pododstavce 2.1.</p>		
<p>2.4 Je-li plnicí středisko usídleno v jiné smluvní straně ADR, musí vlastník dodatečnou dokumentací prokázat, že je toto plnicí středisko patřičně kontrolováno příslušným orgánem této smluvní strany ADR.</p>		
<p>2.5 K zabránění vnitřní korozi musí být láhve plněny pouze plyny vysoké kvality s velmi nízkou potenciální kontaminací. Toto se považuje za splněné, jestliže plyny odpovídají mezím korozivity, jak je stanoveno v normě ISO 9162:1989.</p>		
<p>3. Ustanovení pro kvalifikaci a periodickou inspekci</p>		
<p>3.1 Láhve typu nebo skupiny, které jsou již v používání, pro něž byl povolen interval 15 let a u nichž se interval 15 let aplikuje, musí být podrobovány periodické inspekci podle 6.2.3.5.</p>		
<p>POZNÁMKA: K definici skupiny lahví viz POZNÁMKU k pododstavci 1.5.</p>		
<p>3.2 Jestliže láhev s intervalem 15 let nevyhoví při hydraulické tlakové zkoušce během periodické inspekce, např. dojde k roztržení nebo úniku, musí vlastník provést analýzu a vypracovat zprávu o příčině nevyhovění a zda jsou dotčeny jiné láhve (např. téhož typu nebo skupiny). V tomto posledním případě musí vlastník informovat příslušný orgán. Příslušný orgán musí poté rozhodnout o náležitých opatřeních a informovat příslušné orgány všech ostatních smluvních stran ADR.</p>		
<p>3.3 Jestliže byla zjištěna vnitřní koroze, jak je definována v použité normě (viz pododstavec 1.3), musí být láhev stažena z užívání a nesmí jí být poskytnuta žádná další lhůta pro plnění a přepravu.</p>		
<p>3.4 Láhve, jimž byl povolen interval 15 let, musí být vybaveny jen ventily zkonstruovanými a vyrobenými pro minimální období 15 let používání podle EN 13152:2001 + A1:2003 nebo EN 13153:2001 + A1:2003. Po periodické inspekci musí být láhev opatřena novým ventilem, s výjimkou toho, že ručně ovládané ventily, které byly renovovány nebo prohlédnuty podle EN 14912:2005, smějí být znovu namontovány, pokud jsou vhodné k používání pro další období 15 let. Renovace nebo prohlídka musí být provedeny jen výrobcem ventilů, nebo podle jeho technických pokynů podnikem kvalifikovaným pro takovou práci a pracujícím pod dokumentovaným systémem kvality.</p>		

4. Značení

Láhve, jimž byl povolen interval 15 let pro periodickou inspekci podle tohoto odstavce, musí být dodatečně opatřeny jasným a čitelným označením „P15Y“. Toto označení musí být odstraněno, jestliže láhev již nemá povolen interval 15 let.

POZNÁMKA: *Toto značení se nevztahuje na láhve podléhající přechodnému ustanovení v 1.6.2.9, 1.6.2.10 nebo ustanovením zvláštního ustanovení pro balení v (1) odstavce (10) tohoto pokynu pro balení.*

P200		POKYNY PRO BALENÍ (pokračování)								P200		
Tabulka 1: STLAČENÉ PLYNY												
UN číslo	Název a popis	Klasifikační kód	LC ₅₀ ml/m ³	Láhev	Trubkové nádoby	Tlakové sudy	Svazky lahví	Zkušební lhůta, roky ^b	Zkušební tlak, bary ^c	Nejvyšší provozní tlak, bary	Zvláštní ustanovení pro balení	
1002	VZDUCH, STLAČENÝ	1A		X	X	X	X	10				
1006	ARGON, STLAČENÝ	1A		X	X	X	X	10				
1016	OXID UHELNATÝ, STLAČENÝ	1TF	3760	X	X	X	X	5			u	
1023	SVÍTIPLYN, STLAČENÝ	1TF		X	X	X	X	5				
1045	FLUOR, STLAČENÝ	1TOC	185	X			X	5	200	30	a, k, n, o	
1046	HELIUM, STLAČENÉ	1A		X	X	X	X	10				
1049	VODÍK, STLAČENÝ	1F		X	X	X	X	10			d	
1056	KRYPTON, STLAČENÝ	1A		X	X	X	X	10				
1065	NEON, STLAČENÝ	1A		X	X	X	X	10				
1066	DUSÍK, STLAČENÝ	1A		X	X	X	X	10				
1071	PLYN ROPNÝ, STLAČENÝ	1TF		X	X	X	X	5				
1072	KYSLÍK, STLAČENÝ	1O		X	X	X	X	10			s	
1612	HEXAETHYLTETRAFOSFÁT A STLAČENÝ PLYN, SMĚS	1T		X	X	X	X	5			z	
1660	OXID DUSNATÝ, STLAČENÝ	1TOC	115	X			X	5	225	33	k, o	
1953	PLYN STLAČENÝ, TOXICKÝ, HOŘLAVÝ, J.N.	1TF	≤ 5000	X	X	X	X	5			z	
1954	PLYN STLAČENÝ, HOŘLAVÝ, J.N.	1F		X	X	X	X	10			z	
1955	PLYN STLAČENÝ, TOXICKÝ, J.N.	1T	≤ 5000	X	X	X	X	5			z	
1956	PLYN STLAČENÝ, J.N.	1A		X	X	X	X	10			z	
1957	DEUTERIUM, STLAČENÉ	1F		X	X	X	X	10			d	
1964	UHLOVODÍKY, PLYNNÉ, SMĚS, STLAČENÁ, J.N.	1F		X	X	X	X	10			z	
1971	METHAN, STLAČENÝ nebo PLYN ZEMNÍ, STLAČENÝ, s vysokým obsahem methanu	1F		X	X	X	X	10				
2034	VODÍK A METHAN, SMĚS, STLAČENÁ	1F		X	X	X	X	10			d	
2190	FLUORID KYSLÍKU, STLAČENÝ	1TOC	2.6	X			X	5	200	30	a, k, n, o	
3156	PLYN STLAČENÝ, PODPORUJÍCÍ HOŘENÍ, J.N.	1O		X	X	X	X	10			z	
3303	PLYN STLAČENÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, J.N.	1TO	≤ 5000	X	X	X	X	5			z	
3304	PLYN STLAČENÝ, TOXICKÝ, ŽÍRAVÝ, J.N.	1TC	≤ 5000	X	X	X	X	5			z	
3305	PLYN STLAČENÝ, TOXICKÝ, HOŘLAVÝ, ŽÍRAVÝ, J.N.	1TFC	≤ 5000	X	X	X	X	5			z	

P200		POKYNY PRO BALENÍ (pokračování)							P200			
Tabulka 1: STLAČENÉ PLYNY												
UN číslo	Název a popis	Klasifikační kód	LC ₅₀ ml/m ³	Láhve	Trubkové nádoby	Tlakové sudy	Svazky lahví	Zkušební lhůta, roky ^b	Zkušební tlak, bary ^c	Nejvyšší provozní tlak, bary	Zvláštní ustanovení pro balení	
3306	PLYN STLAČENÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, ŽÍRAVÝ, J.N.	1TOC	≤ 5000	X	X	X	X	5			Z	

^b Netýká se tlakových nádob z kompozitních materiálů.

^c Tam, kde není v tabulce uvedena žádná hodnota, nesmí provozní tlak překročit dvě třetiny hodnoty zkušebního tlaku.

P200		POKYNY PRO BALENÍ (pokračování)									P200
Tabulka 2: ZKAPALNĚNÉ PLYNY A ROZPUŠTĚNÉ PLYNY											
UN číslo	Název a popis	Klasifikační kód	LC ₅₀ ml/m ³	Láhev	Trubkové nádoby	Tlakové sudy	Svazky lahví	Zkušební lhůta, roky ^p	Zkušební tlak, barý	Stupeň plnění	Zvláštní ustanovení pro balení
1001	ACETYLEN, ROZPUŠTĚNÝ	4F		X			X	10	60		c, p
1005	AMONIAK (ČPAVEK), BEZVODÝ	2TC	4000	X	X	X	X	5	29	0.54	b, ra
1008	FLUORID BORITÝ	2TC	387	X	X	X	X	5	225 300	0.715 0.86	a
1009	BROMTRIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 13B1)	2A		X	X	X	X	10	42 120 250	1.13 1.44 1.60	ra ra ra
1010	BUTADIENY, STABILIZOVANÉ (1,2-butadien) nebo	2F		X	X	X	X	10	10	0.59	ra
1010	BUTADIENY, STABILIZOVANÉ (1,3-butadien) nebo	2F		X	X	X	X	10	10	0.55	ra
1010	BUTADIENY, SMĚS S UHLOVODÍKEM, STABILIZOVANÉ	2F		X	X	X	X	10	10	0.50	ra, v, z
1011	BUTAN	2F		X	X	X	X	10	10	0.52	ra, v
1012	BUTENY, SMĚS nebo	2F		X	X	X	X	10	10	0.50	ra, z
1012	1-BUTEN nebo	2F		X	X	X	X	10	10	0.53	
1012	2-BUTEN cis nebo	2F		X	X	X	X	10	10	0.55	
1012	2 BUTEN trans	2F		X	X	X	X	10	10	0.54	
1013	OXID UHLIČITÝ	2A		X	X	X	X	10	190 250	0.68 0.76	ra ra
1017	CHLÓR	2TOC	293	X	X	X	X	5	22	1.25	a, ra
1018	CHLORDIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 22)	2A		X	X	X	X	10	27	1.03	ra
1020	CHLORPENTAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 115)	2A		X	X	X	X	10	25	1.05	ra
1021	1-CHLOR-1,2,2,2-TETRAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 124)	2A		X	X	X	X	10	11	1.20	ra
1022	CHLORTRIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 13)	2A		X	X	X	X	10	100 120 190 250	0.83 0.90 1.04 1.11	ra ra ra ra
1026	DIKYAN	2TF	350	X	X	X	X	5	100	0.70	ra, u
1027	CYKLOPROPAN	2F		X	X	X	X	10	18	0.55	ra
1028	DICHLORDIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 12)	2A		X	X	X	X	10	16	1.15	ra
1029	DICHLORFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 21)	2A		X	X	X	X	10	10	1.23	ra

P200		POKYNY PRO BALENÍ (pokračování)										P200
Tabulka 2: ZKAPALNĚNÉ PLYNY A ROZPUŠTĚNÉ PLYNY												
UN číslo	Název a popis	Klasifikační kód	LC ₅₀ ml/m ³	Láhve	Trubkové nádoby	Tlakové sudy	Svazky lahví	Zkušební lhůta, roky ^p	Zkušební tlak, barý	Stupeň plnění	Zvláštní ustanovení pro balení	
1030	1,1-DIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 152a)	2F		X	X	X	X	10	16	0.79	ra	
1032	DIMETHYLAMIN, BEZVODÝ	2F		X	X	X	X	10	10	0.59	b, ra	
1033	DIMETHYLETHER	2F		X	X	X	X	10	18	0.58	ra	
1035	ETHAN	2F		X	X	X	X	10	95 120 300	0.25 0.30 0.40	ra ra ra	
1036	ETHYLAMIN	2F		X	X	X	X	10	10	0.61	b, ra	
1037	CHLORETHAN (ETHYLCHLORID)	2F		X	X	X	X	10	10	0.80	a, ra	
1039	ETHYLMETHYLETHER	2F		X	X	X	X	10	10	0.64	ra	
1040	ETHYLENOXID, nebo ETHYLENOXID S DUSÍKEM, až do nejvýše přípustného celkového tlaku 1 MPa (10 bar) při 50 °C	2TF	2900	X	X	X	X	5	15	0.78	l, ra	
1041	ETHYLENOXID A OXID UHLIČITÝ, SMĚS, s více než 9 %, ale nejvýše 87 % ethylenoxidu	2F		X	X	X	X	10	190 250	0.66 0.75	ra ra	
1043	HNOJIVO V ROZTOKU s volným čpavkem	4A		X		X	X	5			b, z	
1048	BROMOVODÍK, BEZVODÝ	2TC	2860	X	X	X	X	5	60	1.51	a, d, ra	
1050	CHLOROVODÍK, BEZVODÝ	2TC	2810	X	X	X	X	5	100 120 150 200	0.30 0.56 0.67 0.74	a, d, ra a, d, ra a, d, ra	
1053	SIROVODÍK	2TF	712	X	X	X	X	5	48	0.67	d, ra, u	
1055	ISOBUTEN	2F		X	X	X	X	10	10	0.52	ra	
1058	PLYNY ZKAPALNĚNÉ, nehořlavé, překryté dusíkem, oxidem uhličitým nebo vzduchem	2A		X	X	X	X	10	Zkušební tlak = 1.5 × provozního tlaku		ra	

P200		POKYNY PRO BALENÍ (pokračování)									P200
Tabulka 2: ZKAPALNĚNÉ PLYNY A ROZPUŠTĚNÉ PLYNY											
UN číslo	Název a popis	Klasifikační kód	LC ₅₀ ml/m ³	Láhev	Trubkové nádoby	Tlakové sudy	Svazky lahví	Zkušební lhůta, roky ^p	Zkušební tlak, barý	Stupeň plnění	Zvláštní ustanovení pro balení
1060	METHYLACETYLEN A PROPADIEN, SMĚS, STABILIZOVANÁ	2F		X	X	X	X	10	1.		c, ra, z
	Propadien s 1% až 4% methylacetylenu	2F		X	X	X	X	10	22	0.52	c, ra
	Směs P1	2F		X	X	X	X	10	30	0.49	c, ra
	Směs P2	2F		X	X	X	X	10	24	0.47	c, ra
1061	METHYLAMIN, BEZVODÝ	2F		X	X	X	X	10	13	0.58	b, ra
1062	BROMMETHAN (METHYLBROMID),s nejvýše 2 % chlorpikrinu	2T	850	X	X	X	X	5	10	1.51	a
1063	CHLORMETHAN (METHYLCHLORID) (PLYN JAKO CHLADICÍ PROSTŘEDEK R 40)	2F		X	X	X	X	10	17	0.81	a, ra
1064	METHANTHIOL (METHYLMERKAPTAN)	2TF	1350	X	X	X	X	5	10	0.78	d, ra, u
1067	OXID DUSIČITÝ	2TOC	115	X		X	X	5	10	1.30	k
1069	CHLORID NITROSYLU (NITROSYLCHLORID)	2TC	35	X			X	5	13	1.10	k, ra
1070	OXID DUSNÝ (RAJSKÝ PLYN)	2O		X	X	X	X	10	180 225 250	0.68 0.74 0.75	
1075	PLYNY ROPNÉ, ZKAPALNĚNÉ	2F		X	X	X	X	10			v, z
1076	FOSGEN	2TC	5	X		X	X	5	20	1.23	a, k, ra
1077	PROPEN	2F		X	X	X	X	10	27	0.43	ra
1078	PLYN JAKO CHLADICÍ PROSTŘEDEK, J.N.	2A		X	X	X	X	10			ra, z
	Směs F1	2A		X	X	X	X	10	12	1.23	
	Směs F2	2A		X	X	X	X	10	18	1.15	
	Směs F3	2A		X	X	X	X	10	29	1.03	
1079	OXID SIŘIČITÝ	2TC	2520	X	X	X	X	5	12	1.23	ra
1080	FLUORID SÍROVÝ	2A		X	X	X	X	10	70	1.06	ra
									140	1.34	ra
									160	1.38	ra
1081	TETRAFLUORETHYLEN, STABILIZOVANÝ	2F		X	X	X	X	10	200		m, o, r
1082	CHLORTRIFLUORETHYLEN, STABILIZOVANÝ	2TF	2000	X	X	X	X	5	19	1.13	ra, u
1083	TRIMETHYLAMIN, BEZVODÝ	2F		X	X	X	X	10	10	0.56	b, ra
1085	VINYLBROMID, STABILIZOVANÝ	2F		X	X	X	X	10	10	1.37	a, ra
1086	VINYLCHLORID, STABILIZOVANÝ	2F		X	X	X	X	10	12	0.81	a, ra

P200		POKYNY PRO BALENÍ (pokračování)										P200
Tabulka 2: ZKAPALNĚNÉ PLYNY A ROZPUŠTĚNÉ PLYNY												
UN číslo	Název a popis	Klasifikační kód	LC ₅₀ ml/m ³	Láhev	Trubkové nádoby	Tlakové sudy	Svazky lahví	Zkušební lhůta, roky ^p	Zkušební tlak, barý	Stupeň plnění	Zvláštní ustanovení pro balení	
1087	VINYLMETHYLETER, STABILIZOVANÝ	2F		X	X	X	X	10	10	0.67	ra	
1581	CHLORPIKRIN A METHYLBROMID, SMĚS, s více než 2 % chlorkpirinu	2T	850	X	X	X	X	5	10	1.51	a	
1582	CHLORPIKRIN A METHYLCHLORID, SMĚS	2T	^a	X	X	X	X	5	17	0.81	a	
1589	CHLORKYAN, STABILIZOVANÝ	2TC	80	X			X	5	20	1.03	k	
1741	CHLORID BORITÝ	2TC	2541	X	X	X	X	5	10	1.19	a, ra	
1749	FLUORID CHLORITÝ (CHLORTRIFLUORID)	2TOC	299	X	X	X	X	5	30	1.40	a	
1858	HEXAFLUORPROPYLEN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 1216)	2A		X	X	X	X	10	22	1.11	ra	
1859	FLUORID KŘEMIČITÝ	2TC	450	X	X	X	X	5	200 300	0.74 1.10	a	
1860	VINYLFUORID, STABILIZOVANÝ	2F		X	X	X	X	10	250	0.64	a, ra	
1911	DIBORAN	2TF	80	X			X	5	250	0.07	d, k, o	
1912	CHLORMETHAN (METHYLCHLORID) A DICHLORMETHAN, SMĚS	2F		X	X	X	X	10	17	0.81	a, ra	
1952	ETHYLENOXID A OXID UHLIČITÝ, SMĚS, obsahující nejvýše 9 % ethylenoxidu	2A		X	X	X	X	10	190 250	0.66 0.75	ra ra	
1958	1,2-DICHLOR-1,1,2,2-TETRAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 114)	2A		X	X	X	X	10	10	1.30	ra	
1959	1,1-DIFLUORETHYLEN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 1132a)	2F		X	X	X	X	10	250	0.77	ra	
1962	ETHYLEN	2F		X	X	X	X	10	225 300	0.34 0.38		
1965	UHLOVODÍKY, PLYNNÉ, SMĚS, ZKAPALNĚNÁ, J.N.	2F		X	X	X	X	10		^b	ra, ta, v, z	
	Směs A	2F						10	10	0.50		
	Směs A01	2F						10	15	0.49		
	Směs A02	2F						10	15	0.48		
	Směs A0	2F						10	15	0.47		
	Směs A1	2F						10	20	0.46		
	Směs B1	2F						10	25	0.45		

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Tabulka 2: ZKAPALNĚNÉ PLYNY A ROZPUŠTĚNÉ PLYNY												
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	Směs B2	2F						10	25	0.44		
	Směs B	2F						10	25	0.43		
	Směs C	2F						10	30	0.42		
1967	INSEKTICID, PLYNNÝ, TOXICKÝ, J.N.	2T		X	X	X	X	5			z	
1968	INSEKTICID, PLYNNÝ, J.N.	2A		X	X	X	X	10			ra, z	
1969	ISOBUTAN	2F		X	X	X	X	10	10	0.49	ra, v	
1973	CHLORDIFLUORMETHAN A CHLORPENTAFLUOR ETHAN, SMĚS s konstantním bodem varu s cca 49 % chlortrifluormethanu (PLYN JAKO CHLADICÍ PROSTŘEDEK R 502)	2A		X	X	X	X	10	31	1.01	ra	
1974	BROMCHLORDIFLUOR METHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 12B1)	2A		X	X	X	X	10	10	1.61	ra	
1975	OXID DUSNATÝ A OXID DUSIČITÝ, SMĚS	2TOC	115	X		X	X	5			k, z	
1976	OKTAFLUORCYKLOBUTAN (PLYN JAKO CHLADICÍ PROSTŘEDEK RC 318)	2.A		X	X	X	X	10	11	1.32	ra	
1978	PROPAN	2F		X	X	X	X	10	23	0.43	ra, v	
1982	TETRAFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 14)	2A		X	X	X	X	10	200 300	0.71 0.90		
1983	1-CHLOR-2,2,2-TRIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 133a)	2A		X	X	X	X	10	10	1.18	ra	
1984	TRIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 23)	2A		X	X	X	X	10	190 250	0.88 0.96	ra ra	
2035	1,1,1-TRIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 143a)	2F		X	X	X	X	10	35	0.73	ra	
2036	XENON	2A		X	X	X	X	10	130	1.28		
2044	2,2-DIMETHYLPROPAN	2F		X	X	X	X	10	10	0.53	ra	
2073	AMONIAK (ČPAVEK), ROZTOK, vodný, s hustotou menší než 0,880 kg/l při 15 °C,	4A										
	s více než 35 %, ale nejvýše 40 % amoniaku (čpavku)	4A		X	X	X	X	5	10	0.80	b	
	s více než 40 %, ale nejvýše 50 % amoniaku (čpavku)	4A		X	X	X	X	5	12	0.77	b	
2188	ARSENOVODÍK (ARSIN)	2TF	20	X			X	5	42	1.10	d, k	

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2189	DICHLOROSILAN	2TFC	314	X	X	X	X	5	10 200	0.90 1.08	a	
2191	FLUORID SULFURYLU (SULFURYLFLUORID)	2T	3020	X	X	X	X	5	50	1.10	u	
2192	GERMANOVODÍK (GERMAN) ^c	2TF	620	X	X	X	X	5	250	0.064	d, r, ra, q	
2193	HEXAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 116)	2A		X	X	X	X	10	200	1.13		
2194	FLUORID SELENOVÝ	2TC	50	X			X	5	36	1.46	k, ra	
2195	FLUORID TELUROVÝ	2TC	25	X			X	5	20	1.00	k, ra	
2196	FLUORID WOLFRAMOVÝ	2TC	160	X			X	5	10	3.08	a, k, ra	
2197	JODOVODÍK, BEZVODÝ	2TC	2860	X	X	X	X	5	23	2.25	a, d, ra	
2198	FLUORID FOSFOREČNÝ	2TC	190	X			X	5	200 300	0.90 1.25	K K	
2199	FOSFOROVODÍK (FOSFIN) ^c	2TF	20	X			X	5	225 250	0.30 0.45	d, k, ra, q d, k, ra, q	
2200	PROPADIEN, STABILIZOVANÝ	2F		X	X	X	X	10	22	0.50	ra	
2202	SELENOVODÍK, BEZVODÝ	2TF	2	X			X	5	31	1.60	k	
2203	SILAN ^c	2F		X	X	X	X	10	225 250	0.32 0.36	q q	
2204	SULFID KARBONYLU (KARBONYLSULFID)	2TF	1700	X	X	X	X	5	30	0.87	ra, u	
2417	FLUORID KARBONYLU (KARBONYLFLUORID)	2TC	360	X	X	X	X	5	200 300	0.47 0.70		
2418	FLUORID SIŘIČITÝ	2TC	40	X			X	5	30	0.91	a, k, ra	
2419	BROMTRIFLUORETHYLEN	2F		X	X	X	X	10	10	1.19	ra	
2420	HEXAFLUORACETON	2TC	470	X	X	X	X	5	22	1.08	ra	
2421	OXID DUSITÝ	2TOC	PŘEPRAVA ZAKÁZÁNA									

P200		POKYNY PRO BALENÍ (pokračování)										P200
Tabulka 2: ZKAPALNĚNÉ PLYNY A ROZPUŠTĚNÉ PLYNY												
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2422	OKTAFLUOR-2-BUTEN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 1318)	2A		X	X	X	X	10	12	1.34	ra	
2424	OKTAFLUORPROPAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 218)	2A		X	X	X	X	10	25	1.04	ra	
2451	FLUORID DUSITÝ	2O		X	X	X	X	10	200	0.50		
2452	ETHYLACETYLEN, STABILIZOVANÝ	2F		X	X	X	X	10	10	0.57	c, ra	
2453	FLUORETHAN (ETHYLFLUORID) (PLYN JAKO CHLADICÍ PROSTŘEDEK R 161)	2F		X	X	X	X	10	30	0.57	ra	
2454	FLUORMETHAN (METHYLFLUORID) (PLYN JAKO CHLADICÍ PROSTŘEDEK R 41)	2F		X	X	X	X	10	300	0.63	ra	
2455	METHYL NITRIT	2A	PŘEPRAVA ZAKÁZANA									
2517	1-CHLOR-1,1-DIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 142b)	2F		X	X	X	X	10	10	0.99	ra	
2534	METHYLCHLOROSILAN	2TFC	600	X	X	X	X	5			ra, z	
2548	FLUORID CHLOREČNÝ (CHLORPENTAFLUORID)	2TOC	122	X			X	5	13	1.49	a, k	
2599	CHLORTRIFLUORMETHAN A TRIFLUORMETHAN, AZEOTROPNÍ SMĚS s cca 60 % chlordifluormethanu (PLYN JAKO CHLADICÍ PROSTŘEDEK R 503)	2A		X	X	X	X	10	31	0.12	ra	
									42	0.17	ra	
									100	0.64	ra	
2601	CYKLOBUTAN	2F		X	X	X	X	10	10	0.63	ra	
2602	DICHLORDIFLUORMETHAN A 1,1-DIFLUORETHAN, AZEOTROPNÍ SMĚS s cca 74 % dichlordifluormethanu (PLYN JAKO CHLADICÍ PROSTŘEDEK R 500)	2A		X	X	X	X	10	22	1.01	ra	

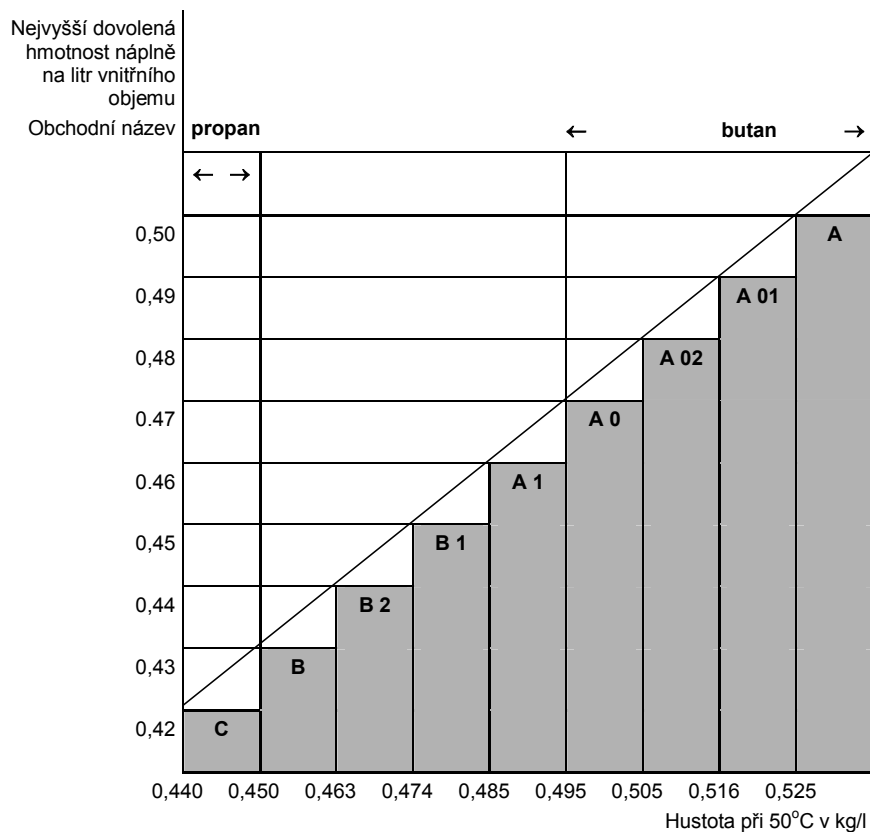
P200		POKYNY PRO BALENÍ (pokračování)										P200
Tabulka 2: ZKAPALNĚNÉ PLYNY A ROZPUŠTĚNÉ PLYNY												
UN číslo	Název a popis	Klasifikační kód	LC ₅₀ ml/m ³	Láhev	Trubkové nádoby	Tlakové sudy	Svazky lahví	Zkušební lhůta, roky ^p	Zkušební tlak, barý	Stupeň plnění	Zvláštní ustanovení pro balení	
2676	ANTIMONOVOODÍK (STIBIN)	2TF	20	X			X	5	200	0.49	k, r, ra	
2901	CHLORID BROMU (BROMCHLORID)	2TOC	290	X	X	X	X	5	10	1.50	a	
3057	TRIFLUOROACETYL CHLORID	2TC	10	X		X	X	5	17	1.17	k, ra	
3070	ETHYLENOXID A DICHLORDIFLUOR METHAN, SMĚS, s nejvýše 12,5 % ethylenoxidu	2A		X	X	X	X	10	18	1.09	ra	
3083	PERCHLORYL FLUORID	2TO	770	X	X	X	X	5	33	1.21	u	
3153	PERFLUORMETHYLVINYL ETHER	2F		X	X	X	X	10	20	0.75	ra	
3154	PERFLUORETHYLVINYL ETHER	2F		X	X	X	X	10	10	0.98	ra	
3157	PLYN ZKAPALNĚNÝ, PODPORUJÍCÍ HOŘENÍ, J.N.	2O		X	X	X	X	10			z	
3159	1,1,1,2-TETRAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 134a)	2A		X	X	X	X	10	18	1.05	ra	
3160	PLYN ZKAPALNĚNÝ, TOXICKÝ, HOŘLAVÝ, J.N.	2TF	≤ 5000	X	X	X	X	5			ra, z	
3161	PLYN ZKAPALNĚNÝ, HOŘLAVÝ, J.N.	2F		X	X	X	X	10			ra, z	
3162	PLYN ZKAPALNĚNÝ, TOXICKÝ, J.N.	2T	≤ 5000	X	X	X	X	5			z	
3163	PLYN ZKAPALNĚNÝ, J.N.	2A		X	X	X	X	10			ra, z	
3220	PENTAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 125)	2A		X	X	X	X	10	49 35	0.95 0.87	ra ra	
3252	DIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 32)	2F		X	X	X	X	10	48	0.78	ra	
3296	HEPTAFLUORPROPAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 227)	2A		X	X	X	X	10	13	1.21	ra	

P200		POKYNY PRO BALENÍ (pokračování)										P200
Tabulka 2: ZKAPALNĚNÉ PLYNY A ROZPUŠTĚNÉ PLYNY												
UN číslo	Název a popis	Klasifikační kód	LC ₅₀ ml/m ³	Láhve	Trubkové nádoby	Tlakové sudy	Svazky lahví	Zkušební lhůta, roky ^p	Zkušební tlak, barý	Stupeň plnění	Zvláštní ustanovení pro balení	
3297	ETHYLENOXID A CHLORTETRAFLUORETHAN, SMĚS, s nejméně 8,8 % ethylenoxidu	2A		X	X	X	X	10	10	1.16	ra	
3298	ETHYLENOXID A PENTAFLUORETHAN, SMĚS, s nejméně 7,9 % ethylenoxidu	2A		X	X	X	X	10	26	1.02	ra	
3299	ETHYLENOXID A TETRAFLUORETHAN, SMĚS, s nejméně 5,6 % ethylenoxidu	2A		X	X	X	X	10	17	1.03	ra	
3300	ETHYLENOXID A OXID UHLIČITÝ, SMĚS, s více než 87 % ethylenoxidu	2TF	Více než 2900	X	X	X	X	5	28	0.73	ra	
3307	PLYN ZKAPALNĚNÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, J.N.	2TO	≤ 5000	X	X	X	X	5			z	
3308	PLYN ZKAPALNĚNÝ, TOXICKÝ, ŽÍRAVÝ, J.N.	2TC	≤ 5000	X	X	X	X	5			ra, z	
3309	PLYN ZKAPALNĚNÝ, TOXICKÝ, HOŘLAVÝ, ŽÍRAVÝ, J.N.	2TFC	≤ 5000	X	X	X	X	5			ra, z	
3310	PLYN ZKAPALNĚNÝ, TOXICKÝ, PODPORUJÍCÍ HOŘENÍ, ŽÍRAVÝ, J.N.	2TOC	≤ 5000	X	X	X	X	5			z	
3318	AMONIAK (ČPAVEK), ROZTOK ve vodě, s hustotou menší než 0,880 kg/l při 15 °C, s více než 50 % amoniaku (čpavku)	4TC		X	X	X	X	5			b	
3337	PLYN JAKO CHLADICÍ PROSTŘEDEK R 404A (pentafluorethan, 1,1,1-trifluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 44 % pentafluorethanu a 52 % 1,1,1-trifluorethanu)	2A		X	X	X	X	10	36	0.82	ra	

P200		POKYNY PRO BALENÍ (pokračování)										P200
Tabulka 2: ZKAPALNĚNÉ PLYNY A ROZPUŠTĚNÉ PLYNY												
UN číslo	Název a popis	Klasifikační kód	LC ₅₀ ml/m ³	Láhev	Trubkové nádoby	Tlakové sudy	Svazky lahví	Zkušební lhůta, roky ^p	Zkušební tlak, bary	Stupeň plnění	Zvláštní ustanovení pro balení	
3338	PLYN JAKO CHLADICÍ PROSTŘEDEK R 407A (difluormethan, pentafluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 20 % difluormethanu a 40 % pentafluorethanu)	2A		X	X	X	X	10	32	0.94	ra	
3339	PLYN JAKO CHLADICÍ PROSTŘEDEK R 407B (difluormethan, pentafluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 10 % difluormethanu a 70 % pentafluorethanu)	2A		X	X	X	X	10	33	0.93	ra	
3340	PLYN JAKO CHLADICÍ PROSTŘEDEK R 407C (difluormethan, pentafluorethan a 1,1,1,2-tetrafluorethan, zeotropní směs s cca 23 % difluormethanu a 25 % pentafluorethanu)	2A		X	X	X	X	10	30	0.95	ra	
3354	INSEKTICID, PLYNNÝ, HOŘLAVÝ, J.N.	2F		X	X	X	X	10			ra, z	
3355	INSEKTICID, PLYNNÝ, TOXICKÝ, HOŘLAVÝ, J.N.	2TF		X	X	X	X	5			ra, z	
3374	ACETYLEN, BEZ ROZPOUŠTĚDLA	2F		X			X	5	60		c, p	

^a Netýká se tlakových nádob z kompozitních materiálů.

^b Pro směsi plynů UN čísla 1965 je maximální dovolená hmotnost náplně na litr vnitřního objemu následující:



c Je považován za pyroforní.

d Je považován za toxický. Hodnotu LC_{50} je třeba ještě určit.

P200 POKYNY PRO BALENÍ (pokračování) P200												
Tabulka 3: LÁTKY JINÝCH TŘÍD, NEŽ TŘÍDY 2												
UN Číslo	Název a popis	Třída	Klasifikační kód	LC ₅₀ ml/m ³	Láhve	Trubkové nádoby	Tlakové sudy	Svazky lahví	Zkušební lhůta, roky ^a	Zkušební tlak, bary ^b	Stupeň plnění	Zvláštní ustanovení pro balení
1051	KYANOVODÍK, STABILIZOVANÝ, s méně než 3 % vody	6.1	TF1	40	X			X	5	100	0.55	k
1052	FLUOROVODÍK, BEZVODÝ	8	CT1	966	X		X	X	5	10	0.84	a, ab, ac
1745	FLUORID BROMIČNÝ	5.1	OTC	25	X		X	X	5	10	^b	k, ab, ad
1746	FLUORID BROMITY	5.1	OTC	50	X		X	X	5	10	^b	k, ab, ad
1790	KYSELINA FLUOROVODÍKOVÁ, roztok, obsahující více než 85 % fluorovodíku	8	CT1	966	X		X	X	5	10	0.84	ab, ac
2495	FLUORID JODIČNÝ	5.1	OTC	120	X		X	X	5	10	^b	k, ab, ad

^a Netýká se tlakových nádob z kompozitních materiálů.

^b Nejnižší dovolené plnění je 8 obj. %.

P 201	POKYN PRO BALENÍ	P 201
Tento pokyn se použije pro UN čísla 3167, 3168 a 3169.		
Dovoleny jsou následující obaly:		
(1) Láhve a plynové nádoby vyhovující konstrukčním, zkušebním a plnicím požadavkům schváleným příslušným orgánem;		
(2) Následující skupinové obaly, za podmínky, že jsou splněna všeobecná ustanovení oddílů 4.1.1 a 4.1.3:		
Vnější obaly:		
Sudy (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G);		
Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);		
Kanystry (3A1, 3A2, 3B1, 3B2, 3H1, 3H2).		
Vnitřní obaly:		
(a) Pro netoxické plyny hermeticky uzavřené vnitřní obaly ze skla nebo kovu s nejvyšším vnitřním objemem 5 litrů na kus;		
(b) Pro toxické plyny hermeticky uzavřené vnitřní obaly ze skla nebo kovu s nejvyšším vnitřním objemem 1 litr na kus.		
Obaly musí splňovat parametry obalové skupiny III.		

P 202	POKYN PRO BALENÍ	P 202
(Vyhrazeno)		

P 203	POKYN PRO BALENÍ	P 203
Tento pokyn se použije pro hluboce zchlazené zkapalněné plyny třídy 2.		
Požadavky na uzavřené kryogenní nádoby:		
<p>(1) Musí být splněna zvláštní ustanovení pro balení oddílu 4.1.6.</p> <p>(2) Požadavky kapitoly 6.2 musí být splněny.</p> <p>(3) Uzavřené kryogenní nádoby musí být izolovány tak, aby se nemohly ojinit.</p> <p>(4) Zkušební tlak</p>		
Hluboce zchlazené kapaliny musí být plněny do uzavřených kryogenních nádob s následujícími nejnižšími zkušebními tlaky:		
<p>(a) pro uzavřené kryogenní nádoby s vakuovou izolací nesmí být zkušební tlak nižší než 1,3 násobek součtu nejvyššího vnitřního tlaku naplněné nádoby, včetně tlaku během plnění a vyprazdňování, plus 100 kPa (1 bar);</p> <p>(b) pro jiné uzavřené kryogenní nádoby nesmí být zkušební tlak nižší než 1,3 násobek nejvyššího vnitřního tlaku naplněné nádoby, s přihlédnutím k tlaku vyvinutému během plnění a vyprazdňování.</p>		
(5) Stupeň plnění		
<p>Pro nehořlavé, netoxické hluboce zchlazené zkapalněné plyny (klasifikačních kódů 3A a 3O) nesmí objem kapalné fáze při plnicí teplotě a při tlaku 100 kPa (1 bar) překročit 98 % hydraulického vnitřního objemu tlakové nádoby.</p> <p>Pro hořlavé hluboce zchlazené zkapalněné plyny (klasifikačního kódu 3F) musí stupeň plnění zůstat pod hodnotou, při níž, je-li obsah zahřátý na teplotu, při které je tenze par rovna otevíracímu tlaku pojistného ventilu, by objem kapalné fáze dosáhl 98% hydraulického vnitřního objemu při této teplotě.</p>		
(6) Zařízení pro vyrovnávání tlaku		
Uzavřené kryogenní nádoby musí být vybaveny alespoň jedním zařízením pro vyrovnávání tlaku.		
(7) Snášenlivost		
Materiály použité k zajištění těsnosti spojů nebo pro údržbu uzávěrů musí být snášenlivé s obsahem. U nádob určených pro přepravu plynů podporujícím hoření (klasifikační kód 3O) nesmějí tyto materiály reagovat s těmito plyny nebezpečným způsobem.		
(8) Periodické inspekce		
Interval mezi periodickými inspekcemi a zkouškami ventilů pro vyrovnávání tlaku podle 6.2.1.6.3 nesmí překročit pět let.		
Požadavky na otevřené kryogenní nádoby:		
V otevřených kryogenních nádobách smějí být přepravovány jen následující hluboce zchlazené zkapalněné plyny, které nepodporují hoření, klasifikačního kódu 3A: UN 1913, 1951, 1963, 1970, 1977, 2591, 3136 a 3158.		
Otevřené kryogenní nádoby musí být vyrobeny za splnění následujících požadavků:		
(1) Nádoby musí být zkonstruovány, vyrobeny, odzkoušeny a vybaveny takovým způsobem, aby odolaly všem podmínkám, včetně únavy, jímž budou vystaveny během normálního používání a během normálních podmínek přepravy.		
(2) Vnitřní objem nesmí být větší než 450 litrů.		
(3) Nádoba musí být konstruována s dvojitou stěnou, přičemž prostor mezi vnitřní a vnější stěnou je zbaven vzduchu (vakuová izolace). Izolace musí zabránit tvoření jinovatky na vnějšku nádoby.		
(4) Konstruktivní materiály musí mít vhodné mechanické vlastnosti při provozní teplotě.		
(5) Materiály, které jsou v přímém styku s nebezpečnými věcmi, nesmějí být napadány nebo zeslabovány nebezpečnými věcmi, které se mají přepravovat, a nesmějí způsobit nebezpečný účinek, např. katalyticky urychlovat reakci nebo reagovat s nebezpečnými věcmi.		
(6) Nádoby ze skla s konstrukcí dvojitě stěny musí mít vnější obal s vhodnými fixačními nebo absorpčními materiály, které odolávají tlakům a nárazům, které mohou vyskytnout za normálních podmínek přepravy.		
(7) Nádoby musí být zkonstruovány tak, aby během přepravy zůstaly ve stojaté poloze, např. mít podstavu, jejíž menší horizontální rozměr je větší než výška těžiště při naplnění nádoby do jejího vnitřního objemu nebo být upevněny ve výkyvných uloženích.		
(8) Otvory nádob musí být opatřeny prostředky dovolujícími únik plynů, zabraňujícími vystříknutí kapaliny a zkonstruovanými tak, aby během přepravy zůstaly na svém místě.		
(9) Otevřené kryogenní nádoby musí být opatřeny následujícími údaji trvale vyznačenými např. vyražením, vyrytím nebo vyleptáním:		
<ul style="list-style-type: none"> - název a adresa výrobce; - typové číslo nebo název; - sériové číslo výrobní šarže; - UN číslo a oficiální pojmenování pro přepravu plynů, pro něž je nádoba určena; - vnitřní objem nádoby v litrech. 		

P 204	POKYN PRO BALENÍ	P 204
<i>(Vypuštěno)</i>		

P 205	POKYN PRO BALENÍ	P 205
Tento pokyn se použije pro UN číslo 3468.		
<p>(1) Pro zásobníkové systémy s hydridem kovu musí být dodržena zvláštní ustanovení pro balení v 4.1.6.</p> <p>(2) Tento pokyn pro balení se vztahuje pouze na tlakové nádoby, jejichž hydraulický vnitřní objem nepřekračuje 150 litrů a které mají maximální vyvinutý tlak nepřekračující 25 MPa.</p> <p>(3) Zásobníkové systémy s hydridem kovu splňující příslušné požadavky na výrobu a zkoušení tlakových nádob obsahujících plyn kapitoly 6.2 jsou dovoleny jen pro přepravu vodíku.</p> <p>(4) Pokud jsou používány ocelové tlakové nádoby nebo kompozitní tlakové nádoby s ocelovými vložkami, musí se používat jen ty, které jsou označeny značkou „H“ podle 6.2.2.9.2 (j).</p> <p>(5) Zásobníkové systémy s hydridem kovu musí splňovat provozní podmínky, konstrukční kritéria, jmenovitý vnitřní objem, typové zkoušky, zkoušky výrobních šarží, výrobní kusové zkoušky, zkušební tlak, jmenovitý plnicí tlak a ustanovení pro zařízení pro vyrovnávání tlaku pro přepravitelné zásobníkové systémy s hydridem kovu uvedené v normě ISO 16111:2008 (Přepravitelná zásobníková zařízení na plyn – Vodík pohlčený v reverzibilním kovovém hydridu) a jejich shoda a schválení musí být posouzeny podle 6.2.2.5.</p> <p>(6) Zásobníkové systémy s hydridem kovu musí být plněny vodíkem při tlaku nepřekračujícím jmenovitý plnicí tlak udaný na permanentním značení systému, jak je uvedeno v normě ISO 16111:2008.</p> <p>(7) Požadavky na periodické zkoušky pro zásobníkové systémy s hydridem kovu musí být v souladu s normou ISO 16111:2008 a musí být prováděny podle 6.2.2.6 a interval mezi periodickými inspekcemi nesmí překročit pět let.</p>		

P 206	POKYN PRO BALENÍ	P 206
Tento pokyn se použije pro UN čísla 3500, 3501, 3502, 3503, 3504 a 3505.		
Pokud není v ADR stanoveno jinak, jsou dovoleny láhve a tlakové sudy splňující příslušné požadavky kapitoly 6.2.		
<p>(1) Zvláštní ustanovení pro balení v 4.1.6 musí být dodržena.</p> <p>(2) Maximální perioda mezi zkouškami pro periodickou inspekci musí být 5 let.</p> <p>(3) Láhve a tlakové sudy musí být plněny tak, aby při 50 °C neplynná fáze nepřekročila 95 % jejich hydraulického vnitřního objemu a aby nebyly úplně naplněny při 60 °C. Po naplnění nesmí vnitřní tlak při 65 °C překročit zkušební tlak lahví a tlakových sudů. Tenze par a objemová roztažnost všech látek v lahvích a tlakových sudem musí být vzaty v úvahu.</p> <p>(4) Nejnižší zkušební tlak musí odpovídat pokynu pro balení P200 pro hnací látku, avšak nesmí být nižší než 20 barů.</p>		
Dodatečný požadavek:		
Láhve a tlakové sudy nesmějí být podávány k přepravě, jsou-li spojeny s rozstřikovacím zařízením, jako je ohebná hadice a proudnice.		
Zvláštní ustanovení pro balení:		
PP89	Bez ohledu na ustanovení uvedená v 4.1.6.9 (b) smějí mít láhve pro jedno použití používané pro UN čísla 3501, 3502, 3503, 3504 a 3505 hydraulický vnitřní objem v litrech nepřekračující 1000 litrů, podělený zkušebním tlakem vyjádřeným v barech, za podmínky, že omezení vnitřního objemu a tlaku konstrukční normy jsou v souladu s normou ISO 11118:1999, která omezuje nejvyšší vnitřní objem na 50 litrů.	

P 207	POKYN PRO BALENÍ	P 207				
Tento pokyn se použije pro UN číslo 1950.						
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:						
<p>(a) Sudy (1A1,1A2, 1B1, 1B2, 1N1,1N2, 1H1, 1H2, 1D, 1G); Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);</p> <p>Obaly musí vyhovovat parametrům obalové skupiny II.</p> <p>(b) Tuhé vnější obaly s následující nejvyšší čistou (netto) hmotností:</p> <table style="margin-left: 20px;"> <tr> <td>Lepenka</td> <td style="text-align: right;">55 kg</td> </tr> <tr> <td>Jiný materiál než lepenka</td> <td style="text-align: right;">125 kg</td> </tr> </table> <p>Ustanovení uvedená v 4.1.1.3 nemusí být dodržena</p> <p>Obaly musí být zkonstruovány a vyrobeny tak, aby zamezily pohybu aerosolů a jejich neúmyslnému vyprázdnění za normálních podmínek přepravy</p>			Lepenka	55 kg	Jiný materiál než lepenka	125 kg
Lepenka	55 kg					
Jiný materiál než lepenka	125 kg					
Zvláštní ustanovení pro balení:						
PP87	Pro UN 1950 odpadové aerosoly přepravované podle zvláštního ustanovení 327, musí mít obaly prostředky pro zadržení jakékoli volné kapaliny, která by mohla uniknout během přepravy, např. absorpční materiál. Obaly musí být přiměřeně odvětrávány, aby se zamezilo vytvoření hořlavého prostředí a nárůstu tlaku.					
Zvláštní ustanovení pro balení, specifické pro RID a ADR:						
RR6	Pro UN 1950 v případě přepravy vozových zásilek smějí být kovové předměty baleny také následujícím způsobem: Předměty musí být seskupeny do jednotek na podložkách a drženy v této pozici pláštěm z plastu; tyto jednotky musí být stohovány a vhodně upevněny na paletách.					

P 208	POKYN PRO BALENÍ	P 208
Tento pokyn se použije pro UN 3150 přístroje malé, poháněné plynným uhlovodíkem, nebo nádoby s plynným uhlovodíkem, opakovaně plnitelné, pro malé přístroje, s odběrným ventilem.		
<p>(1) Zvláštní ustanovení pro balení oddílu 4.1.6, pokud jsou použitelná, musí být dodržena.</p> <p>(2) Tyto předměty musí splňovat předpisy státu, v němž byly naplněny.</p> <p>(3) Přístroje a nádoby musí být zabaleny ve vnějších obalech splňujících požadavky oddílu 6.1.4 a vyzkoušených a schválených podle kapitoly 6.1 pro obalovou skupinu II.</p>		

P 300	POKYN PRO BALENÍ	P 300
Tento pokyn se použije pro UN číslo 3064.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
<p>Skupinové obaly sestávající s vnitřních kovových nádob (plechovek) s vnitřním objemem každé z nich nejvýše 1 litr a z vnějších dřevěných beden (4C1, 4C2, 4D nebo 4F) obsahujících nejvýše 5 litrů roztoku.</p>		
Dodatečné požadavky:		
<p>(1) Kovové obaly (plechovky) musí být úplně obklopeny absorpčním fixačním materiálem.</p> <p>(2) Dřevěné bedny musí být celé opatřeny vložkou z vhodného materiálu nepropouštějícího vodu a nitroglycerin.</p>		

P 301	POKYN PRO BALENÍ	P 301
Tento pokyn se použije pro UN číslo 3165.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
(1)	<p>Hliníková tlaková nádoba vyrobená z trubky a mající přivařená dna. Základní jímavost paliva uvnitř této nádoby je zajištěna jinou svařovanou hliníkovou nádobou s nejvyšším vnitřním objemem 46 litrů. Vnější nádoba musí mít nejnižší výpočtový tlak 1275 kPa (přetlak) a nejnižší tlak při roztržení 2755 kPa (přetlak). Každá nádoba musí být zkontrolována na těsnost během výroby a před odesláním; musí být shledána těsnou (bez úniku). Celá vnitřní nádoba musí být bezpečně zabalena s nehořlavým fixačním materiálem, jako je vermikulit, do pevného a hermeticky uzavřeného kovového vnějšího obalu, který bude přiměřeně chránit celou výstroj. Nejvyšší množství paliva na nádobu a kus je 42 litrů.</p>	
(2)	<p>Hliníková tlaková nádoba Základní jímavost paliva uvnitř této nádoby je zajištěna parotěsnou svařovanou komorou s elastickým měchýřem majícím maximální vnitřní objem 46 litrů. Tlaková nádoba musí mít nejnižší výpočtový tlak 2860 kPa (přetlak) a nejnižší tlak při roztržení 5170 kPa (přetlak). Každá nádoba musí být zkontrolována na těsnost během výroby a před odesláním a musí být bezpečně zabalena s nehořlavým fixačním materiálem, jako je vermikulit, do pevného a hermeticky uzavřeného kovového vnějšího obalu, který bude přiměřeně chránit celou výstroj. Nejvyšší množství paliva na nádobu a kus je 42 litrů.</p>	

P 302	POKYN PRO BALENÍ	P 302
Tento pokyn se použije pro UN číslo 3269.		
Dovoleny jsou následující skupinové obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
Vnější obaly:		
<p>Sudy (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G); Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Kanystry (3A1, 3A2, 3B1, 3B2, 3H1, 3H2).</p>		
Vnitřní obaly:		
<p>Každý vnitřní obal smí obsahovat nejvýše 125 ml aktivátoru (organického peroxidu), je-li tento aktivátor kapalný, a nejvýše 500 gramů, je-li tuhý. Základní materiál a aktivátor musí být zabaleny každý zvlášť ve vnitřních obalech.</p>		
Komponenty mohou být uloženy v tomtéž vnějším obalu za podmínky, že v případě úniku spolu nebudou vzájemně nebezpečně reagovat.		
Obaly musí splňovat parametry obalové skupiny II nebo III podle kritérií pro třídu 3 vztahujících se na základní materiál.		

P 400	POKYN PRO BALENÍ	P 400
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
<p>(1) Tlakové nádoby, pokud jsou dodržena všeobecná ustanovení v 4.1.3.6, mohou být používány. Musí být vyrobeny z oceli a musí být podrobeny první zkoušce a potom periodickým zkouškám každých 10 roků tlakem nejméně 1 MPa (10 barů, přetlak). Během přepravy musí být kapalina pod vrstvou inertního plynu s přetlakem nejméně 20 kPa (0.2 baru).</p> <p>(2) Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F nebo 4G), sudy (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1D nebo 1G) nebo kanystry (3A1, 3A2, 3B1 nebo 3B2) obsahující hermeticky uzavřené kovové nádoby (plechovky) s vnitřními obaly ze skla nebo kovu, s vnitřním objemem nepřesahujícím jednotlivě 1 litr, mající šroubové uzávěry opatřené těsněním. Vnitřní obaly musí být obloženy ze všech stran suchým absorpčním nehořlavým fixačním materiálem v dostatečném množství, aby pohltil celý obsah. Vnitřní obaly nesmějí být plněny více než do 90% svého vnitřního objemu. Vnější obaly musí mít nejvyšší čistou (netto) hmotnost 125 kg.</p> <p>(3) Ocelové, hliníkové nebo kovové sudy (1A1,1A2, 1B1, 1B2, 1N1 nebo 1N2), kanystry (3A1, 3A2, 3B1 nebo 3B2), nebo bedny (4A, 4B nebo 4N) s nejvyšší čistou (netto) hmotností 150 kg každý(á), s hermeticky uzavřenými vnitřními kovovými nádobami (plechovkami), z nichž každá může mít vnitřní objem nejvýše 4 litry, se šroubovými uzávěry opatřeny těsněním. Vnitřní obaly musí být obloženy ze všech stran suchým absorpčním nehořlavým fixačním materiálem v dostatečném množství, aby pohltil celý obsah. Každá vrstva vnitřních obalů musí být oddělena dělicí přepážkou, navíc k fixačnímu materiálu. Vnitřní obaly nesmějí být plněny více než do 90% svého vnitřního objemu.</p>		
Zvláštní ustanovení pro balení:		
PP 86 Pro UN čísla 3392 a 3394 musí být vzduch z parního prostoru odstraněn dusíkem nebo jinými prostředky.		

P 401	POKYN PRO BALENÍ	P 401
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
<p>(1) Tlakové nádoby, pokud jsou dodržena všeobecná ustanovení v pododdíle 4.1.3.6, mohou být používány. Musí být vyrobeny z oceli a musí být podrobeny první zkoušce a potom periodickým zkouškám každých 10 roků tlakem nejméně 0,6 MPa (6 barů, přetlak). Během přepravy musí být kapalina pod vrstvou inertního plynu s přetlakem nejméně 20 kPa (0,2 baru).</p>		
	Vnitřní obal	Vnější obal
(2) Skupinové obaly	1litr	30 kg
Vnější obaly:		nejvyšší čistá (netto) hmotnost
Sudy (1A1, 1A2, 1B1, 1B2, 1N1,1N2,1H1,1H2, 1D, 1G); Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1,4H2); Kanystry (3A1, 3A2, 3B1, 3B2, 3H1, 3H2)		
Vnitřní obaly:		
Sklo, kov nebo plast, opatřené šroubovými uzávěry, s nejvyšším vnitřním objemem 1 litr. Každý vnitřní obal musí být obložen inertním absorpčním fixačním materiálem v množství dostatečném k pohlcení celého obsahu.		
Nejvyšší čistá (netto) hmotnost na vnější obal nesmí překročit 30 kg.		
Zvláštní ustanovení pro balení specifické pro RID a ADR:		
RR 7 Pro UN čísla 1183, 1242, 1295 a 2988 však musí být tlakové nádoby podrobeny zkouškám každých pět let.“		

P 402	POKYN PRO BALENÍ		P 402
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 (viz také tabulku v pododdílu 4.1.4.4):			
(1) Tlakové nádoby, pokud jsou dodržena všeobecná ustanovení v pododdíle 4.1.3.6, mohou být používány. Musí být vyrobeny z oceli a musí být podrobeny první zkoušce a potom periodickým zkouškám každých 10 let tlakem nejméně 0,6 MPa (6 barů, přetlak). Během přepravy musí být kapalina pod vrstvou inertního plynu s přetlakem nejméně 20 kPa (0,2 baru).			
		Nejvyšší čistá (netto) hmotnost	
		Vnitřní obal	Vnější obal
(2) Skupinové obaly		10 kg (sklo)	125 kg
Vnější obaly: Sudy (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G); Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Kanystry (3A1, 3A2, 3B1, 3B2, 3H1, 3H2).		15 kg (kov nebo plast)	125 kg
Vnitřní obaly s následující nejvyšší čistou (netto) hmotností: Sklo 10 kg Kov nebo plast 15 kg			
Každý vnitřní obal musí být opatřen šroubovými uzávěry .			
Každý vnitřní obal musí být obložen inertním absorpčním fixačním materiálem v množství dostatečném k pohlcení celého obsahu. Nejvyšší čistá (netto) hmotnost na vnější obal nesmí překročit 125 kg.			
(3) Ocelové sudy (1A1) s nejvyšším vnitřním objemem 250 litrů.			
(4) Kompozitní obaly sestávající z plastové nádoby s vnějším sudem z oceli nebo hliníku (6HA1 nebo 6HB1) s nejvyšším vnitřním objemem 250 litrů.			
Zvláštní ustanovení pro balení specifické pro RID a ADR:			
RR4	Pro UN číslo 3130 musí být otvory nádob hermeticky uzavřeny pomocí dvou zařízení umístěných za sebou, z nichž alespoň jedno musí být šroubovací nebo zajištěné ekvivalentním způsobem.		
RR7	Pro UN číslo 3129 však musí být tlakové nádoby podrobeny zkouškám každých pět let.		
RR8	Pro UN čísla 1389, 1391, 1411, 1421, 1928, 3129, 3130, 3148 a 3482 však musí být tlakové nádoby podrobeny první zkoušce a periodickým zkouškám při zkušebním tlaku nejméně 1 MPa (10 barů).		

P 403	POKYN PRO BALENÍ	P 403
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
Skupinové obaly:		
Vnitřní obaly	Vnější obaly	Nejvyšší čistá (netto) hmotnost
ze skla 2 kg z plastu 15 kg z kovu 20 kg Vnitřní obaly musí být hermeticky uzavřeny (např. přelepením páskou nebo šroubovými uzávěry)	Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z plastu (1H1, 1H2) z překližky (1D) z lepenky (1G) Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z pěnového plastu (4H1) z tuhého plastu (4H2) Kanistry z oceli (3A1, 3A2) z hliníku (3B1, 3B2) z plastu (3H1, 3H2)	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 250 kg 250 kg 250 kg 125 kg 125 kg 60 kg 250 kg 120 kg 120 kg 120 kg
Samostatné obaly:		Nejvyšší čistá (netto) hmotnost
Sudy ocel (1A1, 1A2) hliník (1B1, 1B2) kov, jiný než ocel nebo hliník (1N1, 1N2) plast (1H1, 1H2) Kanistry ocel (3A1, 3A2) hliník (3B1, 3B2) plast (3H1, 3H2) Kompozitní obaly plastová nádoba s vnějším ocelovým nebo hliníkovým sudem (6HA1 nebo 6HB1) plastová nádoba s vnějším lepenkovým, plastovým nebo překližkovým sudem (6HG1, 6HH1 nebo 6HD1) plastová nádoba s vnějším ocelovým nebo hliníkovým košem nebo bednou nebo s vnější bednou z přírodního dřeva, překližky, lepenky nebo tuhého plastu (6HA2, 6HB2, 6HC, 6HD2, 6HG2 nebo 6HH2)		250 kg 250 kg 250 kg 250 kg 120 kg 120 kg 120 kg 250 kg 75 kg 75 kg
Tlakové nádoby pokud jsou dodržena všeobecná ustanovení v pododdíle 4.1.3.6, mohou být používány.		
Dodatečný požadavek: Obaly musí být hermeticky uzavřené.		
Zvláštní ustanovení pro balení		
PP 83 Pro UN číslo 2813 smějí být baleny pro přepravu vodotěsné pytle obsahující nejvýše 20 g látky pro účely vytváření tepla. Každý vodotěsný pytel musí být zataven v plastovém pytli a vložen do meziobalu. Žádný vnější obal nesmí obsahovat více než 400 g látky. V obalu nesmí být obsažena voda ani žádná kapalina, která může reagovat s látkou reagující s vodou.		

P 404	POKYN PRO BALENÍ	P 404
Tento pokyn se použije pro pyroforní tuhé látky UN čísel: 1383, 1854, 1855, 2008, 2441, 2545, 2546, 2846, 2881, 3200, 3391 a 3393.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1 a 4.1.3:		
(1)	Skupinové obaly Vnější obaly: (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F nebo 4H2) Vnitřní obaly: Kovové obaly o nejvyšší čisté (netto) hmotnosti 15 kg každý. Vnitřní obaly musí být hermeticky uzavřeny a opatřeny šroubovými uzávěry;	
(2)	Kovové obaly: (1A1, 1A2, 1B1, 1N1, 1N2, 3A1, 3A2, 3B1 a 3B2) Nejvyšší celková (brutto) hmotnost: 150kg;	
(3)	Kompozitní obaly: Plastová nádoba s vnějším ocelovým nebo hliníkovým sudem (6HA1 nebo 6HB1) Nejvyšší celková (brutto) hmotnost: 150kg.	
Tlakové nádoby		
pokud jsou dodržena všeobecná ustanovení v pododdíle 4.1.3.6, mohou být používány.		
Zvláštní ustanovení pro balení		
PP 86 Pro UN čísla 3391 a 3393 musí být vzduch z parního prostoru odstraněn dusíkem nebo jinými prostředky.		

P 405	POKYN PRO BALENÍ	P 405
Tento pokyn se použije pro UN číslo 1381.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1 a 4.1.3:		
(1)	Pro UN 1381 fosfor, pod vodou: (a) Skupinové obaly Vnější obaly: (4A, 4B, 4N, 4C1, 4C2, 4D nebo 4F) Nejvyšší čistá (netto) hmotnost: 75 kg Vnitřní obaly: (i) hermeticky uzavřené plechovky o nejvyšší čisté (netto) hmotnosti 15 kg; nebo (ii) skleněné vnitřní obaly, obložené ze všech stran suchým absorpčním nehořlavým fixačním materiálem v dostatečném množství k pohlcení celého obsahu o nejvyšší čisté (netto) hmotnosti 2 kg, nebo (b) Sudy (1A1, 1A2, 1B1, 1B2, 1N1 nebo 1N2); nejvyšší čistá (netto) hmotnost: 400 kg Kanystry (3A1 nebo 3B1); nejvyšší čistá (netto) hmotnost: 120 kg. Tyto obaly musí být způsobilé vyhovět zkoušce těsnosti definované v pododdílu 6.1.5.4 pro obalovou skupinu II.	
(2)	Pro UN 1381 fosfor, suchý: (a) v roztavené formě: sudy (1A2, 1B2 nebo 1N2) o nejvyšší čisté (netto) hmotnosti jednoho sudu 400 kg; nebo (b) v projektilích nebo v předmětech s tvrdým pláštěm, pokud se přepravují bez komponentů třídy 1: obaly stanovené příslušným orgánem.	

P 406	POKYN PRO BALENÍ	P 406
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
<p>(1) Skupinové obaly vnější obaly:(4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2, 1G, 1D, 1H1,1H2, 3H1 nebo 3H2) vnitřní obaly:vodovzdorné obaly;</p> <p>(2) Plastové, překližkové nebo lepenkové sudy (1H2, 1D nebo 1G) nebo bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G a 4H2) s vnitřním vodovzdorným pytle, vnitřní vložkou z plastové fólie nebo vodovzdorným povlakem;</p> <p>(3) Kovové sudy (1A1, 1A2, 1B1, 1B2, 1N1 nebo 1N2), plastové sudy (1H1 nebo 1H2), kovové kanystry (3A1, 3A2, 3B1 nebo 3B2), plastové kanystry (3H1 nebo 3H2), plastové nádoby s vnějšími ocelovými nebo hliníkovými sudy (6HA1 nebo 6HB1), plastové nádoby s vnějšími lepenkovými, plastovými nebo překližkovými sudy (6HG1, 6HH1 nebo 6HD1), plastové nádoby s vnějšími ocelovými nebo hliníkovými koši nebo bednami nebo s vnějšími bednami z přírodního dřeva, překližky, lepenky nebo tuhého plastu (6HA2, 6HB2, 6HC, 6HD2, 6HG2 nebo 6HH2).</p>		
Dodatečné požadavky:		
<p>1. Obaly musí být konstruovány a vyrobeny tak, aby se zabránilo úniku vody, alkoholu nebo flegmatizačního prostředku.</p> <p>2. Obaly musí být tak vyrobeny a uzavřeny aby se zamezilo výbušnému přetlaku nebo tlaku vyššímu než 300 kPa (3 bary).</p>		
Zvláštní ustanovení pro balení:		
PP 24 Pro UN čísla 2852, 3364, 3365, 3366, 3367, 3368 a 3369 nesmí přepravované množství překročit 500 g na kus.		
PP 25 Pro UN číslo 1347 nesmí přepravované množství překročit 15 kg na kus.		
PP 26 Pro UN čísla 1310, 1320, 1321, 1322, 1344, 1347, 1348, 1349, 1517, 2907, 3317 a 3376 musí být obaly prosté olova.		
PP 48 Pro UN číslo 3474 nesmějí být používány kovové obaly.		
PP 78 Pro UN číslo 3370 nesmí přepravované množství překročit 11,5 kg na kus.		
PP 80 Pro UN číslo 2907 musí obaly splňovat parametry obalové skupiny II. Obaly splňující zkušební kritéria obalové skupiny I se nesmějí použít.		

P 407	POKYN PRO BALENÍ	P 407
Tento pokyn se použije pro UN čísla 1331, 1944, 1945 a 2254.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
Vnější obaly:		
<p>Sudy (1A1, 1A2, 1B1, 1B2, 1N1,1N2,1H1,1H2, 1D, 1G); Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1,4H2); Kanystry (3A1, 3A2, 3B1, 3B2, 3H1, 3H2).</p>		
Vnitřní obaly:		
Zápalky musí být pevně zabaleny do bezpečně uzavřených vnitřních obalů tak, aby se zamezilo náhodnému vznícení za normálních podmínek přepravy.		
Nejvyšší celková (brutto) hmotnost kusu nesmí překročit 45 kg, s výjimkou lepenkových beden, u nichž nesmí překročit 30 kg.		
Obaly musí splňovat parametry obalové skupiny III.		
Zvláštní ustanovení pro balení:		
PP 27 UN 1331 zápalky, zápalné „kdekoli“ nesmějí být zabaleny do téhož vnějšího obalu s jinými nebezpečnými věcmi, s výjimkou bezpečnostních zápalek nebo voskových zápalek, které musí být zabaleny v jiných vnitřních obalech. Vnitřní obaly nesmějí obsahovat více než 700 zápalek, zápalných „kdekoli“.		

P 408	POKYN PRO BALENÍ	P 408
Tento pokyn se použije pro UN číslo 3292.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
<p>(1) Pro články:</p> <p style="padding-left: 40px;">Sudy (1A2, 1B2, 1N2, 1H2, 1D, 1G); Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1,4H2); Kanystry (3A2, 3B2, 3H2).</p> <p>Musí být dostatečné množství fixačního materiálu, aby se zabránilo vzájemnému dotyku mezi články a mezi články a vnitřními povrchy vnějšího obalu, jakož i každému nebezpečnému pohybu článků uvnitř vnějšího obalu během přepravy.</p> <p>Obaly musí vyhovovat parametrům obalové skupiny II.</p>		
<p>(2) Baterie mohou být přepravovány bez obalu nebo v ochranných obalech (např. plně uzavřených ochranných obalech nebo v dřevěných latěních). Svorky nesmějí být zatíženy hmotností jiných baterií nebo materiálů zabalených s bateriemi.</p> <p>Obaly nemusí vyhovovat požadavkům uvedeným v 4.1.1.3.</p>		
Dodatečný požadavek:		
Články a baterie musí být chráněny proti zkratu a musí být izolovány takovým způsobem, aby se zabránilo zkratům.		

P 409	POKYN PRO BALENÍ	P 409
Tento pokyn se použije pro UN čísla 2956, 3242 a 3251.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
<p>(1) Lepenkové sudy (1G), které mohou být opatřeny vnitřní vložkou nebo povlakem; nejvyšší čistá (netto) hmotnost: 50 kg;</p> <p>(2) Skupinové obaly: Lepenková bedna (4G) s jednotlivým vnitřním plastovým pytlkem; nejvyšší čistá (netto) hmotnost: 50 kg;</p> <p>(3) Skupinové obaly: Lepenková bedna (4G) nebo lepenkový sud (1G) s vnitřními plastovými obaly, z nichž každý obsahuje nejvýše 5 kg; nejvyšší čistá (netto) hmotnost: 25 kg.</p>		

P 410	POKYN PRO BALENÍ		P 410
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:			
Skupinové obaly:			
Vnitřní obaly	Vnější obaly	Nejvyšší čistá (netto) hmotnost	
		Obalová skupina II	Obalová skupina III
Sklo 10 kg Plast ^a 30 kg Kov 40 kg Papír ^{a, b} 10 kg Lepenka ^{a, b} 10 kg ^a Tyto obaly musí být prachotěsné. ^b Tyto vnitřní obaly se nesmějí použít, pokud přepravované látky mohou během přepravy zkapalnět.	Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z plastu (1H1, 1H2) z překližky (1D) z lepenky (1G) Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) ^a z pěnové hmoty (4H1) z tuhého plastu (4H2) Kanistry z oceli (3A1, 3A2) z hliníku (3B1, 3B2) z plastu (3H1, 3H2)	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 60 kg 400 kg 120 kg 120 kg 120 kg	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 60 kg 400 kg 120 kg 120 kg 120 kg
Samostatné obaly:			
Sudy z oceli (1A1 nebo 1A2) z hliníku (1B1 nebo 1B2) z kovu, jiného než ocel nebo hliník (1N1 nebo 1N2) z plastu (1H1 nebo 1H2) Kanistry z oceli (3A1 nebo 3A2) z hliníku (3B1 nebo 3B2) z plastu (3H1 nebo 3H2)		400 kg 400 kg 400 kg 400 kg 120 kg 120 kg 120 kg	400 kg 400 kg 400 kg 400 kg 120 kg 120 kg 120 kg
Bedny z oceli (4A) ^c z hliníku (4B) ^c z jiného kovu (4N) ^c z přírodního dřeva (4C1) ^c z překližky (4D) ^c z rekonstituovaného dřeva (4F) ^c z přírodního dřeva, prachotěsné (4C2) ^c z lepenky (4G) ^c z tuhého plastu (4H2) ^c		400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg	400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg 400 kg
Pytle Pytle (5H3, 5H4, 5L3, 5M2) ^{c, d}		50 kg	50 kg

^c Tyto obaly nesmějí být použity, pokud přepravovaná látka může během přepravy zkapalnět.

^d Tyto obaly mohou být použity pro látky obalové skupiny II, pouze pokud jsou přepravovány v uzavřených vozidlech nebo kontejnerech.

<p>Kompozitní obaly</p> <p>Plastová nádoba s vnějším ocelovým, hliníkovým překližkovým, lepenkovým nebo plastovým sudem (6HA1, 6HB1, 6HG1, 6HD1 nebo 6HH1)</p> <p>Plastová nádoba s vnějším ocelovým nebo hliníkovým košem nebo bednou nebo s vnější bednou z přírodního dřeva, překližky, lepenky nebo tuhého plastu (6HA2, 6HB2, 6HC, 6HD2, 6HG2 nebo 6HH2)</p> <p>Skleněná nádoba s vnějším ocelovým, hliníkovým, překližkovým nebo lepenkovým sudem (6PA1, 6PB1, 6PD1 nebo 6PG1) nebo s vnějším ocelovým nebo hliníkovým košem nebo bednou nebo s vnější bednou z přírodního dřeva nebo lepenky nebo s vnějším proutěným košem (6PA2, 6PB2, 6PC, 6PD2, nebo 6PG2) nebo s vnějším obalem z tuhého plastu nebo pěnového plastu (6PH1 nebo 6PH2).</p>	400 kg	400 kg
<p>Tlakové nádoby pokud jsou dodržena všeobecná ustanovení v pododdíle 4.1.3.6, mohou být používány.</p>		
<p>Zvláštní ustanovení pro balení:</p>		
<p>PP 39 Pro UN číslo 1378 se u kovových obalů vyžaduje odvětrávací zařízení.</p> <p>PP 40 Pro UN čísla 1326, 1352, 1358, 1395, 1396, 1436, 1437, 1871, 2805 a 3182, obalové skupiny II nejsou dovoleny pytle.</p> <p>PP 83 Pro UN číslo 2813 smějí být baleny pro přepravu vodotěsné pytle obsahující nejvýše 20 g látky pro účely vytváření tepla. Každý vodotěsný pytel musí být zataven v plastovém pytli a vložen do meziobalu. Žádný vnější obal nesmí obsahovat více než 400 g látky. V obalu nesmí být obsažena voda ani žádná kapalina, která může reagovat s látkou reagující s vodou.</p>		

P 411	POKYN PRO BALENÍ	P 411
Tento pokyn platí pro UN číslo 3270.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
<p>Sudy (1A2, 1B2, 1N2, 1H2, 1D, 1G); Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Kanystry (3A2, 3B2, 3H2); za podmínky, že není možný výbuch z důvodů nárůstu vnitřního tlaku.</p> <p>Nejvyšší čistá (netto) hmotnost nesmí překročit 30 kg.</p>		

P 500	POKYN PRO BALENÍ	P 500
<p>Tento pokyn platí pro UN číslo 3356.</p>		
<p>Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1 a 4.1.3:</p> <p>Sudy (1A2, 1B2, 1N2, 1H2, 1D, 1G); Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Kanystry (3A2, 3B2, 3H2).</p> <p>Obaly musí vyhovovat parametrům obalové skupiny II.</p> <p>Generátor(y) musí být přepravován(y) v kusu, který musí v případě, že je uvnitř kusu jeden generátor spuštěný, splňovat následující požadavky:</p> <p>(a) Jiné generátory v kusu nebudou spuštěny;</p> <p>(b) Materiál obalu se nevznítí; a</p> <p>(c) Teplota vnějšího povrchu kompletního kusu nesmí překročit 100 °C.</p>		

P 501	POKYN PRO BALENÍ	P 501
Tento pokyn se použije pro UN číslo 2015.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
Skupinové obaly:	Vnitřní obal	Vnější obal
	Nejvyšší vnitřní objem	Nejvyšší čistá (netto) hmotnost
(1) bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4H2) sudy (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D) nebo kanystry (3A1, 3A2, 3B1, 3B2, 3H1, 3H2) se skleněnými, plastovými nebo kovovými vnitřními obaly	5 litrů	125 kg
(2) Lepenkové bedny (4G) nebo lepenkové sudy (1G), s plastovými nebo kovovými vnitřními obaly, každý v plastovém pytli	2 litry	50 kg
Samostatné obaly:	Nejvyšší vnitřní objem	
Sudy	250 litrů	
z oceli (1A1) z hliníku (1B1) z kovu, jiného než ocel nebo hliník (1N1) z plastu (1H1)		
Kanystry	60 litrů	
z oceli (3A1) z hliníku (3B1) z plastu (3H1)		
Kompozitní obaly		
plastová nádoba s vnějším ocelovým nebo hliníkovým sudem (6HA1, 6HB1)	250 litrů	
plastová nádoba s vnějším lepenkovým, plastovým nebo překližkovým sudem (6HG1, 6HH1, 6HD1)	250 litrů	
plastová nádoba s vnějším ocelovým nebo hliníkovým košem nebo bednou nebo s vnější bednou z přírodního dřeva, překližky, lepenky nebo tuhého plastu (6HA2, 6HB2, 6HC, 6HD2, 6HG2 nebo 6HH2)	60 litrů	
skleněná nádoba s vnějším sudem z oceli, hliníku, lepenky, překližky, tuhého plastu nebo pěnového plastu (6PA1, 6PB1, 6PG1, 6PD1, 6PH1 nebo 6PH2) nebo s vnějším ocelovým nebo hliníkovým košem nebo bednou nebo s vnější bednou z přírodního dřeva nebo lepenky nebo s vnějším proutěným košem (6PA2, 6PB2, 6PC, 6PG2 nebo 6PD2)	60 litrů	
Dodatečné požadavky:		
1. Obaly nesmějí být plněny více než do 90 % svého vnitřního objemu.		
2. Obaly musí být opatřeny odvětrávacím zařízením.		

P 502	POKYN PRO BALENÍ	P 502
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
Skupinové obaly		
Vnitřní obaly	Vnější obaly	Nejvyšší čistá (netto) hmotnost
Sklo 5 litrů Kov 5 litrů Plast 5 litrů	Sudy z oceli (1A1, 1A2) z hliníku (1B1, 1B2) z jiného kovu (1N1, 1N2) z plastu (1H1, 1H2) z překližky (1D) z lepenky (1G)	125 kg 125 kg 125 kg 125 kg 125 kg 125 kg
	Bedny z oceli (4A) z hliníku (4B) z jiného kovu (4N) z přírodního dřeva (4C1) z přírodního dřeva, prachotěsné (4C2) z překližky (4D) z rekonstituovaného dřeva (4F) z lepenky (4G) z pěnového plastu (4H1) z tuhého plastu (4H2)	125 kg 125 kg 125 kg 125 kg 125 kg 125 kg 125 kg 125 kg 60 kg 125 kg
Samostatné obaly:		Nejvyšší vnitřní objem
Sudy z oceli (1A1) z hliníku (1B1) z plastu (1H1)		250 litrů
Kanystry z oceli (3A1) z hliníku (3B1) z plastu (3H1)		60 litrů
Kompozitní obaly		
plastová nádoba s vnějším ocelovým nebo hliníkovým sudem (6HA1, 6HB1)		250 litrů
plastová nádoba s vnějším lepenkovým, plastovým nebo překližkovým sudem (6HG1, 6HH1, 6HD1)		250 litrů
plastová nádoba s vnějším ocelovým nebo hliníkovým košem nebo bednou nebo s vnější bednou z přírodního dřeva, překližky, lepenky nebo tuhého plastu (6HA2, 6HB2, 6HC, 6HD2, 6HG2 nebo 6HH2)		60 litrů
skleněná nádoba s vnějším sudem z oceli, hliníku, lepenky, překližky, pěnového plastu nebo tuhého plastu (6PA1, 6PB1, 6PG1, 6PD1, 6PH1 nebo 6PH2) nebo s vnějším ocelovým nebo hliníkovým košem nebo bednou nebo s vnější bednou z přírodního dřeva nebo lepenky nebo s vnějším proutěným košem (6PA2, 6PB2, 6PC, 6PG2 nebo 6PD2).		60 litrů
Zvláštní ustanovení pro balení:		
PP 28	Pro UN číslo 1873 jsou dovoleny vnitřní obaly ze skla pouze v případě použití skupinových obalů a vnitřní nádoby ze skla pouze v případě použití kompozitních obalů.	

P 503		POKYN PRO BALENÍ		P 503
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:				
Skupinové obaly:				
Vnitřní obaly		Vnější obaly		Nejvyšší čistá (netto) hmotnost
ze skla	5 kg	Sudy		
z kovu	5 kg	z oceli (1A1, 1A2)		125kg
z plastu	5 kg	z hliníku (1B1, 1B2)		125kg
		z jiného kovu (1N1, 1N2)		125kg
		z překližky (1D)		125kg
		z lepenky (1G)		125kg
		z plastu (1H1, 1H2)		125kg
		Bedny		
		z oceli (4A)		125 kg
		z hliníku (4B)		125 kg
		z jiného kovu (4N)		125 kg
		z přírodního dřeva (4C1)		125 kg
		z přírodního dřeva, prachotěsné (4C2)		125 kg
		z překližky (4D)		125 kg
		z rekonstruovaného dřeva (4F)		125 kg
		z lepenky (4G)		40 kg
		z pěnového plastu (4H1)		60 kg
		z tuhého plastu (4H2)		125 kg
Samostatné obaly:				
Kovové sudy (1A1, 1A2, 1B1, 1B2, 1N1 nebo 1N2) o nejvyšší čisté (netto) hmotnosti 250 kg.				
Lepenkové (1G) nebo překližkové sudy (1D), s vnitřní vložkou, o nejvyšší čisté (netto) hmotnosti 200 kg.				

P 504	POKYN PRO BALENÍ	P 504
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
Skupinové obaly:		Nejvyšší čistá (netto) hmotnost
(1)	Skleněné nádoby s nejvyšším vnitřním objemem 5 litrů ve vnějším obalu (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H2)	75 kg
(2)	Plastové nádoby s nejvyšším vnitřním objemem 30 litrů ve vnějším obalu (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H2)	75 kg
(3)	Kovové nádoby s nejvyšším vnitřním objemem 40 litrů ve vnějším obalu (1G, 4F nebo 4G)	125 kg
(4)	Kovové nádoby s nejvyšším vnitřním objemem 40 litrů ve vnějším obalu (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 4A, 4B, 4N, 4C1, 4C2, 4D, 4H2)	225 kg
Samostatné obaly:		Nejvyšší vnitřní objem
Sudy		
	z oceli, neodnímatelné víko (1A1)	250 l
	z oceli, odnímatelné víko (1A2)	250 l
	z hliníku, neodnímatelné víko (1B1)	250 l
	z hliníku, odnímatelné víko (1B2)	250 l
	z kovu, jiného než ocel nebo hliník, neodnímatelné víko (1N1)	250 l
	z kovu, jiného než ocel nebo hliník, odnímatelné víko (1N2)	250 l
	z plastu, neodnímatelné víko (1H1)	250 l
	z plastu, odnímatelné víko (1H2)	250 l
Kanystry		
	z oceli, neodnímatelné víko (3A1)	60 l
	z oceli, odnímatelné víko (3A2)	60 l
	z hliníku, neodnímatelné víko (3B1)	60 l
	z hliníku, odnímatelné víko (3B2)	60 l
	z plastu, neodnímatelné víko (3H1)	60 l
	z plastu, odnímatelné víko (3H2)	60 l
Kompozitní obaly		
	plastová nádoba s vnějším ocelovým nebo hliníkovým sudem (6HA1 nebo 6HB1)	250 l
	plastová nádoba s vnějším lepenkovým, plastovým nebo překližkovým sudem (6HG1, 6HH1 nebo 6HD1)	120 l
	plastová nádoba s vnějším ocelovým nebo hliníkovým košem nebo bednou nebo s vnější bednou z přírodního dřeva, překližky, lepenky nebo tuhého plastu (6HA2, 6HB2, 6HC, 6HD2, 6HG2 nebo 6HH2)	60 l
	skleněná nádoba s vnějším sudem z oceli, hliníku, lepenky, překližky, tuhého plastu nebo pěnového plastu (6PA1, 6PB1, 6PG1, 6PD1, 6PH1 nebo 6PH2) nebo s vnějším ocelovým nebo hliníkovým košem nebo bednou nebo s vnější bednou z přírodního dřeva nebo lepenky nebo s vnějším proutěným košem (6PA2, 6PB2, 6PC, 6PG2 nebo 6PD2)	60 l
Zvláštní ustanovení pro balení:		
PP 10	Pro UN čísla 2014, 2984 a 3149 musí být obaly opatřeny odvětrávacím zařízením.	

P 520	POKYN PRO BALENÍ								P 520
Tento pokyn se použije pro organické peroxidy třídy 5.2 a samovolně se rozkládající látky třídy 4.1									
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení pododdílu 4.1.7.1.									
Způsoby balení jsou označeny OP1 až OP8. Způsoby balení příslušející jednotlivým organickým peroxidům a samovolně se rozkládajícím látkám jsou uvedeny v 2.2.41.4 a 2.2.52.4. Množství specifikovaná pro každý způsob balení jsou nejvyšší dovolená množství na kus. Dovoleny jsou následující obaly:									
(1) Skupinové obaly, jejichž vnějším obalem je bedna (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1 a 4H2), sud (1A1, 1A2, 1B1, 1B2, 1G, 1H1, 1H2 a 1D) nebo kanystr (3A1, 3A2, 3B1, 3B2, 3H1 a 3H2); (2) Samostatné obaly sestávající ze sudu (1A1, 1A2, 1B1, 1B2, 1G, 1H1, 1H2 a 1D) nebo kanystru (3A1, 3A2, 3B1, 3B2, 3H1 a 3H2); (3) Kompozitní obaly s vnitřními nádobami z plastu (6HA1, 6HA2, 6HB1, 6HB2, 6HC, 6HD1, 6HD2, 6HG1, 6HG2, 6HH1 a 6HH2).									
Nejvyšší množství na obal/kus^a pro způsoby balení OP1 až OP8									
Způsob balení	OP1	OP2^a	OP3	OP4^a	OP5	OP6	OP7	OP8	
Nejvyšší Množství									
Nejvyšší hmotnost (v kg) pro tuhé látky a pro skupinové obaly (kapalně a tuhé látky)	0,5	0,5/10	5	5/25	25	50	50	400 ^b	
Nejvyšší obsah v litrech pro kapaliny. ^c	0,5	-	5	-	30	60	60	225 ^d	
^a Pokud jsou udány dvě hodnoty, první platí pro nejvyšší čistou (netto) hmotnost na vnitřní obal a druhá pro nejvyšší čistou (netto) hmotnost celého kusu. ^b 60 kg pro kanystry/200 kg pro bedny a, pro tuhé látky, 400 kg ve skupinových obalech s bednami jako vnějšími obaly (4C1, 4C2, 4D, 4F, 4G, 4H1 a 4H2) a s vnitřními obaly z plastu nebo lepenky s nejvyšší čistou (netto) hmotností 25 kg. ^c Viskózní látky musí být považovány za tuhé látky, pokud nesplňují kriteria uvedená v definici pojmu „kapalina“ v oddíle 1.2.1. ^d 60 litrů pro kanystry.									
Dodatečné požadavky:									
1. Kovové obaly, včetně vnitřních obalů skupinových obalů a vnějších obalů skupinových nebo kompozitních obalů, mohou být použity jen pro způsoby balení OP7 a OP8. 2. Ve skupinových obalech mohou být skleněné nádoby použity pouze jako vnitřní obaly, přičemž nejvyšší množství na nádobu je 0,5 kg pro tuhé látky a 0,5 litru pro kapalně látky. 3. Ve skupinových obalech nesmějí být fixační materiály, které jsou snadno hořlavé. 4. Obal organického peroxidu nebo samovolně se rozkládající látky, který musí být opatřen bezpečnostní značkou pro vedlejší nebezpečí "VÝBUŠNÝ(A)" viz 5.2.2.2.2, musí splňovat také ustanovení uvedená v pododdílech 4.1.5.10 a 4.1.5.11.									
Zvláštní ustanovení pro balení:									
PP 21 Pro určité samovolně se rozkládající látky typu B nebo C (UN čísel 3221, 3222, 3223, 3224, 3231, 3232, 3233, a 3234) se musí použít menší obal než je ten, který je uveden ve způsobech balení OP5 nebo OP6 (viz oddíl 4.1.6 a pododdíl 2.2.41.4).									
PP 22 UN 3241 2-brom-2-nitropropan-1,3-diol musí být balen podle způsobu balení OP6.									

P 600	POKYN PRO BALENÍ	P 600
Tento pokyn se použije pro UN čísla 1700, 2016 a 2017.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
Vnější obaly (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H2) splňující parametry obalové skupiny II. Předměty musí být baleny jednotlivě a odděleny jeden od druhého za použití příček, přepážek, vnitřních obalů nebo fixačního materiálu, aby se zamezilo jakémukoli náhodnému spuštění za normálních podmínek přepravy.		
Nejvyšší čistá (netto) hmotnost: 75 kg		

P 601	POKYN PRO BALENÍ	P 601
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a obaly jsou hermeticky uzavřeny:		
(1) Skupinové obaly o nejvyšší celkové (brutto) hmotností 15 kg sestávající z		
<ul style="list-style-type: none"> - jednoho nebo více skleněných vnitřních obalů s množstvím 1 litru v každém z nich a naplněných nejvýše do 90 % jejich vnitřního objemu; jejichž uzávěr(y) musí být fyzicky drženy(y) v pozici jakýmkoliv způsobem schopných zabránit uražení nebo uvolnění uzávěru nárazem nebo vibracemi během přepravy, vložených jednotlivě do - kovových nádob společně s fixačním a absorpčním materiálem v dostatečném množství, aby pohltil celý obsah skleněného(ých) vnitřního(ch) obalu(ů), dále zabalených do - vnějších obalů: 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G nebo 4H2; 		
(2) Skupinové obaly sestávající z vnitřních obalů z kovu, o nejvyšším vnitřním objemu 5 litrů, jednotlivě balených s absorpčním materiálem v dostatečném množství, schopném pohltit celý obsah, a s inertním fixačním materiálem do vnějšího obalu (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G nebo 4H2) o nejvyšší celkové (brutto) hmotností 75 kg. Vnitřní obaly nesmějí být plněny více než do 90% svého vnitřního objemu. Uzávěr každého vnitřního obalu musí být fyzicky držen v pozici jakýmkoliv způsobem schopných zabránit uražení nebo uvolnění uzávěru nárazem nebo vibracemi během přepravy;		
(3) Obaly sestávající z:		
Vnější obaly:		
Ocelové nebo plastové sudy (1A1, 1A2, 1H1 nebo 1H2), vyzkoušené v souladu ze zkušebními požadavky v oddíle 6.1.5 při hmotnosti odpovídající hmotnosti sestaveného kusu, buď jako obal určený pro vložení vnitřních obalů, nebo jako samostatný obal určený pro tuhé látky nebo kapaliny, a příslušně značené;		
Vnitřní obaly:		
Sudy a kompozitní obaly (1A1, 1B1, 1N1, 1H1 nebo 6HA1) splňující předpisy kapitoly 6.1 pro samostatné obaly, podléhající následujícím požadavkům:		
(a) Hydraulická tlaková zkouška musí být prováděna tlakem nejméně 0,3 MPa (přetlak);		
(b) Zkoušky těsnosti ve stadiu vývoje a výroby musí být prováděny zkušebním tlakem 30 kPa;		
(c) Musí být izolovány od vnějšího sudu inertním fixačním materiálem pohlcujícím nárazy, který obklopuje vnitřní obaly ze všech stran;		
(d) Jejich vnitřní objem nesmí překročit 125 litrů; a		
(e) Uzávěry musí být šroubového kloboučkového provedení, které jsou:		
(i) fyzicky drženy v pozici jakýmkoliv způsobem schopných zabránit uražení nebo uvolnění uzávěru nárazem nebo vibracemi během přepravy, a		
(ii) opatřeny víčkovým těsněním;		
(f) Vnější a vnitřní obaly musí být podrobeny pravidelně v intervalech nejvýše dva a půl roku zkoušce těsnosti podle písmene (b);		
(g) Kompletní obal musí být vizuálně zkontrolován, ke spokojenosti příslušného orgánu, alespoň každé 3 roky;		
(h) Na vnějším a vnitřním obalu musí být dobře čitelné a trvanlivé údaje:		
(i) datum (měsíc, rok) první zkoušky a poslední periodické inspekce a zkoušky;		


<p>(ii) značka znalce který provedl prohlídku a zkoušku.</p> <p>(4) Tlakové nádoby, pokud jsou dodržena všeobecná ustanovení v pododdíle 4.1.3.6, mohou být používány. Musí být podrobeny první zkoušce a potom periodickým zkouškám každých 10 roků tlakem nejméně 1 MPa (10 barů) (přetlak). Tlakové nádoby nesmějí být vybaveny zařízením pro vyrovnávání tlaku. Každá tlaková nádoba obsahující kapalinu toxickou při vdechnutí s LC₅₀ nejvýše 200 ml/m³ (ppm) musí být uzavřena zátkou nebo ventilem vyhovujícím těmto požadavkům:</p> <p>(a) Každá zátká nebo ventil musí mít přímé závitové spojení s tlakovou nádobou a být schopen(na) odolat zkušebnímu tlaku tlakové nádoby bez nebezpečí poškození nebo úniku;</p> <p>(b) Každý ventil musí být v provedení bez utěsnění s neperforovanou membránou, s výjimkou toho, že pro žíravé látky může být ventil utěsněného typu, přičemž se plynotěsnost montážního celku zajistí těsným ochranným krytem upevněným s těsněním na těleso ventilu nebo tlakové nádoby, aby se zamezilo úniku látky kolem těsnění;</p> <p>(c) Každý vývod ventilu musí být opatřen šroubovacím kloboučkem nebo pevnou šroubovací zátkou a inertním materiálem zajišťujícím těsnost nádob;</p> <p>(d) Výrobní materiály pro tlakové nádoby, ventily, zátky, kloboučky vývodů, těsnicí prostředky a těsnění musí být snášelivé navzájem a s obsahem tlakové nádoby.</p> <p>Každá tlaková nádoba s tloušťkou stěny v kterémkoli bodě menší než 2,0 mm a každá tlaková nádoba, jejíž ventily nejsou chráněny, musí být přepravována ve vnějším obalu. Tlakové nádoby nesmějí být spojeny mezi sebou sběrným potrubím ani vzájemně propojeny.</p>
<p>Zvláštní ustanovení pro balení PP 82 (Vypuštěno)</p>
<p>Zvláštní ustanovení pro balení, specifické pro RID a ADR RR3 (Vypuštěno) RR7 Pro UN číslo 1251 však musí být tlakové nádoby podrobeny zkouškám každých pět let. RR10 Látky UN čísla 1614, pokud jsou úplně pohlceny inertním porézním materiálem, musí být zabaleny do kovových nádob o vnitřním objemu nejvýše 7,5 litrů, vložených do dřevěných beden takovým způsobem, aby nemohly přijít do styku jedna s druhou. Nádoby musí být zcela vyplněny porézním materiálem, který se nesmí setřást nebo vytvořit nebezpečné dutiny ani po dlouhodobém používání nebo nárazem, ani při teplotách až do 50 °C.</p>

P 602	POKYN PRO BALENÍ	P 602
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 a obaly jsou hermeticky uzavřeny:		
(1)	<p>Skupinové obaly o nejvyšší celkové (brutto) hmotností 15 kg sestávající z</p> <ul style="list-style-type: none"> - jednoho nebo více skleněných vnitřních obalů s množstvím 1 litru v každém z nich a naplněných nejvýše do 90 % jejich vnitřního objemu; jejichž uzávěr(y) musí být fyzicky drženy(y) v pozici jakýmkoliv způsobem schopných zabránit uražení nebo uvolnění uzávěru nárazem nebo vibracemi během přepravy, vložených jednotlivě do - kovových nádob společně s fixačním a absorpčním materiálem v dostatečném množství, aby pohltil celý obsah skleněného(y) vnitřního(ch) obalu(ů), dále zabalených do - vnějších obalů: 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G nebo 4H2; 	
(2)	<p>Skupinové obaly sestávající z kovových vnitřních obalů jednotlivě balených s absorpčním materiálem v dostatečném množství, schopném pohltit celý obsah, a s inertním fixačním materiálem do vnějšího obalu (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G nebo 4H2) o nejvyšší celkové (brutto) hmotností 75 kg. Vnitřní obaly nesmějí být plněny více než do 90% svého vnitřního objemu. Uzávěr každého vnitřního obalu musí být fyzicky drženy v pozici jakýmkoliv způsobem schopných zabránit uražení nebo uvolnění uzávěru nárazem nebo vibracemi během přepravy. Vnitřní objem vnitřních obalů nesmí přesáhnout 5 litrů.</p>	
(3)	<p>Sudy a kompozitní obaly (1A1, 1B1, 1N1, 1H1, 6HA1 nebo 6HH1), podléhají následujícím požadavkům:</p> <ul style="list-style-type: none"> (a) Hydraulická tlaková zkouška musí být prováděna tlakem nejméně 0,3 MPa (přetlak); (b) Zkoušky těsnosti ve stadiu vývoje a výroby musí být prováděny zkušební tlakem 30 kPa; a (c) Uzávěry musí být šroubového kloboučkového provedení které jsou: <ul style="list-style-type: none"> (i) fyzicky drženy v pozici jakýmkoliv způsobem schopných zabránit uražení nebo uvolnění uzávěru nárazem nebo vibracemi během přepravy, a (ii) opatřeny víčkovým těsněním; 	
(4)	<p>Tlakové nádoby, pokud jsou dodržena všeobecná ustanovení v pododdíle 4.1.3.6, mohou být používány. Musí být podrobeny první zkoušce a potom periodickým zkouškám každých 10 roků tlakem nejméně 1 MPa (10 barů) (přetlak). Tlakové nádoby nesmějí být vybaveny zařízením pro vyrovnávání tlaku. Každá tlaková nádoba obsahující kapalinu toxickou při vdechnutí s LC₅₀ nejvýše 200 ml/m³ (ppm) musí být uzavřena zátkou nebo ventilem vyhovujícím těmto požadavkům:</p> <ul style="list-style-type: none"> (a) Každá zátka nebo ventil musí mít přímé závitové spojení s tlakovou nádobou a být schopen(na) odolat zkušebnímu tlaku tlakové nádoby bez nebezpečí poškození nebo úniku; (b) Každý ventil musí být v provedení bez utěsnění s neperforovanou membránou, s výjimkou toho, že pro žíravé látky může být ventil utěsněného typu, přičemž se plynotěsnost montážního celku zajistí těsným ochranným krytem upevněným s těsněním na těleso ventilu nebo tlakové nádoby, aby se zamezilo úniku látky kolem těsnění; (c) Každý vývod ventilu musí být opatřen šroubovacím kloboučkem nebo pevnou šroubovací zátkou a inertním materiálem zajišťujícím těsnost nádoby; (d) Výrobní materiály pro tlakové nádoby, ventily, zátky, kloboučky vývodů, těsnicí prostředky a těsnění musí být snášlivé navzájem a s obsahem tlakové nádoby. <p>Každá tlaková nádoba s tloušťkou stěny v kterémkoli bodě menší než 2,0 mm a každá tlaková nádoba, jejíž ventily nejsou chráněny, musí být přepravována ve vnějším obalu. Tlakové nádoby nesmějí být spojeny mezi sebou sběrným potrubím ani vzájemně propojeny.</p>	

P 620	POKYN PRO BALENÍ	P 620
Tento pokyn se použije pro UN čísla 2814 a 2900.		
Dovoleny jsou následující obaly, pokud jsou dodržena zvláštní ustanovení pro balení oddílu 4.1.8:		
Obaly splňující předpisy kapitoly 6.3 a podle těchto předpisů schválené, sestávající z:		
(a)	Vnitřních obalů, které se skládají z:	
	(i) jedné nebo více těsných primárních nádob;	
	(ii) těsného sekundárního obalu;	
	(iii) s výjimkou tuhých infekčních látek - absorpčního materiálu v dostatečném množství pro pohlcení celého vnitřního obsahu vloženého mezi primární nádobu(y) a sekundární obal; pokud je více primárních nádob uloženo v jednom sekundárním obalu, musí být buď jednotlivě zabaleny, nebo odděleny tak, aby se předešlo jejich vzájemnému dotyku;	
(b)	tuhého vnějšího obalu:	
	Sudy (1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G);	
	Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);	
	Kanistry (3A1, 3A2, 3B1, 3B2, 3H1, 3H2).	
Nejmenší vnější rozměr nesmí být menší než 100 mm.		
Dodatečné požadavky:		
1.	Vnitřní obaly obsahující infekční látky nesmějí být seskupeny s jinými vnitřními obaly, které obsahují nepříbuzný druh věcí. Kompletní kusy mohou být vloženy do přepravního obalového souboru podle ustanovení oddílů 1.2.1 a 5.1.2. Tento přepravní obalový soubor může obsahovat suchý led.	
2.	Kromě výjimečných zásilek, jako jsou celé orgány, které vyžadují speciální obal, platí následující dodatečné požadavky:	
	(a) Látky odesílané při teplotě okolí nebo při vyšší teplotě: Primární nádoby musí být ze skla, kovu nebo plastu. Musí být použity účinné prostředky k zajištění těsného uzavření, např. tepelný spoj, lemovaná zátka nebo kovový uzávěr s obrubou. Pokud jsou použity šroubovací korunkové uzávěry, musí být zajištěny účinnými prostředky, např. páskou, parafinovou lepicí páskou nebo zvlášť pro tento účel zhotoveným uzamykatelným uzávěrem;	
	(b) Látky odesílané ve zchlazeném nebo zmrazeném stavu: Led, suchý led nebo jiná chladicí látka musí být umístěna kolem sekundárního obalu (sekundárních obalů) nebo v přepravním obalovém souboru s jedním nebo více kompletními kusy označenými podle pododdílu 6.3.3. Vnitřní rozpěrky musí udržet sekundární obal(y) nebo kusy v pozici poté, co led odtál nebo se suchý led odpařil. Pokud je použito ledu, musí být vnější obal nebo přepravní obalový soubor těsný. Pokud je použito suchého ledu, musí vnější obal nebo přepravní obalový soubor umožnit únik plynného oxidu uhličitého. Primární nádoba a sekundární obal si musí zachovat svou neporušenost při teplotě použitého chladicího prostředku;	
	(c) Látky odesílané v kapalném dusíku: Musí být použito primárních plastových nádob schopných odolávat velmi nízkým teplotám. Sekundární obal musí být také schopen odolávat velmi nízkým teplotám, a ve většině případů bude nezbytné, aby byl individuálně vytvarován kolem celé primární nádoby. Je rovněž nutno dodržet ustanovení týkající se přepravy kapalného dusíku. Primární nádoba a sekundární obal si musí zachovat svoji neporušenost při teplotě kapalného dusíku.;	
	(d) Lyofilizační látky mohou být přepravovány také v primárních nádobách, kterými jsou plamenem zatavené skleněné ampule nebo skleněné lahvičky a pryžovou zátkou, utěsněné kovovým uzávěrem.	
3.	Ať jsou předpokládáné teploty zásilky jakékoli, primární nádoba nebo sekundární obal musí být schopné odolat, bez úniku obsahu, vnitřnímu tlaku vytvářejícímu tlakový rozdíl nejméně 95 kPa a teplotám v rozmezí od -40 °C do +55 °C.	
4.	Jiné nebezpečné věci nesmějí být baleny do téhož obalu s infekčními látkami třídy 6.2, pokud nejsou nutné pro udržování životaschopnosti, stabilizaci nebo zamezení degradaci nebo pro neutralizaci nebezpečí představovaných infekčními látkami. Množství nejvýše 30 ml nebezpečných věcí spadajících do tříd 3, 8 nebo 9 smí být zabalen do každé primární nádoby obsahující infekční látky. Tato malá množství nebezpečných věcí tříd 3, 8 nebo 9 nepodléhají žádným dodatečným požadavkům ADR, pokud jsou zabalena podle tohoto pokynu pro balení.	
5.	Alternativní obaly pro přepravu zvířecího materiálu smějí být povoleny příslušným orgánem země původu ^a podle ustanovení pododdílu 4.1.8.7.	

^a Není-li země původu členským státem ADR, příslušný orgán prvního členského státu ADR dotčeného zásilkou.

P 621	POKYN PRO BALENÍ	P 621
Tento pokyn se použije pro UN číslo 3291.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 (kromě 4.1.1.15) a 4.1.3:		
(1) Za podmínky, že je v obalu dostatečné množství absorpčního materiálu k pohlcení celého množství kapaliny přítomné v obalu a že obal sám má schopnost udržet kapalinu: Sudy (1A2, 1B2, 1N2, 1H2, 1D, 1G); Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1,4H2); Kanystry (3A2, 3B2, 3H2).		
Obaly musí vyhovovat požadavkům na úrovni parametrů obalové skupiny II pro tuhé látky.		
(2) Pro kusy obsahující větší množství kapaliny: Sudy (1A1, 1A2, 1B1, 1B2, 1N1,1N2,1H1,1H2, 1D, 1G); Kanystry (3A1, 3A2, 3B1, 3B2, 3H1, 3H2); Kompozitní obaly (6HA1, 6HB1, 6HG1, 6HH1, 6HD1, 6HA2, 6HB2, 6HC, 6HD2, 6HG2, 6HH2, 6PA1, 6PB1, 6PG1, 6PD1, 6PH1, 6PH2, 6PA2, 6PB2, 6PC, 6PG2 nebo 6PD2).		
Obaly musí vyhovovat požadavkům na úrovni parametrů obalové skupiny II pro kapaliny.		
Dodatečný požadavek:		
Obaly určené pro ostré nebo špičaté předměty, jako jsou skleněné střepy a jehly, musí být odolné proti propíchnutí a musí udržet kapalinu za zkušebních podmínek kapitoly 6.1.		

P 650	POKYN PRO BALENÍ	P 650
Tento pokyn se použije pro UN číslo 3373.		
(1) Obal musí být dobré kvality, dostatečně pevný, aby odolal nárazům a namáháním, k nimž normálně dochází během přepravy, včetně překládky mezi vozidly nebo kontejnery a mezi vozidly nebo kontejnery a sklady, jakož i snímání (vyjímání) z palety nebo přepravního obalového souboru pro následnou ruční nebo mechanickou manipulaci. Obaly musí být vyrobeny a uzavřeny tak, aby se zamezilo jakémukoli úniku jejich obsahu, který by mohl být za normálních podmínek přepravy způsoben vibrací nebo změnami teploty, vlhkosti nebo tlaku.		
(2) Obal musí sestávat alespoň ze tří komponentů: a) primární nádoby, b) sekundárního obalu, a c) vnějšího obalu, z nichž buď sekundární, nebo vnější obal musí být tuhý.		
(3) Primární nádoby musí být zabaleny do sekundárních obalů takovým způsobem, aby za normálních podmínek přepravy nemohly prasknout, být proděravěny nebo propouštět svůj obsah do sekundárního obalu. Sekundární obaly musí být zajištěny ve vnějších obalech vhodným fixačním materiálem. Žádný únik obsahu nesmí narušit celistvost fixačního materiálu ani vnějšího obalu.		
(4) Pro přepravu musí být na vnějším povrchu vnějšího obalu, na pozadí s kontrastní barvou, umístěna značka vyobrazená dole, která musí být jasně viditelná a čitelná. Značka musí mít formu čtverce postaveného na vrchol pod úhlem 45o s minimálními rozměry 50 mm x 50 mm; tloušťka čáry musí být nejméně 2 mm; písmena a číslice musí mít výšku nejméně 6 mm. Na vnějším obalu vedle této značky musí být uvedeno oficiální pojmenování pro přepravu „BIOLOGICKÁ LÁTKA, KATEGORIE B“ písmeny o výšce nejméně 6 mm.		
		

- (5) Alespoň jeden povrch vnějšího obalu musí mít minimální rozměry 100 mm x 100 mm.
- (6) Kompletní kus musí být schopen úspěšně projít zkouškou volným pádem podle pododdílu 6.3.5.3, jak je uvedeno v pododdílu 6.3.5.2, při výšce pádu 1,2 m. Po uvedené sérii pádů nesmí být zpozorován žádný únik z primární(ch) nádob(y), které musí zůstat chráněny absorpčním materiálem, je-li předepsán, v sekundárním obalu.
- (7) Obaly pro kapalné látky:
- Primární nádoba (nádob) musí být těsná (těsné);
 - Sekundární obal musí být těsný;
 - Pokud je několik křehkých primárních nádob vloženo do jednoho sekundárního obalu, musí být buď jednotlivě zabaleny, nebo navzájem odděleny, aby se zamezilo jejich vzájemnému dotyku;
 - Mezi primární nádobu (nádob) a sekundární obal musí být vložen absorpční materiál. Absorpční materiál musí být v množství dostatečném, pro pohlcení celého obsahu primární(ch) nádoby (nádob) tak, aby únik kapalné látky nenarušil celistvost fixačního materiálu nebo vnějšího obalu;
 - Primární nádoba nebo sekundární obal musí být schopné odolat bez úniku obsahu vnitřnímu tlaku 95 kPa (0,95 baru).
- (8) Obaly pro tuhé látky:
- Primární nádoba (nádob) musí být prachotěsná (prachotěsné);
 - Sekundární obal musí být prachotěsný;
 - Pokud je několik křehkých primárních nádob vloženo do jednoho sekundárního obalu, musí být buď jednotlivě zabaleny, nebo navzájem odděleny, aby se zamezilo jejich vzájemnému dotyku.
 - Není-li možno vyloučit přítomnost zbytkové kapaliny v primární nádobě během přepravy, musí se použít obal vhodný pro kapaliny včetně absorpčního materiálu.
- (9) Zchlazené nebo zmrazené vzorky: Led, suchý led a kapalný dusík:
- Je-li použito jako chladiva suchého ledu nebo kapalného dusíku, musí být dodrženy požadavky uvedené v 5.5.3. Je-li použit led, musí být umístěn vně sekundárních obalů nebo ve vnějším obalu nebo přepravním obalovém souboru. Musí se použít vnitřní podpěry, aby byly sekundární obaly zajištěny v původní poloze. Je-li použit led, musí být vnější obal nebo přepravní obalový soubor těsný.
 - Primární nádoba a sekundární obal si musí zachovat svou celistvost při teplotě chladiva, jakož i teplotách a tlacích, které by mohly vzniknout při ztrátě chlazení.
- (10) Jsou-li kusy uloženy v přepravním obalovém souboru, musí být označení kusů vyžadované tímto pokynem pro balení buď přímo viditelné, nebo musí být reprodukováno na vnější straně přepravního obalového souboru.
- (11) Infekční látky přiřazené k UN číslu 3373, které jsou zabaleny, a kusy, které jsou označeny podle tohoto pokynu pro balení, nepodléhají žádným dalším ustanovením ADR.
- (12) Výrobci obalů a jejich následní distributoři musí dát odeslateli nebo osobě, která připravuje kus (např. pacient), jasné pokyny pro plnění a uzavírání takových obalů a umožnit tak správně připravit kus k přepravě.
- (13) Jiné nebezpečné věci nesmějí být baleny do téhož obalu jako infekční látky třídy 6.2, pokud nejsou nutné k udržení životaschopnosti infekčních látek, k jejich stabilizaci nebo k zamezení jejich degradace nebo pro neutralizaci nebezpečí, které představují. Množství nejvýše 30 ml nebezpečných věcí tříd 3, 8 nebo 9 může být zabaleno do každé primární nádoby obsahující infekční látky. Jsou-li tato malá množství nebezpečných věcí balena s infekčními látkami v souladu s tímto pokynem pro balení, není třeba dodržet žádná jiná ustanovení ADR.
- (14) Jestliže látka unikla a rozlila (rozsykala) se ve vozidle nebo kontejneru, nesmí být toto vozidlo nebo kontejner znovu použit(použito), dokud nebyl důkladně vyčištěn, a pokud je to potřebné, dezinfikován a dekontaminován. Všechny ostatní věci a předměty přepravované v tomtéž vozidle nebo kontejneru musí být prohlédnuty kvůli případnému znečištění.

Dodatečný požadavek:

Alternativní obaly pro přepravu zvířecího materiálu smějí být povoleny příslušným orgánem země původu^a podle ustanovení pododdílu 4.1.8.7

^a Není-li země původu členským státem ADR, příslušný orgán prvního členského státu ADR dotčeného zásilkou.

P 800	POKYN PRO BALENÍ	P 800
Tento pokyn se použije pro UN čísla 2803 a 2809.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
<p>(1) Tlakové nádoby pokud jsou dodržena všeobecná ustanovení v pododdíle 4.1.3.6; nebo</p> <p>(2) Ocelové lahvičky nebo lahve se šroubovými uzávěry o vnitřním objemu nepřesahujícím 3 litry; nebo</p> <p>(3) Skupinové obaly, které splňující následující požadavky:</p> <p>(a) Vnitřní obaly musí být obaly ze skla, kovu nebo tuhého plastu, určené pro kapaliny, o nejvyšší čisté (netto) hmotnosti 15 kg každý;</p> <p>(b) Vnitřní obaly musí být baleny s dostatečným množstvím fixačního materiálu k zamezení jejich rozbití;</p> <p>(c) Jak vnitřní obal, tak i vnější obal musí být opatřeny vnitřní vložkou nebo vaky z pevného materiálu, odolného proti únikům a proražení, nepropouštějícími obsah a úplně jej obklopujícími a zabraňujícími jeho úniku, bez ohledu na polohu nebo orientaci kusu;</p> <p>(d) Dovoleny jsou následující vnější obaly a nejvyšší čisté (netto) hmotnosti:</p>		
Vnější obaly:	Nejvyšší čistá (netto) hmotnost	
Sudy		
z oceli (1A1, 1A2)	400 kg	
z kovu, jiného než ocel nebo hliník (1N1, 1N2)	400 kg	
z plastu (1H1, 1H2)	400 kg	
z překližky (1D)	400 kg	
z lepenky (1G)	400 kg	
Bedny		
ocel (4A)	400 kg	
kov, jiný než ocel nebo hliník (4N)	400 kg	
přírodní dřevo (4C1)	250 kg	
přírodní dřevo, prachotěsné (4C2)	250 kg	
překližka (4D)	250 kg	
rekonstituované dřevo (4F)	125 kg	
lepenka (4G)	125 kg	
pěnový plast (4H1)	60 kg	
tuhý plast (4H2)	125 kg	
Zvláštní ustanovení pro balení:		
<p>PP 41 Pro UN číslo 2803, pokud je nezbytné přepravovat galium při nízkých teplotách pro jeho udržení zcela v tuhém stavu, mohou být výše uvedené obaly zabaleny do pevného vodovzdorného vnějšího obalu, který obsahuje suchý led nebo jiný chladicí prostředek. Pokud je použito chladicího prostředku, musí být všechny výše uvedené materiály použité pro balení galia chemicky a fyzicky odolné vůči chladicímu prostředku a musí mít dostatečnou odolnost proti nárazům při nízkých teplotách použitého chladicího prostředku. Pokud je použit suchý led, musí vnější obal umožnit únik plynného oxidu uhličitého.</p>		

P 801	POKYN PRO BALENÍ	P 801
Tento pokyn se použije pro nové a použité akumulátory UN čísel 2794, 2795 nebo 3028.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1, kromě 4.1.1.3 a 4.1.3:		
<ol style="list-style-type: none"> (1) Pevné vnější obaly; (2) Dřevěná latění; (3) Palety. 		
Dodatečné požadavky:		
<ol style="list-style-type: none"> 1. Akumulátory musí být chráněny proti zkratům. 2. Navrstvené akumulátory musí být přiměřeně zajištěny ve vrstvách, oddělených vrstvou nevodivého materiálu. 3. Svorky akumulátorů nesmějí nést váhu jiných navrstvených jednotek. 4. Akumulátory musí být zabaleny nebo zajištěny tak, aby se zamezilo náhodnému pohybu. Jakýkoli použitý fixační materiál musí být inertní. 		

P 801a	POKYN PRO BALENÍ	P 801a
Tento pokyn se použije pro použité akumulátory UN čísel 2794, 2795, 2800 a 3028.		
Bedny pro akumulátory z nerezové oceli nebo tuhého plastu o nejvyšším vnitřním objemu 1m ³ jsou dovoleny za těchto podmínek:		
<ol style="list-style-type: none"> (1) Bedny pro akumulátory musí být odolné proti žíravým látkám obsaženým v akumulátorech; (2) Za normálních podmínek přepravy nesmí z beden pro akumulátory vytékat žádné žíravé látky, ani se do nich nesmí dostat žádná jiná látka (např. voda). Žádné nebezpečné zbytky žíravých látek obsažených v akumulátorech nesmějí ulpět na vnějšku beden pro akumulátory; (3) Ložná výška akumulátorů nesmí přesáhnout horní okraj bočních stěn beden pro akumulátory; (4) Do beden pro akumulátory se nesmí uložit žádný akumulátor obsahující látku nebo jiné nebezpečné věci, které by spolu mohly vzájemně nebezpečně reagovat; (5) Bedny pro akumulátory musí být: <ol style="list-style-type: none"> (i) buď zakryty; (ii) nebo přepravovány v uzavřených vozidlech nebo vozidlech s plachtou, nebo v uzavřených kontejnerech nebo kontejnerech s plachtou. 		

P 802	POKYN PRO BALENÍ	P 802
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
(1)	<p>Skupinové obaly:</p> <p>Vnější obaly: 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G nebo 4H2;</p> <p>Nejvyšší čistá (netto) hmotnost: 75 kg.</p> <p>Vnitřní obaly: skleněné nebo plastové; nejvyšší vnitřní objem: 10 litrů;</p>	
(2)	<p>Skupinové obaly:</p> <p>Vnější obaly: 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G nebo 4H2;</p> <p>Nejvyšší čistá (netto) hmotnost: 125 kg.</p> <p>Vnitřní obaly: kov; nejvyšší vnitřní objem: 40 litrů;</p>	
(3)	<p>Kompozitní obaly: skleněná nádoba s vnějším sudem z oceli, hliníku, překližky nebo tuhého plastu (6PA1, 6PB1, 6PD1, nebo 6PH2) nebo s vnějším ocelovým nebo hliníkovým košem nebo bednou nebo s vnější bednou z přírodního dřeva nebo s vnějším proutěným košem (6PA2, 6PB2, 6PC nebo 6PD2); nejvyšší vnitřní objem: 60 litrů;</p>	
(4)	Sudy z oceli (1A1) o nejvyšším vnitřním objemu 250 litrů;	
(5)	Tlakové nádoby, pokud jsou dodržena všeobecná ustanovení v pododdíle 4.1.3.6, mohou být používány.	

P 803	POKYN PRO BALENÍ	P 803
Tento pokyn se použije pro UN číslo 2028.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
(1)	Sudy (1A2, 1B2, 1N2, 1H2, 1D, 1G);	
(2)	Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H2).	
Nejvyšší čistá (netto) hmotnost: 75kg.		
Předměty musí být jednotlivě zabaleny a navzájem odděleny použitím příček, přepážek, vnitřních obalů nebo fixačního materiálu k zamezení náhodnému spuštění za normálních podmínek přepravy.		

P 804	POKYN PRO BALENÍ	P 804
Tento pokyn se použije pro UN číslo 1744.		
Jsou dovoleny následující obaly, pokud jsou dodržena všeobecná ustanovení oddílů 4.1.1 a 4.1.3 a obaly jsou hermeticky utěsněny:		
<p>(1) Skupinové obaly o nejvyšší celkové (brutto) hmotnosti 25 kg sestávající z</p> <ul style="list-style-type: none"> - jednoho nebo více skleněných vnitřních obalů o nejvyšším vnitřním objemu každého z nich 1,3 litru, naplněných do nejvýše 90 % jejich vnitřního objemu, jejichž uzávěry musí být drženy na svém místě prostředky schopnými zabránit jejich povolení nebo uvolnění v důsledku nárazu nebo vibrací během přepravy, po jednom uložených - do nádob z kovu nebo tuhého plastu spolu s fixačním a savým materiálem dostatečným k tomu, aby pohltil celý obsah skleněného vnitřního obalu (obalů), dále zabalených do - do vnějších obalů 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G nebo 4H2. <p>(2) Skupinové obaly sestávající z vnitřních obalů z kovu nebo z polyvinylidenfluoridu (PVDF) o vnitřním objemu nepřesahujícím 5 litrů, jednotlivě zabalených se savým materiálem dostatečným k tomu, aby pohltil obsah, a s inertním fixačním materiálem do vnějších obalů 1A1, 1A2, 1B1, 1B2, 1N1, 1N2, 1H1, 1H2, 1D, 1G, 4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G nebo 4H2 o nejvyšší celkové (brutto) hmotnosti 75 kg. Vnitřní obaly nesmějí být naplněny více než do 90 % svého vnitřního objemu. Uzávěr každého vnitřního obalu musí být fyzicky držen na svém místě prostředky schopnými zabránit jeho povolení nebo uvolnění v důsledku nárazu nebo vibrací během přepravy.</p> <p>(3) Obaly sestávající z:</p> <p>vnějších obalů:</p> <p>Ocelové nebo plastové sudy (1A1, 1A2, 1H1 nebo 1H2), odzkoušené podle požadavků na zkoušky v 6.1.5 s hmotností odpovídající hmotnosti zkompletovaného kusu, buď jako obal určený k vložení vnitřních obalů, nebo jako samostatný obal určený pro tuhé látky nebo kapaliny, a náležitě označené;</p> <p>vnitřních obalů:</p> <p>Sudy a kompozitní obaly (1A1, 1B1, 1N1, 1H1 nebo 6HA1) splňující požadavky kapitoly 6.1 pro samostatné obaly, za dodržení následujících podmínek:</p> <p>(a) Zkouška hydraulickým tlakem musí být provedena tlakem nejméně 300 kPa (3 bary) (přetlak);</p> <p>(b) Konstrukční a výrobní zkoušky těsnosti musí být provedeny zkušebním tlakem 30 kPa (0,3 baru);</p> <p>(c) Musí být izolovány od vnějšího sudu použitím inertního, nárazy tlumícího fixačního materiálu, který obklopuje vnitřní obal ze všech stran;</p> <p>(d) Jejich vnitřní objem nesmí přesáhnout 125 litrů;</p> <p>(e) Uzávěry musí být šroubového typu, které jsou:</p> <ul style="list-style-type: none"> (i) fyzicky drženy na svém místě prostředky schopnými zabránit povolení nebo uvolnění uzávěru v důsledku nárazu nebo vibrací během přepravy; (ii) opatřeny těsnicím víčkem; <p>(f) Vnější a vnitřní obaly musí být periodicky podrobeny prohlídce vnitřku a zkoušce těsnosti podle pododstavce (b) v intervalech nejvýše dva a půl roku; a</p> <p>(g) Vnější a vnitřní obaly musí být opatřeny jasně čitelným a trvalým značením obsahujícím:</p> <ul style="list-style-type: none"> (i) datum (měsíc, rok) první zkoušky a poslední periodické zkoušky a prohlídky vnitřního obalu; a (ii) jméno nebo autorizovanou značku znalce, který provedl zkoušky a prohlídky; <p>(4) Tlakové nádoby, pokud jsou dodržena všeobecná ustanovení 4.1.3.6.</p> <p>(a) Musí být podrobeny první zkoušce a periodickým zkouškám každých 10 let tlakem nejméně 1MPa (10 barů) (přetlak);</p> <p>(b) Musí být podrobeny periodicky prohlídce vnitřku a zkoušce těsnosti v intervalech nejvýše dva a půl roku;</p> <p>(c) Nesmějí být vybaveny zařízením pro vyrovnávání tlaku;</p> <p>(d) Každá tlaková nádoba musí být uzavřena zátkou nebo ventilem (ventily) opatřenými sekundárním uzavíracím prostředkem; a</p> <p>(e) Výrobní materiály pro tlakové nádoby, ventily, zátky, výpustné kloboučky a těsnění se musí snášet mezi sebou navzájem a s obsahem.“</p>		

P 900	POKYN PRO BALENÍ	P 900
(Vyhrazeno)		


P 901	POKYN PRO BALENÍ	P 901
Tento pokyn se použije pro UN číslo 3316.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 :		
Sudy (1A1,1A2, 1B1, 1B2, 1N1,1N2, 1H1, 1H2, 1D, 1G);		
Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2);		
Kanystry (3A1,3A2, 3B1, 3B2, 3H1, 3H2).		
Obaly musí splňovat parametry odpovídající obalové skupině, ke které je přiřazena souprava jako celek (viz zvláštní ustanovení 251 kapitoly 3.3).		
Největší množství nebezpečných věcí na vnější obal: 10 kg, s vyloučením hmotnosti oxidu uhličitého, tuhého (suchý led) použitého jako chladicí prostředek.		
Dodatečný požadavek:		
Nebezpečné věci v soupravách musí být zabaleny do vnitřních obalů, které smějí obsahovat nejvýše 250 ml nebo 250 g a musí být chráněny před ostatními materiály obsaženými v soupravě.		

P 902	POKYN PRO BALENÍ	P 902
Tento pokyn se použije pro UN číslo 3268.		
Balené předměty:		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3 :		
Sudy (1A2, 1B2, 1N2, 1H2, 1D, 1G);		
Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1,4H2);		
Kanystry (3A2, 3B2, 3H2).		
Obaly musí vyhovovat parametrům obalové skupiny III.		
Obaly musí být zkonstruovány a vyrobeny tak, aby zamezilo pohybu předmětů a nechtěné činnosti za normálních podmínek přepravy.		
Nebalené předměty:		
Předměty mohou být přepravovány také nezabalené v jednoúčelových manipulačních zařízeních, vozidlech nebo kontejnerech, jsou-li přemísťovány z místa své výroby do kompletačního závodu.		
Dodatečný požadavek:		
Jakákoli tlaková nádoba musí splňovat požadavky příslušného orgánu pro látku (látky) obsaženou (obsažené) v tlakové nádobě (nádobách).		

P 903	POKYN PRO BALENÍ	P 903
Tento pokyn se použije pro UN čísla 3090, 3091, 3480 a 3481.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
(1)	<p>Pro články a baterie:</p> <p style="padding-left: 40px;">Sudy (1A2, 1B2, 1N2, 1H2, 1D, 1G); Bedny (4A, 4B, 4N, 4C1, 4C2, 4D, 4F, 4G, 4H1, 4H2); Kanystry (3A2, 3B2, 3H2).</p> <p>Články nebo baterie musí být zabaleny v obalech tak, aby byly články nebo baterie chráněny proti poškození, které může být způsobeno pohybem nebo rozmístěním článků nebo baterií uvnitř obalu.</p> <p>Obaly musí vyhovovat parametrům obalové skupiny II.</p>	
(2)	<p>Kromě toho pro články nebo baterie o celkové (brutto) hmotnosti nejméně 12 kg v pevných, proti nárazu odolných vnějších skříních a sestavy takových článků nebo baterií:</p> <p>(a) Pevné vnější obaly, v ochranných klecích (např. plně uzavřených nebo ve formě dřevěných latění); nebo</p> <p>(b) Palety nebo jiné manipulační prostředky.</p> <p>Články nebo baterie musí být zajištěny tak, aby se zabránilo jejich neúmyslnému pohybu, a jejich svorky nesmějí přenášet hmotnost jiných, na nich uložených součástí.</p> <p>Obaly nemusí splňovat požadavky uvedené v 4.1.1.3.</p>	
(3)	<p>Pro články nebo baterie balené se zařízením:</p> <p>Obaly odpovídající požadavkům uvedeným v odstavci (1) tohoto pokynu pro balení, poté uložené se zařízením do vnějšího obalu; nebo</p> <p>Obaly, které plně obklopují články nebo baterie, poté uložené se zařízením do obalu, který odpovídá požadavkům uvedeným v odstavci (1) tohoto pokynu pro balení.</p> <p>Zařízení musí být zajištěno proti pohybu uvnitř vnějšího obalu.</p> <p>Pro účely tohoto pokynu pro balení „zařízení“ znamená přístroj vyžadující lithiové kovové nebo lithium-iontové články nebo baterie, s nimiž je balen, ke své činnosti.</p>	
(4)	<p>Pro články nebo baterie obsažené v zařízení:</p> <p>Pevné vnější obaly vyrobené z vhodného materiálu a přiměřené pevnosti a konstrukce s ohledem na vnitřní objem obalu a jeho zamýšlené použití. Musí být vyrobeny takovým způsobem, aby se zabránilo nechtěné činnosti během přepravy. Obaly nemusí splňovat požadavky uvedené v 4.1.1.3.</p> <p>Velké zařízení může být podáváno k přepravě bez obalu nebo na paletách, pokud je článkům nebo bateriím poskytována rovnocenná ochrana zařízením, v němž jsou obsažena.</p> <p>Přístroje, jako jsou vysílače vysokofrekvenční identifikace (RFID), hodiny a registrační snímače teploty, které nejsou schopné generovat nebezpečné vyvíjení tepla, smějí být přepravovány, pokud jsou záměrně aktivní, v pevných vnějších obalech.</p>	
Dodatečný požadavek:		
Články nebo baterie musí být chráněny proti zkratu.		

P 903a	POKYN PRO BALENÍ	P 903a
Tento pokyn se použije pro použité články a baterie UN čísel 3090, 3091, 3480 a 3481.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1, kromě 4.1.1.3 a 4.1.3:		
Obaly vyhovující parametrům obalové skupiny II.		
Neschválené obaly jsou nicméně dovoleny, pokud:		
<ul style="list-style-type: none"> - vyhoví všeobecným ustanovením oddílů 4.1.1 a 4.1.3; - články a baterie jsou zabaleny a uloženy tak, aby se předešlo nebezpečí zkratu; - hmotnost kusů není větší než 30 kg. 		
Dodatečný požadavek:		
Baterie musí být chráněny proti zkratu.		

P 903b	POKYN PRO BALENÍ	P 903b
Tento pokyn se použije pro použité články a baterie UN čísel 3090, 3091, 3480 a 3481.		
Použité lithiové články a baterie o celkové (brutto) hmotnosti nejvýše po 500 g shromažďované za účelem jejich odstranění smějí být přepravovány spolu s jinými použitými nelithiovými bateriemi nebo samotné, aniž by byly jednotlivě chráněny, za těchto podmínek:		
<ol style="list-style-type: none"> (1) V sudech 1H2 nebo bednách 4H2 vyhovujících parametrům obalové skupiny II pro tuhé látky; (2) V sudech 1A2 nebo bednách 4A vybavených polyetylenovým pytlíkem a vyhovujících parametrům obalové skupiny II pro tuhé látky. Polyetylenový pytlík <ul style="list-style-type: none"> - musí mít odolnost proti nárazu nejméně 480 gramů jak v souběžných, tak i kolmých rovinách vzhledem k délce pytlíku; - musí mít tloušťku nejméně 500 mikronů s elektrickým měrným odporem více než 10 megaohmů a mírou nasákavosti vody po dobu 24 hodin při 25 °C nižší než 0,01%; - musí být uzavřen a - smí být použit pouze jednou; (3) Ve sběrných vanách o celkové (brutto) hmotnosti nižší než 30 kg, vyrobených z nevodivého materiálu, které splňují všeobecné podmínky 4.1.1.1, 4.1.1.2 a 4.1.1.5 až 4.1.1.8. 		
Dodatečné požadavky:		
Volný prostor v obalu musí být vyplněn fixačním materiálem. Od fixačního materiálu smí být upuštěno, je-li obal úplně vyplněn polyetylenovým pytlíkem a pytlík je uzavřen.		
Hermeticky uzavřené obaly musí být opatřeny odvětrávacím zařízením podle 4.1.1.8. Odvětrávací zařízení musí být zkonstruováno tak, aby přetlak způsobený plynem nepřekročil 10 kPa.“		

P 904	POKYN PRO BALENÍ	P 904
Tento pokyn se použije pro UN číslo 3245.		
Dovoleny jsou následující obaly:		
<p>(1) Obaly splňující ustanovení uvedené v 4.1.1.1, 4.1.1.2, 4.1.1.4, 4.1.1.8 a 4.1.3 a zkonstruované tak, aby splňovaly konstrukční požadavky uvedené v 6.1.4. Musí být použity vnější obaly vyrobené z vhodného materiálu a přiměřené pevností a konstrukce ve vztahu k vnitřnímu objemu obalu a jeho zamýšlenému použití. Pokud se tento pokyn pro balení používá pro přepravu vnitřních obalů skupinových obalů, musí být obal zkonstruován a vyroben tak, aby zamezil náhodnému vyprázdnění za normálních podmínek přepravy.</p>		
<p>(2) Obaly, které nemusí vyhovět předpisům pro zkoušky obalů části 6, ale splňující následující požadavky:</p>		
<p>(a) Vnitřní obal zahrnující:</p>		
<p>i. primární nádobu (nádoby) a sekundární obal; primární nádoba (nádoby) nebo sekundární obal musí být vodotěsné pro kapaliny nebo prachotěsné pro tuhé látky;</p>		
<p>ii. pro kapaliny absorpční materiál vložený mezi primární nádobu(y) a sekundární obal. Absorpční materiál musí být v dostatečném množství, aby pohltil celý obsah primární nádoby (primárních nádob) tak, aby unik kapalné látky nenarušil celistvost fixačního materiálu ani vnějšího obalu;</p>		
<p>iii. je-li více křehkých primárních nádob uloženo v jednom sekundárním obalu, musí být jednotlivě zabaleny nebo odděleny tak, aby se předešlo jejich vzájemnému dotyku;</p>		
<p>(b) Vnější obal musí být dostatečně pevný s ohledem na svůj vnitřní objem, hmotnost a zamýšlené použití a s nejmenším vnějším rozměrem nejméně 100 mm.</p>		
<p>Pro přepravu musí být na vnějším povrchu vnějšího obalu, na podkladu kontrastní barvy, umístěna dále vyobrazená značka, která musí být jasně viditelná a čitelná. Tato značka musí mít tvar čtverce postaveného na vrchol pod úhlem 45 °, jehož každá strana má délku nejméně 50 mm; šířka čáry musí být nejméně 2 mm a písmena a čísla musí být nejméně 6 mm vysoká.</p>		
		
Dodatečný požadavek:		
<u>Led, suchý led a kapalný dusík</u>		
<p>Je-li použito jako chladiva suchého ledu nebo kapalného dusíku, musí být dodrženy požadavky uvedené v 5.5.3. Je-li použit led, musí být umístěn vně sekundárních obalů nebo ve vnějším obalu nebo přepravním obalovém souboru. Musí se použít vnitřní podpěry, aby byly sekundární obaly zajištěny v původní poloze. Je-li použit led, musí být vnější obal nebo přepravní obalový soubor těsný.</p>		

P 905	POKYN PRO BALENÍ	P 905
Tento pokyn se použije pro UN čísla 2990 a 3072.		
Dovolený je každý vhodný obal, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1 a 4.1.3, s výjimkou toho, že obaly nemusí nutně vyhovět předpisům části 6.		
Pokud jsou záchranné prostředky vyrobeny k zabudování do pevných, proti počasí odolných pouzder, nebo jsou v nich obsaženy (takových jako pro záchranné čluny), mohou být přepravovány bez obalu.		
Dodatečné požadavky:		
<p>1.Všechny nebezpečné látky a předměty obsažené jako výbava v zařízeních musí být zajištěny k zamezení nahodilého pohybu a mimo to:</p> <ul style="list-style-type: none"> (a) Signální prostředky třídy 1 musí být zabaleny v plastových nebo lepenkových vnitřních obalech; (b) Nehořlavé netoxické plyny musí být v lahvích schválených příslušným orgánem, které mohou být připojeny k zařízením; (c) Elektrické akumulátory (třídy 8) a lithiové baterie (třídy 9) musí být odpojeny nebo elektricky odizolovány a zajištěny proti vylití kapaliny, a (d) Malá množství jiných nebezpečných látek (např. tříd 3, 4.1 a 5.2) musí být zabalena v pevných vnitřních obalech. <p>2.Příprava pro přepravu a balení musí zahrnovat opatření k zamezení jakéhokoliv náhodného nafouknutí zařízení.</p>		

P 906	POKYN PRO BALENÍ	P 906
Tento pokyn se použije pro UN čísla 2315, 3151, 3152 a 3432.		
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:		
<p>(1) Pro kapaliny a tuhé látky obsahující nebo kontaminované PCB nebo polyhalogenovanými bifenyly nebo terfenyly: Obaly podle pokynu pro balení P001 nebo P002, podle vhodnosti;</p> <p>(2) Pro transformátory, kondenzátory a jiná zařízení: Těsné obaly, které jsou schopny pojmout navíc k zařízením nejméně 1,25 násobek objemu kapalných PBC nebo polyhalogenovaných bifenyly nebo terfenylů, které jsou v nich obsaženy. V obalech musí být dostatečné množství absorpčního materiálu k pohlcení alespoň 1,1 násobku objemu kapaliny, která je obsažena v zařízeních. Všeobecně musí být transformátory a kondenzátory přepravovány v těsných kovových obalech, které jsou schopné zadržet, kromě transformátorů a kondenzátorů, nejméně 1,25 násobek objemu kapaliny v nich obsažené.</p> <p>Nehledě k výše uvedenému, mohou být kapaliny a tuhé látky, které nejsou zabaleny podle pokynů pro balení P 001 nebo P 002, jakož i transformátory a kondenzátory bez obalu, přepravovány dopravními jednotkami vybavenými nepropustnou kovovou vanou o výšce nejméně 800 mm, obsahující dostatek inertního absorpčního materiálu k pohlcení nejméně 1,1 násobku objemu jakékoliv volné kapaliny.</p>		
Dodatečný požadavek:		
Musí být provedena vhodná opatření k zajištění těsnosti transformátorů a kondenzátorů, aby se zabránilo jakémukoli úniku za normálních podmínek přepravy.		

R 001	POKYN PRO BALENÍ			R 001
Dovoleny jsou následující obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3:				
Nejvyšší vnitřní objem/nejvyšší čistá (netto) hmotnost				
Obaly z jemného plechu	Obalová skupina I			Obalová skupina II
	Obalová skupina III			
ocel, neodnímatelné víko (0A1)	Není dovoleno	40 litrů/50 kg	40 litrů/50 kg	40 litrů/50 kg
ocel, odnímatelné víko (0A2) ^a	Není dovoleno	40 litrů/50 kg	40 litrů/50 kg	40 litrů/50 kg
^a Není dovoleno pro UN 1261 NITROMETHAN				
Poznámka 1:	Tento pokyn se použije pro tuhé látky a kapaliny (za podmínky, že konstrukční typ byl vyzkoušen a příslušným způsobem označen).			
Poznámka 2:	V případě třídy 3, obalové skupiny II, mohou být tyto obaly použity jen pro látky bez vedlejšího nebezpečí a s tenzí par nejvýše 110 kPa při 50°C a pro slabě toxické pesticidy.			

4.1.4.2 Pokyny pro balení týkající se použití IBC

IBC 01	POKYN PRO BALENÍ	IBC 01
Dovoleny jsou následující IBC, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1, 4.1.2 a 4.1.3: Kovové IBC (31A, 31B a 31N).		
Zvláštní ustanovení pro balení, specifické pro RID a ADR:		
BB1	Pro UN číslo 3130: otvory nádob pro tuto látku musí být těsně uzavřeny, a to dvěma prostředky v sérii, z nichž jeden musí být šroubový, nebo zajištěný rovnocenným způsobem.	

IBC 02	POKYN PRO BALENÍ	IBC 02
Dovoleny jsou následující IBC, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1, 4.1.2 a 4.1.3:		
(1) Kovové IBC (31A, 31B a 31N);		
(2) IBC z tuhého plastu (31H1 a 31H2);		
(3) Kompozitní IBC (31HZ1).		
Zvláštní ustanovení pro balení:		
B5	Pro UN čísla 1791, 2014, 2984 a 3149 musí být IBC vybaveny zařízením umožňujícím odvětrávání během přepravy. Vstup odvětrávacího zařízení musí být umístěn v parním prostoru IBC v podmínkách maximálního naplnění během přepravy.	
B7	Pro UN čísla 1222 a 1865 nejsou dovoleny IBC s vnitřním objemem větším než 450 litrů z důvodu náchylnosti látek k výbuchu při jejich přepravě ve velkých objemech.	
B8	Čistá forma této látky nesmí být přepravována v IBC, neboť je známo, že má tenzi par vyšší než 110 kPa při 50°C, nebo 130 kPa při 55 °C.	
B15	Pro látky UN čísla 2031 s více než 55 % kyseliny dusičné je povolena doba používání IBC z tuhého plastu a kompozitních IBC s vnitřní nádobou z tuhého plastu dva roky od data jejich výroby.	
Zvláštní ustanovení pro balení specifické pro RID a ADR:		
BB 2	Pro UN číslo 1203 mohou být, bez ohledu na zvláštní ustanovení 534 (viz oddíl 3.3.1), IBC používány, jen je-li skutečná tenze par nejvýše 110 kPa při 50 °C, nebo nejvýše 130 kPa při 55 °C."	

IBC 03	POKYN PRO BALENÍ	IBC 03
Dovoleny jsou následující IBC, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1, 4.1.2 a 4.1.3:		
(1) Kovové IBC (31A, 31B a 31N);		
(2) IBC z tuhého plastu (31H1 a 31H2);		
(3) Kompozitní IBC (31HZ1, 31HA2, 31HB2, 31HN2, 31HD2 a 31HH2).		
Zvláštní ustanovení pro balení:		
B8 Čistá forma této látky nesmí být přepravována v IBC, neboť je známo, že má tenzi par vyšší než 110 kPa při 50 °C, nebo 130 kPa při 55 °C.		

IBC 04	POKYN PRO BALENÍ	IBC 04
Dovoleny jsou následující IBC, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1, 4.1.2 a 4.1.3:		
Kovové IBC (11A, 11B, 11N, 21A, 21B a 21N).		

IBC 05	POKYN PRO BALENÍ	IBC 05
Dovoleny jsou následující IBC, pokud jsou splněna všeobecná ustanovení v oddílů 4.1.1, 4.1.2 a 4.1.3:		
(1) Kovové IBC (11A, 11B, 11N, 21A, 21B a 21N);		
(2) IBC z tuhého plastu (11H1, 11H2, 21H1 a 21H2);		
(3) Kompozitní IBC (11HZ1 a 21HZ1).		

IBC 06	POKYN PRO BALENÍ	IBC 06
Dovoleny jsou následující IBC, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1, 4.1.2 a 4.1.3:		
(1) Kovové IBC (11A, 11B, 11N, 21A, 21B a 21N);		
(2) IBC tuhého plastu (11H1, 11H2, 21H1 a 21H2);		
(3) Kompozitní IBC (11HZ1, 11HZ2, 21HZ1 a 21HZ2).		
Dodatečný požadavek:		
Je-li tuhá látka náchylná ke zkapalnění během přepravy, viz 4.1.3.4.		
Zvláštní ustanovení pro balení:		
B12 Pro UN číslo 2907 musí IBC splňovat parametry obalové skupiny II. IBC splňující zkušební kritéria obalové skupiny I se nepoužijí.		

IBC 07	POKYN PRO BALENÍ	IBC 07
Dovoleny jsou následující IBC, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1, 4.1.2 a 4.1.3:		
(1) Kovové IBC (11A, 11B, 11N, 21A, 21B a 21N); (2) IBC z tuhého plastu (11H1, 11H2, 21H1 a 21H2); (3) Kompozitní IBC (11HZ1, 11HZ2, 21HZ1 a 21HZ2); (4) Dřevěné IBC (11C, 11D a 11F).		
Dodatečný požadavek:		
1. Je-li tuhá látka náchylná ke zkapalnění během přepravy, viz 4.1.3.4.		
2. Vložky dřevěných IBC musí být prachotěsné.		

IBC 08	POKYN PRO BALENÍ	IBC 08
Dovoleny jsou následující IBC, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1, 4.1.2 a 4.1.3:		
(1) Kovové IBC (11A, 11B, 11N, 21A, 21B a 21N); (2) IBC z tuhého plastu (11H1, 11H2, 21H1 a 21H2); (3) Kompozitní IBC (11HZ1, 11HZ2, 21HZ1 a 21HZ2); (4) Lepenkové IBC (11G); (5) Dřevěné IBC (11C, 11D a 11F); (6) Flexibilní IBC (13H1, 13H2, 13H3, 13H4, 13H5, 13L1, 13L2, 13L3, 13L4, 13M1 a 13M2).		
Dodatečný požadavek:		
Je-li tuhá látka náchylná ke zkapalnění během přepravy, viz 4.1.3.4.		
Zvláštní ustanovení pro balení:		
B3	Flexibilní IBC musí být prachotěsné a vodovzdorné, nebo musí být opatřeny prachotěsnou a vodovzdornou vložkou.	
B4	Flexibilní, lepenkové nebo dřevěné IBC musí být prachotěsné a vodovzdorné, nebo musí být opatřeny prachotěsnou a vodovzdornou vložkou.	
B6	Pro UN čísla 1363, 1364, 1365, 1386, 1408, 1841, 2211, 2217, 2793 a 3314 se nevyžaduje, aby IBC vyhověly zkušebním požadavkům kapitoly 6.5.	
B13	<i>Poznámka: Pro UN čísla 1748, 2208, 2880, 3485, 3486 a 3487 je přeprava po moři ve velkých nádobách IBC podle IMDG Code zakázána.</i>	

IBC 99	POKYN PRO BALENÍ	IBC 99
Smějí se použít pouze IBC schválené pro tyto věci příslušným orgánem. Kopie schválení příslušného orgánu musí doprovázet každou zásilku, nebo přepravní doklad musí obsahovat zápis, že byl obal schválen příslušným orgánem.		

IBC 100	POKYN PRO BALENÍ	IBC 100
Tento pokyn se použije pro UN čísla 0082, 0241, 0331 a 0332.		
Dovoleny jsou následující IBC, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1, 4.1.2 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:		
<ul style="list-style-type: none">(1) Kovové IBC (11A, 11B, 11N, 21A, 21B, 21N, 31A, 31B a 31N);(2) Flexibilní IBC (13H2, 13H3, 13H4, 13L2, 13L3, 13L4 a 13M2);(3) IBC z tuhého plastu (11H1, 11H2, 21H1, 21H2, 31H1 a 31H2);(4) Kompozitní IBC (11HZ1, 11HZ2, 21HZ1, 21HZ2, 31HZ1 a 31HZ2).		
Dodatečné požadavky:		
<ul style="list-style-type: none">1. IBC smějí být použity jen pro volně sypké látky.2. Flexibilní IBC smějí být použity jen pro tuhé látky.		
Zvláštní ustanovení pro balení:		
B9	Pro UN číslo 0082 může být tento pokyn pro balení použit, jen pokud jsou tyto látky směsí dusičnanu amonného nebo jiných anorganických dusičnanů s jinými hořlavými látkami, které nejsou výbušnými složkami. Takové výbušné látky nesmějí obsahovat nitroglycerin, podobné kapalné organické dusičnany nebo chlorečnany. Kovové IBC nejsou dovoleny.	
B10	Pro UN číslo 0241 může být tento pokyn pro balení použit jen pro látky složené z vody, jako základní složky, a vysokého podílu dusičnanu amonného nebo jiných oksylichujících látek, z nichž některé nebo všechny jsou v roztoku. Jiné složky mohou zahrnovat uhlovodíky nebo práškový hliník, ale nesmějí obsahovat nitroderiváty, jako je trinitrotoluen. Kovové IBC nejsou dovoleny.	

IBC 520		POKYN PRO BALENÍ			IBC520
Tento pokyn se použije pro organické peroxidy a samovolně se rozkládající látky typu F.					
Následující IBC jsou dovoleny pro uvedené přípravky, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1, 4.1.2 a 4.1.3, a zvláštní ustanovení pododdílu 4.1.7.2.					
Pro přípravky, které nejsou v tomto seznamu uvedeny, mohou být použity jen IBC schválené příslušným orgánem (viz 4.1.7.2.2).					
UN číslo	Organický peroxid	Typ IBC	Maximální množství (litry/kg)	Rízená teplota	Kritická teplota
3109	ORGANICKÝ PEROXID TYP F, KAPALNÝ	31A	1250		
	terc.-Butylhydroperoxid, nejvýše 72% s vodou	31A	1250		
	terc.-Butylperoxyacetát, nejvýše 32% v ředidle typu A	31HA1	1000		
	terc.-BUTYLPEROXYBENZOÁT, nejvýše 32% v ředidle typu A	31A	1250		
	terc-Butylperoxy-3,5,5-trimethylhexanoát, nejvýše 37% v ředidle typu A	31A 31HA1	1250 1000		
	Kumylhydroperoxid, nejvýše 90% v ředidle typu A	31HA1	1250		
	Dibenzoylperoxid, nejvýše 42% jako stabilní vodní disperze	31H1	1000		
	Di-terc.-butylperoxid, nejvýše 52% v ředidle typu A	31A 31HA1	1250 1000		
	1,1-Di-(terc.-butylperoxy) cyclohexan, nejvýše 42% v ředidle typu A	31H1	1000		
	1,1-DI-(terc-BUTYLPEROXY) CYKLOHEXAN, nejvýše 37% v ředidle typu A	31A	1250		
	Dilauroylperoxid, nejvýše 42%, stabilní disperze, ve vodě	31HA1	1000		
	Isopropylkumylhydroperoxid, nejvýše 72% v ředidle typu A	31HA1	1250		
	p-Menthylhydroperoxid, nejvýše 72% v ředidle typu A	31HA1	1250		
	Kyselina peroxyoctová, stabilizovaná, nejvýše 17%	31H1 31H2 31HA1 31A	1500 1500 1500 1500		
3110	PEROXID, ORGANICKÝ, TYP F, TUHY	31H1	2000		
	Dikumyl peroxid	31HA1			
		31A			

IBC 520	POKYN PRO BALENÍ (pokračování)				IBC520
3119	ORGANICKÝ PEROXID TYP F, KAPALNÝ, ŘÍZENÁ TEPLOTA				
	terc.-Amylperoxy-pivalát, nejvýše 32% v ředidle typu A	31A	1250	+10 °C	+15 °C
	terc.-Butylperoxy-2-ethylhexanoát, nejvýše 32% v ředidle typu B	31HA1 31A	1000 1250	+30 °C +30 °C	+35 °C +35 °C
	terc.-Butylperoxyneodekanoát, nejvýše 32% v ředidle typu A	31A	1250	0 °C	+10 °C
	terc.-Butylperoxyneodekanoát, nejvýše 52%, stabilní vodní disperze	31A	1250	-5 °C	+5 °C
	terc.-Butylperoxyneodekanoát, nejvýše 42% stabilní vodní disperze	31A	1250	-5 °C	+5 °C
	terc.-Butylperoxy-pivalát, nejvýše 27% v ředidle typu B	31HA1 31A	1000 1250	+10 °C +10 °C	+15 °C +15 °C
	Kumylperoxyneodecanoát, nejvýše 52%, stabilní vodní disperze	31A	1250	-15 °C	-5 °C
	Di-(4-terc.-butylcyclohexyl)peroxydikarbonát, nejvýše 42%, stabilní vodní disperze	31HA1	1000	+30 °C	+35 °C
	Dicetylperoxydikarbonát, nejvýše 42%, stabilní vodní disperze	31HA1	1000	+30 °C	+35 °C
	Di-(2-neodekanoylperoxyisopropyl)benzen, nejvýše 42%, stabilní vodní disperze	31A	1250	-15 °C	-5 °C
	3-Hydroxy-1,1-dimethylbutylperoxyneodekanoát, nejvýše 52%, stabilní vodní disperze	31A	1250	-15 °C	-5 °C
	Di-(2-ethylhexyl)peroxydikarbonát, nejvýše 62%, stabilní vodní disperze	31A	1250	-20 °C	-10 °C
	Dimyristylperoxydikarbonát, nejvýše 42%, stabilní vodní disperze	31HA1	1000	+15 °C	+20 °C
	Di-(3,5,5-trimethylhexanoyl) peroxid, nejvýše 52% v ředidle typu A	31HA1 31A	1000 1250	+10 °C +10 °C	+15 °C +15 °C
	Di-(3,5,5-trimethylhexanoyl) peroxid, nejvýše 52%, stabilní vodní disperze	31A	1250	+10 °C	+15 °C
	1,1,3,3-Tetramethylbutylperoxyneodekanoát, nejvýše 52%, stabilní vodní disperze	31A 31HA1	1250 1 000	-5 °C -5 °C	+5 °C +5 °C
	Dicyklohexylperoxydikarbonát, nejvýše 42%, stabilní vodní disperze	31A	1250	+10 °C	+15 °C
	Diisobutyryl peroxid, nejvýše 28 %, stabilní vodní disperze	31HA1 31A	1 000 1250	-20 °C -20 °C	-10 °C -10 °C
	Diisobutyryl peroxid, nejvýše 42 %, stabilní vodní disperze	31HA1 31A	1 000 1250	-25 °C -25 °C	-15 °C -15 °C
3120	ORGANICKÝ PEROXID TYP F, TUHÝ, ŘÍZENÁ TEPLOTA Neuvedený				

Dodatečné požadavky:

1. IBC musí být vybaveny zařízením umožňujícím odvětrávání během přepravy. Vstup zařízení pro vyrovnávání tlaku musí být umístěn v parním prostoru IBC za podmínek maximálního naplnění během přepravy.
2. Aby se předešlo výbušnému roztržení kovové IBC nebo kompozitní IBC s celokovovým pláštěm, musí být nouzové zařízení pro odlehčení tlaku zkonstruováno tak, aby odvětralo všechny produkty rozkladu a páry vyvinuté během samourychlujícího se rozkladu nebo během časového úseku nejméně jedné hodiny zachycení ohněm, jak je vypočítáno podle vzorce v 4.2.1.13.8. Řízená a kritická teplota uvedené v tomto pokynu pro balení jsou vypočítány na základě neizolované IBC. Jestliže se odesílá organický peroxid v IBC podle tohoto pokynu pro balení, je odpovědností odesílatele se ujistit že:
 - (a) tlak zařízení pro vyrovnávání tlaku a nouzového zařízení pro odlehčení tlaku instalovaných na IBC je navržen s příslušným ohledem k samourychlujícímu se rozkladu organického peroxidu a průniku plamene, a
 - (b) popřípadě, že řízená a kritická teplota jsou příslušně indikovány, s přihlédnutím ke konstrukci (např. izolaci) použité IBC.

IBC 620	POKYN PRO BALENÍ	IBC 620
Tento pokyn se použije pro UN číslo 3291.		
Dovoleny jsou následující IBC, pokud jsou splněna všeobecná ustanovení v oddílů 4.1.1 (kromě 4.1.1.15), 4.1.2 a 4.1.3:		
Pevné těsné IBC splňující parametry obalové skupiny II.		
Dodatečné požadavky:		
<ol style="list-style-type: none"> 1. V IBC musí být dostatek absorpčního materiálu k pohlcení celého množství kapaliny obsažené v IBC. 2. IBC musí být schopny udržet kapaliny. 3. IBC, u kterých se předpokládá, že budou obsahovat ostré předměty, jako jsou skleněné střepy a jehly, musí být odolné proti proražení. 		

4.1.4.3 Pokyny pro balení týkající se použití velkých obalů

LP 01	POKYN PRO BALENÍ (kapaliny)				LP 01
Dovoleny jsou následující velké obaly, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1 a 4.1.3:					
Vnitřní obaly	Vnější velké obaly	Obalová skupina I	Obalová skupina II	Obalová skupina III	
ze skla 10 litrů z plastu 30 litrů z kovu 40 litrů	z oceli (50A) z hliníku (50B) z kovu, jiného než ocel nebo hliník (50N) z tuhého plastu (50H) z přírodního dřeva(50C) z překližky (50D) z rekonstituovaného dřeva (50F) z lepenky (50G)	Není dovoleno	Není dovoleno	Nejvyšší vnitřní objem: 3 m ³	

LP 02	POKYN PRO BALENÍ (tuhé látky)				LP 02
Dovoleny jsou následující velké obaly, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1 a 4.1.3:					
Vnitřní obaly	Vnější velké obaly	Obalová skupina I	Obalová skupina II	Obalová skupina III	
ze skla 10 kg z plastu ^b 50 kg z kovu 50 kg z papíru ^{a, b} 50 kg z lepenky ^{a, b} 50 kg	z oceli (50A) z hliníku (50B) z kovu, jiného než ocel nebo hliník (50N) z tuhého plastu (50H) z přírodního dřeva (50C) z překližky (50D) z rekonstituovaného dřeva (50F) z lepenky (50G) z flexibilního plastu (51H) ^c	Není dovoleno	Není dovoleno	Nejvyšší vnitřní objem: 3 m ³	
^a Tyto vnitřní obaly nesmějí být použity, jestliže přepravovaná látka může během přepravy zkvalitnět. ^b Tyto vnitřní obaly musí být prachotěsné. ^c Smějí se použít jen s flexibilními vnitřními obaly.					
Zvláštní ustanovení pro balení					
L2	Pro UN 1950 aerosoly musí velké obaly vyhovovat parametrům obalové skupiny III. Velké obaly pro odpadové aerosoly přepravované podle zvláštního ustanovení 327 musí mít kromě toho prostředky k zadržení veškeré volné kapaliny, která by mohla uniknout během přepravy, např. absorpční materiál.“				
L3	POZNÁMKA: Pro UN čísla 2208 a 3486 je přeprava po moři ve velkých obalech zakázána.				

LP 99	POKYN PRO BALENÍ				LP 99
Použity mohou být pouze velké obaly schválené pro tyto věci příslušným orgánem. Kopie schválení příslušného orgánu musí doprovázet každou zásilku, nebo přepravní doklad musí obsahovat zápis, že byl obal schválen příslušným orgánem.					

LP 101	POKYN PRO BALENÍ		LP 101
Dovoleny jsou následující velké obaly, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Velké obaly	
Nejsou nutné	Nejsou nutné	z oceli (50A) z hliníku (50B) z kovu, jiného než ocel nebo hliník (50N) z tuhého plast (50H) z přírodního dřeva (50C) z překližky (50D) z rekonstituovaného dřeva (50F) z lepenky (50G)	
Zvláštní ustanovení pro balení:			
<p>L1 Pro UN čísla 0006, 0009, 0010, 0015, 0016, 0018, 0019, 0034, 0035, 0038, 0039, 0048, 0056, 0137, 0138, 0168, 0169, 0171, 0181, 0182, 0183, 0186, 0221, 0243, 0244, 0245, 0246, 0254, 0280, 0281, 0286, 0287, 0297, 0299, 0300, 0301, 0303, 0321, 0328, 0329, 0344, 0345, 0346, 0347, 0362, 0363, 0370, 0412, 0424, 0425, 0434, 0435, 0436, 0437, 0438, 0451, 0488 a 0502:</p> <p>Velké a robustní výbušné předměty, běžně určené pro vojenské použití, bez svých rozněcovacích prostředků, nebo se svými rozněcovacími prostředky obsahujícími nejméně dvě účinná pojistná zařízení, mohou být přepravovány bez obalu. Pokud takové předměty obsahují hnací náplně, nebo jsou s vlastním pohonem, jejich spouštěcí systémy musí být chráněny proti stimulovanému spuštění během normálních podmínek přepravy. Negativní výsledek zkoušky série 4 na nezabaleném předmětu prokazuje, že tento předmět může být uvažován pro přepravu bez obalu. Takovéto nezabalené předměty mohou být fixovány v lůžkách nebo uloženy v latěních nebo jiných vhodných manipulačních prostředcích.</p>			

LP 102	POKYN PRO BALENÍ		LP 102
Dovoleny jsou následující velké obaly, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1 a 4.1.3 a zvláštní ustanovení oddílu 4.1.5:			
Vnitřní obaly	Meziobaly	Vnější obaly	
Pytle vodovzdorné Nádoby z lepenky z kovu z plastu ze dřeva Balící materiály z lepenky, vlnité Trubkové nádoby z lepenky	Není nutný	z oceli (50A) z hliníku (50B) z kovu, jiného než ocel nebo hliník (50N) z tuhého plastu (50H) z přírodního dřeva (50C) z překližky (50D) z rekonstituovaného dřeva (50F) z lepenky (50G)	

LP 621	POKYN PRO BALENÍ	LP 621
Tento pokyn se použije pro UN číslo 3291.		
Dovoleny jsou následující velké obaly, pokud jsou splněna všeobecná ustanovení oddílů 4.1.1 a 4.1.3:		
<p>(1) Pro klinický odpad uložený ve vnitřních obalech: Pevné těsné velké obaly vyhovující požadavkům kapitoly 6.6 pro tuhé látky, na úrovni parametrů obalové skupiny II, za podmínky dostatečného množství absorpčního materiálu k pohlcení celého množství kapaliny obsažené ve velkém obalu a za podmínky, že velký obal je schopen udržet kapaliny;</p> <p>(2) Pro obaly obsahující větší množství kapalin: Pevné velké obaly splňující požadavky kapitoly 6.6, na úrovni parametrů obalové skupiny II, pro kapaliny.</p>		
Dodatečný požadavek:		
Velké obaly určené pro ostré předměty, jako skleněné střepy a jehly, musí být odolné proti proražení a udržet kapaliny podle zkušebních podmínek kapitoly 6.6.		

LP 902	POKYN PRO BALENÍ	LP 902
Tento pokyn se použije pro UN číslo 3268.		
Balené předměty		
Dovoleny jsou následující velké obaly, pokud jsou splněna všeobecná ustanovení pro balení oddílů 4.1.1 a 4.1.3: Obaly vyhovující parametrům obalové skupiny III. Obaly musí být zkonstruovány a vyrobeny tak, aby zabránily pohybu předmětů a jejich nechtěné činnosti za normálních podmínek přepravy.		
Nebalené předměty		
Předměty smějí být přepravovány také nebalené v jednoúčelových manipulačních zařízeních, vozidlech nebo kontejnerech, pokud jsou přepravovány z místa své výroby do kompletačního závodu.		
Dodatečný požadavek:		
Jakákoli tlaková nádoba musí splňovat požadavky příslušného orgánu pro látku (látky) obsaženou (obsažené) v tlakové nádobě (nádobách).		

4.1.4.4 *(Vypuštěno)*

4.1.5 Zvláštní ustanovení pro balení věci třídy 1

4.1.5.1 Musí být splněna všeobecná ustanovení oddílu 4.1.1.

4.1.5.2 Všechny obaly pro věci třídy 1 musí být zkonstruovány a vyrobeny tak, že:

- (a) chrání výbušné látky a předměty, zabraňují jejich unikání a nezvyšují riziko neúmyslného zážehu nebo roznětu za normálních podmínek přepravy, včetně předvídatelných změn teploty, vlhkosti a tlaku;
- (b) umožní, aby úplné kusy byly za normálních podmínek přepravy bezpečně manipulovatelné;
a
- (c) kusy budou odolné vůči předpokládaným tlakům při stohování, které mohou nastat během přepravy, udrží daný stav, bez toho, že by zvyšovalo výchozí riziko představované výbušnými látkami a předměty, bez toho, že by se snížila ochranná schopnost obalů a bez toho, že by se kusy zdeformovaly takovým způsobem nebo v takovém rozsahu, že by snížila jejich pevnost, nebo to způsobilo nestabilitu stohovaných kusů.

4.1.5.3 Všechny výbušné látky a předměty, které jsou připraveny k přepravě, musí být zatříděny ve shodě s postupy podrobně uvedenými v oddílu 2.2.1.

4.1.5.4 Věci třídy 1 musí být baleny podle příslušného pokynu pro balení udaného ve sloupci (8) tabulky A kapitoly 3.2, s použitím obalů a způsobů balení podrobně popsanych v oddílu 4.1.4.

4.1.5.5 Pokud není v ADR uvedeno jinak, musí obaly, včetně IBC a velkých obalů, odpovídat požadavkům kapitol 6.1, 6.5 nebo 6.6, jak je to náležité, a musí splňovat jejich požadavky na zkoušky pro obalovou skupinu II.

4.1.5.6 Uzavírací zařízení obalů obsahujících kapalnou výbušnou látku musí být zajištěna dvojitou ochranou proti netěsnosti (úniku).

4.1.5.7 Uzavírací zařízení kovových sudů musí mít vhodné těsnění; pokud je uzavírací zařízení se závitem, musí být zabráněno prostupu výbušných látek do závitu.

4.1.5.8 Obaly pro látky rozpustné ve vodě musí být odolné proti vodě. Obaly pro znečistlivé nebo flegmatizované látky musí být uzavřeny tak, aby bylo zabráněno změnám koncentrace během přepravy.

4.1.5.9 Jestliže obal zahrnuje dvojitý plášť naplněný vodou, která může během přepravy zmrznout, musí být do vody přidáno postačující množství prostředku proti zamrznání. Prostředek proti zamrznání, který by mohl vzhledem ke své hořlavosti vytvořit nebezpečí požáru, nesmí být použit.

4.1.5.10 Hřebíky, sponky a jiná uzavírací zařízení vyrobené z kovu bez ochranného potahu nesmějí proniknout dovnitř vnějšího obalu, ledaže vnitřní obal dostatečně účinně chrání výbušnou látku a předměty proti styku s kovem.

4.1.5.11 Vnitřní obaly, fixační prvky a fixační materiály a umístění výbušných látek nebo předmětů v kusech musí být takové, aby výbušná látka nemohla za normálních podmínek přepravy uniknout do vnějšího obalu. Kovové části předmětů musí být zajištěny proti možnému styku s kovovými obaly. Předměty obsahující výbušnou látku, které nejsou uloženy ve vnějším obalu, musí být odděleny jeden od druhého způsobem zabraňujícím tření a nárazu. Pro tento účel mohou být použity vycpávky, fixační podložky, dělicí přepážky ve vnitřním nebo vnějším obalu, výlisky nebo nádoby.

4.1.5.12 Obaly musí být vyrobeny z materiálů snášelivých s výbušnými látkami nebo předměty obsaženými v kusech a vůči nim nepropustných tak, aby ani vzájemné působení mezi těmito látkami nebo předměty a materiály obalu, ani jejich únik z obalu nezpůsobily, že se výbušné látky a předměty stanou nebezpečnými pro přepravu nebo dojde ke změně podtřídy nebo skupiny snášelivosti.

4.1.5.13 Musí být zabráněno vniknutí výbušných látek do meziprostorů spojovacích přehybů kovových obalů.

- 4.1.5.14** Plastové obaly nesmějí být náchylné k vytváření nebo akumulaci statické elektřiny v takovém množství, aby výboj mohl způsobit roznět nebo zážeh zabalených výbušných látek nebo předmětů nebo jejich uvedení do činnosti.
- 4.1.5.15** Rozměrné a robustní výbušné předměty, normálně určené pro vojenské použití, bez rozněcovacích prostředků, nebo s rozněcovacími prostředky opatřenými nejméně dvěma účinnými pojistnými zařízeními mohou být přepravovány bez obalu. Pokud mají takovéto předměty hnací náplně, nebo jsou samohnací, musí být jejich zapalovací systémy chráněny proti stimulaci nárazy a zatížením, které mohou nastat za normálních podmínek přepravy. Negativní výsledek zkoušek série 4 provedených na nezabaleném předmětu ukazuje, že předmět může být uvažován pro přepravu bez obalu. Takové nezabalené předměty mohou být uchyceny v lůžkách nebo uloženy v latěních nebo jiných vhodných manipulačních, skladovacích nebo vystřelovacích prostředcích tak, aby se za normálních podmínek přepravy nemohly uvolnit.
- Pokud takové velké výbušné předměty podléhají v rámci své provozní bezpečnosti a zkoušek vhodnosti zkušebními režimům, které splňují intence ADR a pokud takové zkoušky byly s úspěchem provedeny, může příslušný orgán schválit přepravu takových předmětů podle ADR.
- 4.1.5.16** Výbušné látky nesmějí být baleny do vnitřních nebo vnějších obalů, jestliže by rozdily ve vnitřních a vnějších tlacích, v důsledku tepelných nebo jiných účinků, mohly vyvolat výbuch nebo roztržení kusu.
- 4.1.5.17** Pokud volné výbušné látky nebo výbušná látka v nezabaleném nebo částečně zabaleném předmětu mohou přijít do styku s vnitřním povrchem kovových obalů (1A1, 1A2, 1B1, 1B2, 4A, 4B a kovové nádoby), musí být kovový obal opatřen vnitřní vložkou nebo povlakem (viz pododdíl 4.1.1.2).
- 4.1.5.18** Pokyn pro balení P101 smí být použit pro každou výbušnou látku nebo předmět, pokud je obal schválen příslušným orgánem bez ohledu na to, zda obal vyhovuje pokynu pro balení, který je udán ve sloupci (8) tabulky A kapitoly 3.2.
- 4.1.6 Zvláštní ustanovení pro balení věcí třídy 2 a věcí jiných tříd přiřazených k pokynu pro balení P200**
- 4.1.6.1** Tento oddíl obsahuje všeobecné předpisy platné pro používání tlakových nádob a otevřených kryogenních nádob pro přepravu látek třídy 2 a věcí jiných tříd přiřazených k pokynu pro balení P200 (např. UN 1051 kyanovodík, stabilizovaný). Tlakové nádoby musí být vyrobeny a uzavřeny tak, aby zabránily jakémukoli úniku obsahu, který by mohl být způsoben za normálních podmínek přepravy, včetně vibrací nebo změn teploty, vlhkosti nebo tlaku (vyplývajících například ze změny nadmořské výšky).
- 4.1.6.2** Části tlakových nádob a otevřených kryogenních nádob, které jsou v přímém styku s nebezpečnými látkami, nesmějí být poškozovány ani zeslabovány těmito nebezpečnými látkami a nesmějí způsobit žádný nebezpečný účinek (např. katalytickou reakci nebo reakci s nebezpečnými látkami) (viz též tabulku norem na konci tohoto oddílu).
- 4.1.6.3** Tlakové nádoby, včetně jejich uzávěrů, a otevřené kryogenní nádoby musí být zvoleny pro plyn nebo směs plynů podle požadavků uvedených v pododdílu 6.2.1.2 a požadavků příslušných pokynů pro balení v pododdílu 4.1.4.1. Tento pododdíl se vztahuje také na tlakové nádoby, které jsou součástí MEGC a bateriových vozidel.
- 4.1.6.4** Změna použití opakovaně plnitelné nádoby musí zahrnovat vyprazdňovací, čistící a odplynovací činnosti v rozsahu nezbytném pro bezpečné použití (viz též tabulku norem na konci tohoto oddílu). Kromě toho nesmí být tlaková nádoba, která předtím obsahovala žíravou látku třídy 8 nebo látku jiné třídy s vedlejším nebezpečím žíravosti, použita pro přepravu látky třídy 2, pokud nebyla provedena inspekce a zkoušky předepsané v pododdílu 6.2.1.6 a popřípadě 6.2.3.5.
- 4.1.6.5** Před plněním musí balič provést kontrolu tlakové nádoby nebo otevřené kryogenní nádoby a přesvědčit se, že může obsahovat látku, a v případě chemické látky pod tlakem hnací látku, která se má přepravovat, a že jsou splněny všechny příslušné předpisy. Po naplnění nádoby se musí

uzavírací ventily uzavřít a během přepravy zůstat uzavřeny. Odesílatel musí ověřit těsnost uzávěrů a výstroje.

POZNÁMKA: Uzavírací ventily namontované na jednotlivé láhve ve svazku lahví mohou být během přepravy otevřeny, pokud přepravovaná látka nepodléhá zvláštnímu ustanovení pro balení „k“ nebo „q“ v pokynu pro balení P200.

- 4.1.6.6** Tlakové nádoby a otevřené kryogenní nádoby musí být plněny podle provozních tlaků, stupňů plnění a ustanovení uvedených v příslušném pokynu pro balení pro konkrétní látku, která je plněna. Reaktivní plyny a směsi plynů musí být plněny takovým tlakem, aby v případě úplného rozkladu plynu nebyl překročen provozní tlak tlakové nádoby. Svazky lahví nesmějí být plněny tlakem, který překračuje nejnižší provozní tlak kterékoli láhve ve svazku.
- 4.1.6.7** Nádoby, včetně svých uzávěrů, musí vyhovovat konstrukčním, výrobním, kontrolním a zkušebním požadavkům podrobně uvedeným v kapitole 6.2. Pokud jsou předepsány vnější obaly, tlakové nádoby a otevřené kryogenní nádoby v nich musí být pevně zajištěny. Pokud není stanoveno jinak v příslušných pokynech pro balení, může být jeden nebo více vnitřních obalů uzavřeno v jednom vnějším obalu.
- 4.1.6.8** Ventily musí být zkonstruovány a vyrobeny takovým způsobem, aby byly schopné odolat poškození bez úniku plynu nebo musí být chráněny proti poškození, které by mohlo způsobit nechtěný únik obsahu tlakové nádoby, jedním z následujících způsobů (viz též tabulku norem na konci tohoto oddílu):
- (a) Ventily jsou umístěny uvnitř hrdla tlakové nádoby a chráněny šroubovací zátkou nebo kloboučkem;
 - (b) Ventily jsou chráněny kloboučky. Tyto kloboučky musí mít odvětrávací otvory dostatečného příčného průřezu k odstranění plynu v případě jeho úniku ventily;
 - (c) Ventily jsou chráněny límcí nebo kryty;
 - (d) Tlakové nádoby jsou přepravovány v rámech (např. svazky lahví); nebo
 - (e) Tlakové nádoby jsou přepravovány v ochranných bednách. Pro UN tlakové nádoby musí být obal, tak jak je připraven k přepravě, schopen vyhovět při zkoušce volným pádem uvedené v 6.1.5.3 parametřům obalové skupiny I.
- 4.1.6.9** Tlakové nádoby, které nejsou opakovaně plnitelné:
- (a) musí být přepravovány ve vnějším obalu, jako je bedna nebo koš, nebo na podložkách ze smršťovací nebo průtažnou fólií;
 - (b) nesmějí mít hydraulický vnitřní objem větší než 1,25 litrů, pokud jsou naplněny hořlavým nebo toxickým plynem;
 - (c) nesmějí být používány pro toxické plyny s LC_{50} nejvýše 200 ml/m³; a
 - (d) nesmějí být po uvedení do používání opravovány.
- 4.1.6.10** Opakovaně plnitelné tlakové nádoby, jiné než kryogenní nádoby, musí být podrobovány periodickým inspekcím podle ustanovení v 6.2.1.6, nebo v 6.2.3.5.1 pro nádoby neodpovídající UN, a pokynu pro balení P200, P205 nebo P206. Ventily pro vyrovnávání tlaku u uzavřených kryogenních nádob musí být podrobovány periodickým inspekcím a zkouškám podle ustanovení uvedených v 6.2.1.6.3 a v pokynu pro balení P203. Tlakové nádoby nesmějí být plněny po uplynutí lhůty pro provedení periodické inspekce, avšak smějí být přepravovány po vypršení termínu za účelem provedení inspekce nebo jejich likvidace, včetně mezilehlých přeprav.
- 4.1.6.11** Opravy musí vyhovovat výrobním a zkušebním požadavkům platných norem pro konstrukci a výrobu a jsou dovoleny jen podle norem vztahujících se na periodické inspekce, které jsou uvedeny v kapitole 6.2. Na tlakových nádobách, jiných než je plášť uzavřených kryogenních nádob, nesmějí být opravovány:
- (a) praskliny nebo jiné defekty svarů;
 - (b) praskliny stěn;
 - (c) netěsnosti nebo vady materiálu stěny, čela nebo dna.
- 4.1.6.12** Nádoby nesmějí být předány k naplnění:

- (a) jsou-li poškozeny v takovém rozsahu, že tím může utrpět neporušenost nádoby nebo její provozní výstroje;
- (b) pokud nádoba a její provozní výstroj nebyly prohlédnuty a shledány v dobrém provozním stavu;
- (c) pokud vyžadovaná značení nádoby, týkající se certifikace, přezkoušení a plnění nejsou čitelná.

4.1.6.13 Naplněné nádoby nesmějí být předány k přepravě:

- (a) jsou-li netěsné;
- (b) jsou-li poškozeny v takovém rozsahu, že tím může utrpět neporušenost tlakové nádoby nebo její provozní výstroje;
- (c) pokud nádoba a její provozní výstroj nebyly prohlédnuty a shledány v dobrém provozním stavu;
- (d) pokud vyžadovaná značení nádoby, týkající se certifikace, přezkoušení a plnění nejsou čitelná.

4.1.6.14 Vlastníci musí, na základě odůvodněné žádosti od příslušného orgánu, poskytnout tomuto příslušnému orgánu všechny informace potřebné k prokázání shody tlakové nádoby v jazyce, jemuž příslušný orgán snadno rozumí. Musí spolupracovat s příslušným orgánem, na jeho žádost, při jakékoli akci směřující k vyloučení neshody tlakových nádob, které vlastní.

4.1.6.15 Pro UN tlakové nádoby platí normy ISO uvedené dále. Pro jiné tlakové nádoby se požadavky oddílu 4.1.6 považují za splněné, pokud byly použity příslušné následující normy:

Použitelné odstavce	Číslo	Název dokumentu
4.1.6.2	ISO 11114-1:1997	Přepřavitelné plynové lahve – Snášeniivost materiálů lahví a ventilů s plyným obsahem – část 1: Kovové materiály
	ISO 11114-2: 2000	Přepřavitelné plynové lahve – Snášeniivost materiálů lahví a ventilů s plyným obsahem – část 2: Nekovové materiály
4.1.6.4	ISO 11621:1997	Plynové lahve – Postupy pro změnu druhu plynu POZNÁMKA: EN verze této normy ISO splňuje požadavky a smí být rovněž použita.
4.1.6.8 Ventily s integrovanou ochranou	Příloha A k ISO 10297:2006	Plynové lahve - Ventily opakovaně plnitelných plynových lahví - Specifikace a zkoušky konstrukčního typu POZNÁMKA: EN verze této normy ISO splňuje požadavky a smí být rovněž použita.
	EN 13152: 2001 + A1:2003	Zkoušení a specifikace ventilů lahví na zkapalněné ropné plyny - samouzavíracích
	EN 13153: 2001 + A1:2003	Zkoušení a specifikace ventilů lahví na zkapalněné ropné plyny - ovládaných ručně
4.1.6.8 (b) a (c)	buď ISO 11117:1998 nebo ISO 11117:2008 + Cor 1:2009	Plynové lahve - Ochranné kloboučky ventilů a ochranná zařízení ventilů pro průmyslové a lékařské plynové lahve - Konstrukce, výroba a zkoušení
	EN 962:1996 + A2:2000	Ochranné kloboučky ventilů a ochranná zařízení ventilů pro průmyslové a lékařské plynové lahve - Konstrukce, výroba a zkoušení.
4.1.6.8 (b) a (c)	ISO 16111:2008	Přepřavitelná zásobníková zařízení na plyn – Vodík pohlcený v reverzibilním kovovém hydridu

4.1.7 Zvláštní ustanovení pro balení organických peroxidů (třídy 5.2) a samovolně se rozkládajících látek třídy 4.1

4.1.7.0.1 V případě organických peroxidů musí být všechny nádoby „účinně uzavřeny“. Pokud se může v kusu, v důsledku uvolňování plynu, vyvinout značný vnitřní tlak, může být opatřen odvětrávacím zařízením, za podmínky, že vypouštěný plyn nevyvolá nebezpečí, jinak musí být omezen stupeň plnění. Jakékoli odvětrávací zařízení musí být vyrobeno tak, aby kapalina neunikla, je-li kus v poloze

nastojato, a musí být schopno zamezit vniknutí nečistot. Vnější obal, pokud je, musí být zkonstruován tak, aby nebránil činnosti odvětrávacího zařízení.

4.1.7.1 Použití obalů (kromě IBC)

4.1.7.1.1 Obaly pro organické peroxidy a samovolně se rozkládající látky musí odpovídat požadavkům kapitoly 6.1 a musí splňovat její požadavky na zkoušky pro obalovou skupinu II.

4.1.7.1.2 Způsoby balení organických peroxidů a samovolně se rozkládajících látek jsou uvedeny v pokynu pro balení 520 a jsou označeny OP1 až OP8. Množství stanovená pro každý způsob balení jsou nejvyšší množství dovolená pro kus.

4.1.7.1.3 Způsoby balení vhodné pro jednotlivé již zařazené organické peroxidy a samovolně se rozkládající látky jsou uvedeny v tabulkách pododdílů 2.2.41.4 a 2.2.52.4.

4.1.7.1.4 Pro nové organické peroxidy, nové samovolně se rozkládající látky nebo nové přípravky již zařazených organických peroxidů nebo samovolně se rozkládajících látek musí být použit následující postup pro přiřazení vhodného způsobu balení:

(a) ORGANICKÝ PEROXID TYPU B nebo SAMOVOLNĚ SE ROZKLÁDÁJÍCÍ LÁTKA TYPU B:

Použit musí být způsob balení OP5, pokud organický peroxid (nebo samovolně se rozkládající látka) splňuje kriteria odstavce 20.4.3 (b) (resp. 20.4.2 (b)) Příručky zkoušek a kritérií v obalu dovoleném tímto způsobem balení. Pokud organický peroxid (nebo samovolně se rozkládající látka) splňuje tato kriteria pouze v menším obalu než těch, které jsou dovoleny způsobem balení OP5 (tj. jeden z obalů uvedených pro OP1 až OP4), musí se použít způsob balení s nižším OP číslem;

(b) ORGANICKÝ PEROXID TYPU C nebo SAMOVOLNĚ SE ROZKLÁDÁJÍCÍ LÁTKA TYPU C:

Použit musí být způsob balení OP6, pokud organický peroxid (nebo samovolně se rozkládající látka) splňuje kriteria odstavce 20.4.3 (c) (resp. 20.4.2 (c)) Příručky zkoušek a kritérií v obalu dovoleném tímto způsobem balení. Pokud organický peroxid (nebo samovolně se rozkládající látka) splňuje tato kriteria pouze v menším obalu než těch, které jsou dovoleny způsobem balení OP6 (tj. jeden z obalů uvedených pro OP1 až OP5), musí se použít způsob balení s nižším OP číslem;

(c) ORGANICKÝ PEROXID TYPU D nebo SAMOVOLNĚ SE ROZKLÁDÁJÍCÍ LÁTKA TYPU D:

Pro tento typ organického peroxidu nebo samovolně se rozkládající látky je nutno použít způsob balení OP7;

(d) ORGANICKÝ PEROXID TYPU E nebo SAMOVOLNĚ SE ROZKLÁDÁJÍCÍ LÁTKA TYPU E:

Pro tento typ organického peroxidu nebo samovolně se rozkládající látky je nutno použít způsob balení OP8;

(e) ORGANICKÝ PEROXID TYPU F nebo SAMOVOLNĚ SE ROZKLÁDÁJÍCÍ LÁTKA TYPU F:

Pro tento typ organického peroxidu nebo samovolně se rozkládající látky je nutno použít způsob balení OP8;

4.1.7.2 Použití velkých nádob pro volně ložené látky (IBC)

4.1.7.2.1 Již zařazené organické peroxidy, jmenovitě uvedené v pokynu pro balení IBC520, mohou být přepravovány v IBC podle tohoto pokynu pro balení. IBC musí odpovídat požadavkům kapitoly 6.5 a musí splňovat její požadavky na zkoušky pro obalovou skupinu II.

4.1.7.2.2 Jiné organické peroxidy a samovolně se rozkládající látky typu F smějí být přepravovány v IBC za podmínek stanovených příslušným orgánem země původu, pokud se příslušný orgán na základě vhodných zkoušek přesvědčí, že taková přeprava může být bezpečně provedena. Provedené zkoušky musí umožnit:

- (a) prokázat, že organický peroxid (nebo samovolně se rozkládající látka) vyhovují zásadám klasifikace uvedeným v odstavcích 20.4.3 (f) (resp. 20.4.2 (f)) Příručky zkoušek a kritérií, výsledné políčko F obrázku 20.1 (b) Příručky;
- (b) prokázat snášenlivost všech materiálů, které jsou normálně ve styku s látkou během přepravy;
- (c) stanovit, kdy je to použitelné, řízenou a kritickou teplotu pro uvažovanou přepravu látky v dotyčné IBC, v závislosti na SADT;
- (d) navrhnout, pokud je to použitelné, charakteristiky zařízení pro vyrovnávání tlaku a nouzového zařízení pro odlehčení tlaku; a
- (e) určit případná zvláštní opatření, nutná pro bezpečnou přepravu látky.

Jestliže země původu není smluvní stranou ADR, musí být klasifikace a přepravní podmínky uznány příslušným orgánem prvního státu smluvní strany ADR, se kterým zásilka přijde do styku.

4.1.7.2.3 Je nutno počítat se samourychlujícím se rozkladem a se zachvácením ohněm. Aby se předešlo výbušnému roztržení kovové IBC nebo kompozitní IBC s celokovovým pláštěm, musí být nouzová zařízení pro odlehčení tlaku zkonstruována tak, aby odvětrala všechny produkty rozkladu a páry vyvinuté během samourychlujícího se rozkladu nebo během časového úseku nejméně jedné hodiny úplného zachvácení ohněm, jak je vypočítáno podle rovnic uvedených v 4.2.1.13.8.

4.1.8 Zvláštní ustanovení pro balení infekčních látek (třída 6.2)

4.1.8.1 Odesílatel infekčních látek musí zaručit, že kusy jsou připraveny takovým způsobem, že dojedou do místa určení v dobrém stavu a nebudou představovat žádné nebezpečí pro osoby nebo zvířata během přepravy.

4.1.8.2 Definice v oddíle 1.2.1 a všeobecná ustanovení pro balení v pododdílech 4.1.1.1 až 4.1.1.17, kromě pododdílů 4.1.1.3, 4.1.1.9 až 4.1.1.12 a 4.1.1.15, platí pro kusy s infekčními látkami. Avšak kapaliny musí být plněny jen do obalů, které mají odpovídající odolnost proti vnitřnímu tlaku, který se může vyvinout za normálních podmínek přepravy.

4.1.8.3 Mezi sekundárním a vnějším obalem musí být vložen podrobný seznam obsahu kusu. Pokud jsou infekční látky, které se mají přepravovat, neznámé, avšak existuje podezření, že splňují kritéria pro zařazení do kategorie A, je nutno uvést v závorkách za oficiálním pojmenováním pro přepravu na dokladu vloženém do vnějšího obalu slova „podezření na infekční látku kategorie A“.

4.1.8.4 Před tím než se prázdný obal vrátí k odesílateli, nebo bude zaslán jinam, musí být vydesinfikován nebo aby se odstranilo jakékoli nebezpečí; všechny bezpečnostní značky a nápisy informující, že obsahoval infekční látku, musí být odstraněny nebo smazány.

4.1.8.5 Pokud je dodržena rovnocenná úroveň provedení jsou dovoleny následující varianty primárních nádob umístěných v sekundárním obalu, aniž by bylo třeba provést další zkoušení jednotky přepravního balení (kompletního kusu):

- (a) Primární nádoby stejných nebo menších rozměrů, než mají zkoušené nádoby, mohou být použity pokud:
 - (i) primární nádoby jsou podobné konstrukce jako zkoušené (např. tvaru: kruhového, pravoúhlého atd.);
 - (ii) materiál konstrukce primárních nádob (např. sklo, plasty, kov) poskytuje odolnost proti nárazu a stohovacím silám stejnou nebo lepší než odzkoušené nádoby;
 - (iii) primární nádoby mají stejné nebo menší otvory a uzávěr je rovnocenné konstrukce (např. šroubovací čepička, třecí víčko, atd.);
 - (iv) přiměřený dodatečný fixační materiál je použit pro vyplnění prázdných prostorů a pro

zabránění nekontrolovatelnému pohybu prvotních nádob; a

- (v) primární nádoby jsou orientovány v sekundárních obalech tak jako v zkoušeném kusu;
- (b) Menší počet zkoušených primárních nádob nebo alternativních typů primárních nádob uvedených výše v odstavci (a) může být používán, pokud je dostatečně doplněna fixace zaplňující volný(é) prostor(y) a zabráňující nekontrolovatelnému pohybu primárních nádob.

4.1.8.6 Pododdíly 4.1.8.1 až 4.1.8.5 se vztahují pouze na infekční látky kategorie A (UN čísel 2814 a 2900). Nevztahují se na UN 3373 BIOLOGICKÁ LÁTKA, KATEGORIE B (viz pokyn pro balení P 650 v 4.1.4.1), ani na UN 3291 ODPAD KLINICKÝ, NESPECIFIKOVANÝ, J.N. nebo ODPAD (BIO)MEDICINSKÝ, J.N. nebo ODPAD MEDICINSKÝ REGULOVANÝ, J.N.

4.1.8.7 Pro přepravu zvířecího materiálu nesmějí být používány obaly nebo IBC, které nejsou konkrétně dovoleny v příslušném pokynu pro balení pro přepravu látky nebo předmětu, pokud nejsou zvlášť schváleny příslušným orgánem země původu² a za podmínky, že

- (a) alternativní obal splňuje všeobecná ustanovení této části;
- (b) pokud tak stanoví pokyn pro balení udaný ve sloupci (8) tabulky A kapitoly 3.2, alternativní obal splňuje ustanovení části 6;
- (c) příslušný orgán země původu² rozhodne, že alternativní obal poskytuje alespoň stejnou úroveň bezpečnosti, jako kdyby látka byla zabalena podle metody uvedené v příslušném pokynu pro balení, udaném ve sloupci (8) tabulky A kapitoly 3.2; a
- (d) kopie schválení příslušného orgánu doprovází každou zásilku, nebo přepravní doklad obsahuje zápis, že alternativní obal byl schválen příslušným orgánem.

4.1.9 Zvláštní ustanovení pro balení pro látky třídy 7

4.1.9.1 Všeobecně

4.1.9.1.1 Radioaktivní látky, obaly a kusy musí splňovat požadavky kapitoly 6.4. Množství radioaktivních látek v kusu nesmí překročit mezní hodnoty uvedené v 2.2.7.2.2, 2.2.7.2.4.1, 2.2.7.2.4.4, 2.2.7.2.4.5, 2.2.7.2.4.6, zvláštní ustanovení 336 kapitoly 3.3.a 4.1.9.3.

Typy kusů radioaktivních látek dle ADR jsou

- (a) Vyjmutý kus (viz 1.7.1.5);
- (b) Průmyslový kus typu 1(Typ IP-1);
- (c) Průmyslový kus typu 2(Typ IP-2);
- (d) Průmyslový kus typu 3(Typ IP-3);
- (e) Kus typu A;
- (f) Kus typu B(U);
- (g) Kus typu B(M);
- (h) Kus typu C.

Kusy obsahující štěpný materiál nebo hexafluorid uranu jsou předmětem dodatečných požadavků.

4.1.9.1.2 Nestálé kontaminace vnějších povrchů kusů obalu musí být co nejnižší jak je prakticky možné a za běžných podmínek dopravy nesmí překročit následující mezní hodnoty:

- (a) 4 Bq/cm² pro beta a gama zářiče a nízkotoxické alfa zářiče; a
- (b) 0.4 Bq/cm² pro všechny ostatní alfa zářiče.

Tato mezní hodnoty platí, pokud prochází plochou o 300 cm² kterékoliv části povrchu.

² Není-li země původu členským státem ADR, příslušný orgán prvního členského státu ADR dotčeného zásilkou.

- 4.1.9.1.3** Kusy jiné než vyjmutý kus, nesmí obsahovat žádné jiné položky než ty, které jsou nezbytné pro používání radioaktivní látky. Za podmínek přepravy odpovídajících podmínkám vzatých s jinými předměty. Přeprava takovýchto předmětů a dokladů v baleních v úvahu v konstrukčím vzoru kusu nesmí vzájemné působení mezi těmito předměty a kusem snižovat bezpečnost kusu
- 4.1.9.1.4** Pokud není předepsáno jinak v oddílu 7.5.11, zvláštním ustanovením CV33, úroveň nestálých kontaminací vnějších a vnitřních povrchů přepravních obalových souborů, kontejnerů, cisteren, (IBC) a vozidel nesmí přesáhnout mezní hodnoty stanovené v 4.1.9.1.2.
- 4.1.9.1.5** Pro radioaktivní látky mající jiné nebezpečné vlastnosti musí konstrukce kusu vzít v úvahu tyto vlastnosti. Radioaktivní látky s vedlejším nebezpečím zabalené do kusů, které nevyžadují schválení příslušného orgánu, musí být přepravovány v obalech, IBC, cisternách nebo kontejnerech pro volně ložené látky, které plně vyhovují ustanovením příslušných kapitol části 6, jakož i příslušným ustanovením kapitol 4.1, 4.2 nebo 4.3 pro toto vedlejší nebezpečí.
- 4.1.9.1.6** Před první přepravou jakéhokoliv kusu s radioaktivní látkou musí být splněny následující požadavky:
- (a) přesahuje-li projektovaný přetlak zádržného systému 35 kPa, musí být zajištěno, aby zádržný systém každého kusu odpovídal schváleným požadavkům projektu vzhledem ke schopnosti tohoto systému zachovat si celistvost při vystavení takovému tlaku;
 - (b) pro každý kus typu B(U), B(M) a C a pro každou radioaktivní zásilku obsahující štěpný materiál musí být zajištěno, aby efektivnost stínění a zádržného systému, a pokud je to zapotřebí, vlastnosti přenosu tepla a účinnost omezujícího systému, byly v rámci mezních hodnot, použitelných pro schválený konstrukční typ nebo v něm popsany;
 - (c) každý kus, který obsahuje štěpnou látku a do kterého byly účelově přidány neutronové jedy jako její součást, musí být podroben zkouškám ke zjištění přítomnosti a rozmístění těchto neutronových jedů, aby byla splněna ustanovení 6.4.11.1.
- 4.1.9.1.7** Před každým odesláním jakéhokoliv kusu musí být splněny následující požadavky
- (a) Pro každý kus musí být zaručeno, že všechny požadavky specifikované v příslušných ustanoveních ADR byly splněny;
 - (b) musí být zajištěno, aby všechny zdvihací úchyty, nesplňující podmínky uvedené v bodě 6.4.2.2, byly odstraněny nebo byly jiným způsobem učiněny nepoužitelnými pro zdvihání kusu v souladu s 6.4.2.3;
 - (c) pro každý kus, pro který se vyžaduje schválení příslušným orgánem, musí být zajištěno, že všechny podmínky stanovené v osvědčení o schválení byly splněny;
 - (d) každý kus typu B(U), B(M) a C a každá radioaktivní zásilka obsahující štěpný materiál nesmí být přepravována dříve, než dosáhne podmínek rovnováhy dostatečně blízkých podmínkám odpovídajícím požadavkům na teplotu a tlak při přepravě, pokud se nejedná o výjimku z těchto požadavků obsaženou v jednostranném schválení;
 - (e) pro každý kus typu B(U), B(M) a C musí být kontrolou a nebo vhodnými zkouškami prověřeno, že všechny uzávěry, ventily a jiné otvory kontejmentového systému, jimiž by mohl unikat radioaktivní obsah, jsou vhodným způsobem uzavřeny a popřípadně utěsněny způsobem u něhož bylo prokázáno, že splňuje požadavky uvedené v 6.4.8.8 a 6.4.10.3;
 - (f) každá radioaktivní látka zvláštní formy musí splňovat všechny podmínky stanovené v osvědčení o schválení a všechny odpovídající požadavky ADR;
 - (g) pro kusy obsahující štěpnou látku musí být zajištěno provedení měření popsaného v 6.4.11.4 (b) a zkoušky k prokázání uzavřenosti každého kusu podle 6.4.11.7, pokud to přichází v úvahu;
 - (h) každý kus s malou rozptýlitelností radioaktivní látky musí splňovat všechny podmínky stanovené v osvědčení o schválení a všechny odpovídající požadavky ADR.
- 4.1.9.1.8** Odesílatel musí mít k dispozici kopii všech pokynů s ohledem na správné uzavření kusu a všech opatření pro přípravu přepravy dříve, než bude přeprava provedena podle podmínek rozhodnutí o povolení.

- 4.1.9.1.9** S výjimkou přepravy za výlučného použití žádný kus nebo přepravní obalový soubor nesmí překročit přepravní index 10 a nesmí překročit index bezpečné podkritičnosti 50.
- 4.1.9.1.10** S výjimkou přepravy kusů a přepravních obalových souborů za podmínek výlučného použití specifikovaných v 7.5.11 v CV 33 (3.5) (a) nesmí příkon dávkového ekvivalentu kusu nebo přepravního obalového souboru překročit 2 mSv/h.
- 4.1.9.1.11** Maximální hodnota příkonu dávkového ekvivalentu na jakémkoliv místě vnějšího povrchu kusu nebo přepravního obalového souboru nesmí překročit 10 mSv/h.
- 4.1.9.2** **Požadavky a kontrolní opatření pro přepravu radioaktivních látek s malou specifickou aktivitou (LSA-látky) a povrchově kontaminované předměty (SCO-předměty)**
- 4.1.9.2.1** Množství LSA látky nebo SCO-předmětů v jednotlivém průmyslovém kusu Typu 1 (Typ IP-1), průmyslovém kusu Typu 2 (Typ IP-2), průmyslovém kusu Typu 3 (Typ IP-3), nebo předmětu nebo souboru předmětů, jakkoli je vhodné, musí být omezeno tak, že vnější radiační úroveň 3m od nestíněné látky nebo předmětu nebo souboru předmětů nebude vyšší než 10 mSv/h.
- 4.1.9.2.2** LSA-látky a předměty SCO, které jsou štěpnými látkami anebo takové obsahují, musí splnit příslušné požadavky požadavky (ustanovení) 6.4.11.1 a 7.5.11 ,CV33 (4.1) a (4.2).
- 4.1.9.2.3** LSA-látky materiál a SCO-předměty ve skupinách LSA-I a SCO-I mohou být přepravovány nezabalené za následujících podmínek:
- (a) všechny nezabalené látky, s výjimkou rud, obsahující výlučně radionuklidy vyskytující se v přírodě, musí být přepravovány takovým způsobem, že za běžných podmínek přepravy nedojde k úniku radioaktivního obsahu z vozu a neztratí se clonění;
 - (b) každé vozidlo musí být pod výlučným použitím (výlučně použít) s výjimkou, pokud přepravuje výhradně SCO-I-předměty, u kterých není kontaminace přístupného i nepřístupného povrchu větší než 10x než jsou hodnoty udávané v pododdílu 2.2.7.1.2; a
 - (c) lze-li u SCO-I-předmětů předpokládat, na existenci nestálé kontaminace u nepřístupných povrchů, která převyšující hodnoty uvedené v pododdílu 2.2.7.2.3.2 (a) (i), musí být učiněna opatření, která zajistí, že radioaktivní látky nemohou uniknout do vozidla.
- 4.1.9.2.4** LSA-látky a SCO-předměty jsou, pokud není v 4.1.9.2.3. stanoveno jinak, jsou typy kusů baleny v souladu s následující tabulkou:

Požadavky pro LSA látky a SCO-předměty průmyslových kusů

Radioaktivní obsahy	Druh průmyslového kusu	
	Výlučné použití	Ne pod výlučným použitím
LSA-I Tuhé ^a Kapalné	Typ IP-1 Typ IP-1	Typ IP-1 Typ IP-2
LSA-II Tuhé Kapalné plynné a	Typ IP-2 Typ IP-2	Typ IP-2 Typ IP-3
LSA-III	Typ IP-2	Typ IP-3
SCO-I ^a	Typ IP-1	Typ IP-1
SCO-II	Typ IP-2	Typ IP-2

^a Za podmínek stanovených v 4.1.9.2.3, LSA-I-látky a SCO-I-předměty mohou být přepravovány nezabalené.

4.1.9.3 Kusy obsahující štěpný materiál

S výjimkou látek nezatříděných jako štěpné v souladu s 2.2.7.2.3.5, kusy obsahující štěpné materiály nesmí obsahovat:

- (a) hmotnost štěpného materiálu nebo hmotnost každého štěpného nuklidu pro směsi, je-li to náležitě, odlišnou od té, která byla určena pro daný konstrukční typ;
- (b) jakékoliv radionuklidy nebo štěpné materiály odlišné od těch, které byly určeny pro daný konstrukční typ; nebo
- (c) radioaktivní obsah v podobě fyzikální nebo chemického stavu nebo ve speciálním uspořádání jiném, než které byly určeny pro daný konstrukční typ;

jak je uvedeno v rozhodnutích o jejich schválení.

4.1.10 Zvláštní ustanovení pro společné balení

4.1.10.1 Pokud je na základě ustanovení tohoto oddílu dovoleno společné balení, mohou být různé nebezpečné věci, nebo nebezpečné věci a jiné věci baleny společně do skupinových obalů podle pododdílu 6.1.4.21, za podmínky, že spolu vzájemně nebezpečně nereagují a že jsou dodržena všechna ostatní příslušná ustanovení této kapitoly.

POZNÁMKA 1: Viz též pododdíly 4.1.1.5 a 4.1.1.6.

POZNÁMKA 2: K věcem třídy 7 viz oddíl 4.1.9.

4.1.10.2 S výjimkou kusů, které obsahují pouze věci třídy 1, nebo pouze látky třídy 7, nesmí kus, který obsahuje různé věci balené společně, vážit více než 100 kg, pokud jsou jako vnější obaly použity dřevěné nebo lepenkové bedny.

4.1.10.3 Pokud příslušné zvláštní ustanovení v pododdílu 4.1.10.4 nestanoví jinak, smějí být společně baleny nebezpečné věci téže třídy a téhož klasifikačního kódu.

4.1.10.4 Je-li pro danou položku uveden údaj ve sloupci (9b) tabulky A kapitoly 3.2, použije se následujících zvláštních ustanovení pro společné balení věcí přiřazených k této položce s jinými věcmi do jednoho kusu.

- MP 1 Mohou být baleny společně jenom s věcmi stejného druhu stejné skupiny snášenlivosti.
- MP 2 Nesmějí být baleny společně s jinými věcmi.
- MP 3 Společné balení UN čísla 1873 s UN číslem 1802 je dovoleno.
- MP 4 Nesmějí být baleny společně s věcmi jiných tříd, nebo s věcmi, které nepodléhají ustanovením ADR. Nicméně, je-li organický peroxid tužidlem nebo vícesložkovým systémem pro látky třídy 3, je dovoleno společné balení s těmito látkami třídy 3.
- MP 5 UN čísla 2814 a 2900 mohou být balena společně do skupinového obalu podle pokynu pro balení P620. Nesmějí být baleny společně s jinými věcmi; toto se netýká látek biologických, kategorie B (UN číslo 3373), balených podle pokynu pro balení P650, nebo látek přidávaných jako chladiva, např. led, suchý led nebo hluboce zchlazený zkapalněný dusík.
- MP 6 Nesmějí být baleny společně s jinými věcmi. Toto se netýká látek přidávaných jako chladiva, např. led, suchý led nebo hluboce zchlazený zkapalněný dusík.
- MP 7 Pokud množství nepřevyšuje 5 litrů na vnitřní obal, mohou být baleny společně do skupinového obalu podle pododdílu 6.1.4.21:

- s věcmi stejné třídy zahrnutými pod jiné klasifikační kódy, je-li společné balení dovoleno též pro tyto věci; nebo
 - s věcmi, které nepodléhají ustanovením ADR,
- pod podmínkou, že spolu vzájemně nebezpečně nereagují.
- MP 8 Pokud množství nepřevyší 3 litry na vnitřní obal, mohou být baleny společně do skupinového obalu podle pododdílu 6.1.4.21:
- s věcmi stejné třídy zahrnutými pod jiné klasifikační kódy, je-li společné balení dovoleno též pro tyto věci; nebo
 - s věcmi, které nepodléhají ustanovením ADR,
- pod podmínkou, že spolu vzájemně nebezpečně nereagují.
- MP 9 Mohou být baleny společně do vnějšího obalu pro skupinové obaly podle pododdílu 6.1.4.21:
- s jinými věcmi třídy 2;
 - s věcmi jiných tříd, je-li společné balení dovoleno též pro tyto věci; nebo
 - s věcmi, které nepodléhají ustanovením ADR,
- pod podmínkou, že spolu vzájemně nebezpečně nereagují.
- MP 10 Pokud množství nepřevyší 5 kg na vnitřní obal, mohou být baleny společně do skupinového obalu podle pododdílu 6.1.4.21:
- s věcmi stejné třídy zahrnutými pod jiné klasifikační kódy, nebo s věcmi jiných tříd, je-li společné balení dovoleno též pro tyto věci; nebo
 - s věcmi, které nepodléhají ustanovením ADR,
- pod podmínkou, že spolu vzájemně nebezpečně nereagují.
- MP 11 Pokud množství nepřevyší 5 kg na vnitřní obal, mohou být baleny společně do skupinového obalu podle pododdílu 6.1.4.21:
- s věcmi stejné třídy zahrnutými pod jiné klasifikační kódy, nebo s věcmi jiných tříd (kromě látek obalové skupiny I nebo II třídy 5.1.), je-li společné balení dovoleno též pro tyto věci; nebo
 - s věcmi, které nepodléhají ustanovením ADR,
- pod podmínkou, že spolu vzájemně nebezpečně nereagují.
- MP 12 Pokud množství nepřevyší 5 kg na vnitřní obal, mohou být baleny společně do skupinového obalu podle pododdílu 6.1.4.21:
- s věcmi stejné třídy zahrnutými pod jiné klasifikační kódy, nebo s věcmi jiných tříd (kromě látek obalové skupiny I nebo II třídy 5.1.), je-li společné balení dovoleno též pro tyto věci; nebo
 - s věcmi, které nepodléhají ustanovením ADR,
- pod podmínkou, že spolu vzájemně nebezpečně nereagují.
- Hmotnost kusu nesmí být větší než 45 kg. Jestliže jsou jako vnější obaly použity

- lepenkové bedny, potom kus nesmí vážit více než 27 kg.
- MP 13 Pokud množství nepřevyšší 3 kg na vnitřní obal a na kus, mohou být baleny společně do skupinového obalu podle pododdílu 6.1.4.21:
- s věcmi stejné třídy zahrnutými pod jiné klasifikační kódy, nebo s věcmi jiných tříd, je-li společné balení dovoleno též pro tyto věci; nebo
 - s věcmi, které nepodléhají ustanovením ADR,
- pod podmínkou, že spolu vzájemně nebezpečně nereagují.
- MP 14 Pokud množství nepřevyšší 6 kg na vnitřní obal, mohou být baleny společně do skupinového obalu podle pododdílu 6.1.4.21:
- s věcmi stejné třídy zahrnutými pod jiné klasifikační kódy, nebo s věcmi jiných tříd, je-li společné balení dovoleno též pro tyto věci; nebo
 - s věcmi, které nepodléhají ustanovením ADR,
- pod podmínkou, že spolu vzájemně nebezpečně nereagují.
- MP 15 Pokud množství nepřevyšší 3 litry na vnitřní obal, mohou být baleny společně do skupinového obalu podle pododdílu 6.1.4.21:
- s věcmi stejné třídy zahrnutými pod jiné klasifikační kódy, nebo s věcmi jiných tříd, je-li společné balení dovoleno též pro tyto věci; nebo
 - s věcmi, které nepodléhají ustanovením ADR,
- pod podmínkou, že spolu vzájemně nebezpečně nereagují.
- MP 16 Pokud množství nepřevyšší 3 litry na vnitřní obal a na kus, mohou být baleny společně do skupinového obalu podle pododdílu 6.1.4.21:
- s věcmi stejné třídy zahrnutými pod jiné klasifikační kódy, nebo s věcmi jiných tříd, je-li společné balení dovoleno též pro tyto věci; nebo
 - s věcmi, které nepodléhají ustanovením ADR,
- pod podmínkou, že spolu vzájemně nebezpečně nereagují.
- MP 17 Pokud množství nepřevyšší 0,5 litru na vnitřní obal a 1 litr na kus, mohou být baleny společně do skupinového obalu podle pododdílu 6.1.4.21:
- s věcmi jiných tříd, kromě třídy 7, je-li společné balení dovoleno též pro tyto věci; nebo
 - s věcmi, které nepodléhají ustanovením ADR,
- pod podmínkou, že spolu vzájemně nebezpečně nereagují.
- MP 18 Pokud množství nepřevyšší 0,5 kg na vnitřní obal a 1 kg na kus, mohou být baleny společně do skupinového obalu podle pododdílu 6.1.4.21:
- s věcmi nebo předměty jiných tříd, kromě třídy 7, je-li společné balení dovoleno též pro tyto věci nebo předměty; nebo
 - s věcmi, které nepodléhají ustanovením ADR,
- pod podmínkou, že spolu vzájemně nebezpečně nereagují.

- MP 19 Pokud množství nepřevyší 5 litrů na vnitřní obal, mohou být baleny společně do skupinového obalu podle pododdílu 6.1.4.21:
- s věcmi stejné třídy zahrnutými pod jiné klasifikační kódy, nebo s věcmi jiných tříd, je-li společné balení dovoleno též pro tyto věci; nebo
 - s věcmi, které nepodléhají ustanovením ADR,
- pod podmínkou, že spolu vzájemně nebezpečně nereagují.
- MP 20 Mohou být baleny společně s látkami zahrnutými pod stejné UN číslo.
- Nesmějí být baleny společně s věcmi a předměty třídy 1, které mají rozdílná UN čísla, pokud to není stanoveno zvláštním ustanovením MP 24.
- Nesmějí být baleny společně s věcmi jiných tříd, nebo s věcmi, které nepodléhají ustanovením ADR.
- MP 21 Mohou být baleny společně s předměty zahrnutými pod stejné UN číslo.
- Nesmějí být baleny společně s věcmi třídy 1, které mají rozdílná UN čísla, kromě
- (a) svých vlastních rozněcovacích prostředků, pod podmínkou, že
- (i) rozněcovací prostředky se neuvedou do činnosti za normálních podmínek přepravy; nebo
 - (ii) takovéto prostředky mají nejméně dvě účinná pojistná zařízení, která zabrání výbuchu předmětu v případě náhodného uvedení rozněcovacích prostředků do činnosti; nebo
 - (iii) u rozněcovacích prostředků, které nemají dvě účinná pojistná zařízení (tj. rozněcovací prostředky přiřazené ke skupině snášenlivosti B), nezpůsobí podle názoru příslušného orgánu země původu³ náhodné uvedení rozněcovacího zařízení v činnost výbuch předmětu za normálních podmínek přepravy;
- (b) předmětů skupin snášenlivosti C, D a E.
- Nesmějí být baleny společně s věcmi jiných tříd, nebo s věcmi, které nepodléhají ustanovením ADR.
- Pokud jsou věci baleny společně podle tohoto zvláštního ustanovení, je nutno vzít v úvahu možnost změny klasifikace kusů v souladu s pododdílem 2.2.1.1. K popisu věcí v přepravním dokladu viz 5.4.1.2.1 (b).
- MP 22 Mohou být baleny společně s předměty zahrnutými pod stejné UN číslo.
- Nesmějí být baleny společně s věcmi třídy 1, které mají rozdílná UN čísla, s výjimkou
- (a) svých vlastních rozněcovacích prostředků, pod podmínkou, že se rozněcovací prostředky neuvedou do činnosti za normálních podmínek přepravy; nebo
 - (b) předmětů skupin snášenlivosti C, D a E; nebo
 - (c) je-li to stanoveno zvláštním ustanovením MP 24.
- Nesmějí být baleny společně s věcmi jiných tříd, nebo s věcmi, které nepodléhají ustanovením ADR.

³ Není-li země původu smluvním stranou ADR, je vyžadováno schválení příslušným orgánem prvního členského státu ADR, do něhož zásilka vstoupí.

Pokud jsou věci baleny společně podle tohoto zvláštního ustanovení, je nutno vzít v úvahu možnost změny klasifikace kusů v souladu s pododdílem 2.2.1.1. K popisu věcí v přepravním dokladu viz 5.4.1.2.1 (b).

MP 23 Mohou být baleny společně s předměty zahrnutými pod stejné UN číslo.

Nesmějí být baleny společně s věcmi a předměty třídy 1, které mají rozdílná UN čísla, avšak s výjimkou

(a) svých vlastních rozněcovacích prostředků, pod podmínkou, že se tyto rozněcovací prostředky neuvedou v činnost za normálních podmínek přepravy; nebo

(b) je-li to stanoveno zvláštním ustanovením MP 24.

Nesmějí být baleny společně s věcmi jiných tříd, nebo s věcmi, které nepodléhají ustanovením ADR.

Pokud jsou věci balené společně podle tohoto zvláštního ustanovení, je nutno vzít v úvahu možnost změny klasifikace kusů v souladu s pododdílem 2.2.1.1. K popisu věcí v přepravním dokladu viz 5.4.1.2.1 (b).

MP 24 Mohou být baleny společně s věcmi UN čísel uvedených níže v tabulce, za následujících podmínek :

- pokud je v tabulce uvedeno písmeno A, věci s těmito UN čísly mohou být baleny společně do jednoho kusu bez jakéhokoli zvláštního omezení hmotnosti;
- pokud je v tabulce uvedeno písmeno B, věci s těmito UN čísly mohou být baleny společně do jednoho kusu až do celkové hmotnosti 50 kg výbušných látek.

Pokud jsou věci baleny společně podle tohoto zvláštního ustanovení, je nutno vzít v úvahu možnost změny klasifikace kusů v souladu s pododdílem 2.2.1.1. K popisu věcí v přepravním dokladu viz 5.4.1.2.1 (b).

KAPITOLA 4.2

POUŽÍVÁNÍ PŘEMÍSTITELNÝCH CISTEREN A UN VÍCEČLÁNKOVÝCH KONTEJNERŮ NA PLYN (MEGC)

POZNÁMKA 1: *Pro nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny, cisternové kontejnery a cisternové výměnné nástavby s nádržemi vyrobenými z kovových materiálů, bateriová vozidla a vícečlankové kontejnery na plyn (MEGC) viz kapitola 4.3; pro cisterny z vyztužených plastů viz kapitola 4.4; pro cisterny pro podtlakové vyčerpávání odpadů viz kapitola 4.5.*

POZNÁMKA 2: *Přemístitelné cisterny a UN MEGC označené podle příslušných ustanovení kapitoly 6.7, avšak které byly schváleny ve státě, který není smluvní stranou ADR, mohou být přesto používány pro přepravu podle ADR.*

4.2.1 Všeobecná ustanovení pro používání přemístitelných cisteren pro přepravu látek třídy 1 a tříd 3 až 9.

4.2.1.1 Tento oddíl obsahuje všeobecná ustanovení vztahující se na používání přemístitelných cisteren pro přepravu látek tříd 1, 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 6.2, 7, 8 a 9. Kromě těchto všeobecných ustanovení musí přemístitelné cisterny splňovat požadavky na konstrukci, výrobu, kontrolu a zkoušení uvedené v oddíle 6.7.2. Látky musí být přepravovány v přemístitelných cisternách splňujících pokyny pro přemístitelné cisterny uvedené ve sloupci (10) tabulky A kapitoly 3.2, popsané v 4.2.5.2.6 (T1 až T23) a zvláštní ustanovení o přemístitelných cisternách uvedená ke každé látce ve sloupci (11) tabulky A kapitoly 3.2 a popsaná v pododdíle 4.2.5.3.

4.2.1.2 Přemístitelné cisterny musí být během přepravy přiměřeně chráněny proti poškození nádrže a provozní výstroje následkem podélného a příčného nárazu a převrácení. Jestliže jsou nádrže a provozní výstroj konstruovány tak, že odolávají nárazu nebo převrácení, tato ochrana se nevyžaduje. Příklady takové ochrany jsou uvedeny v 6.7.2.17.5.

4.2.1.3 Určité látky jsou chemicky nestálé. Tyto látky jsou připuštěny k přepravě pouze v tom případě, byla-li učiněna nezbytná opatření zabráňující nebezpečnému rozkladu, přeměně nebo polymerizaci během přepravy. Proto musí být věnována pozornost zejména tomu, aby nádrže neobsahovaly látky, které jsou schopné podporovat tyto reakce.

4.2.1.4 Teplota vnějšího povrchu nádrže, vyjma otvorů a jejich uzávěrů nebo tepelné izolace, nesmí během přepravy přesáhnout 70 °C. Pokud je to nezbytné, nádrž musí být tepelně izolována.

4.2.1.5 Prázdné nevyčištěné a neodplyněné přemístitelné cisterny musí splňovat tytéž požadavky jako přemístitelné cisterny naplněné předchozí látkou.

4.2.1.6 Látky, které mohou spolu nebezpečně reagovat (viz definice pro „nebezpečnou reakci“ v oddíle 1.2.1), nesmějí být přepravovány v těch samých nebo v sousedních komorách nádrží.

4.2.1.7 Osvědčení o schválení typu, zkušební protokol a osvědčení obsahující výsledky první inspekce a zkoušky každé přemístitelné cisterny vydané příslušným orgánem nebo jím pověřenou organizací, musí být uloženy u příslušného orgánu nebo jím pověřené organizace a u držitele. Držitelé musí být schopni předložit tuto dokumentaci na požádání jakéhokoli příslušného orgánu.

4.2.1.8 Pokud pojmenování přepravované(ých) látky(ek) není uvedeno na kovovém štítku uvedeném v 6.7.2.20.2, kopie osvědčení uvedeného v 6.7.2.18.1 musí být předložena na požádání příslušnému orgánu nebo jím pověřené instituci odesílatelem, příjemcem nebo zaslátelelem.

4.2.1.9 Stupeň plnění

4.2.1.9.1 Před plněním musí odesílatel zajistit, že bude použita vhodná přemístitelná cisterna a že tato cisterna nebude naplněna látkami, které při styku s materiálem nádrže, těsněními, provozní výstrojí a případným ochranným vnitřním povlakem nejsou náchylné nebezpečně s nimi reagovat tvořením nebezpečných látek nebo značným zeslabením materiálů. Odesílatel musí v případě potřeby požádat výrobce látky ve spojení s příslušným orgánem o pokyny týkající se snášenlivosti látky s materiálem přemístitelné cisterny.

4.2.1.9.1.1 Přemístitelné cisterny nesmějí být plněny nad limity uvedené v 4.2.1.9.2 až 4.2.1.9.6. Uplatňování 4.2.1.9.2, 4.2.1.9.3 nebo 4.2.1.9.5.1 na jednotlivé látky je uvedeno v příslušných pokynech pro přemístitelné cisterny nebo ve zvláštních ustanoveních v 4.2.5.2.6 nebo pododdíle 4.2.5.3 a sloupcích (10) nebo (11) tabulky A kapitoly 3.2.

4.2.1.9.2 Pro všeobecné použití se stanoví nejvyšší stupeň plnění (v %) podle tohoto vzorce:

$$\text{Stupeň plnění} = \frac{97}{1 + \alpha (t_r - t_f)}$$

4.2.1.9.3 Nejvyšší stupeň plnění (v %) pro kapaliny třídy 6.1 a 8 pro obalové skupiny I a II, jakož i pro kapaliny s absolutním tlakem par vyšším než 175 kPa (1.75 bar) při 65 °C se stanoví podle tohoto vzorce:

$$\text{Stupeň plnění} = \frac{95}{1 + \alpha (t_r - t_f)}$$

4.2.1.9.4 V tomto vzorci α znamená střední součinitel objemové roztažnosti kapaliny mezi střední teplotou kapaliny během plnění (t_f) a nejvyšší střední teplotou naplněné látky během přepravy (t_r) (obě ve °C). Pro kapaliny přepravované za okolních podmínek může být α vypočten individuálně podle vzorce:

$$\alpha = \frac{d_{15} - d_{50}}{35 d_{50}}$$

ve kterém d_{15} a d_{50} jsou hustoty kapaliny při 15 °C, resp. 50 °C.

4.2.1.9.4.1 Nejvyšší střední teplota naplněné látky (t_r) musí být uvažována 50 °C, kromě přeprav při řízené teplotě nebo přeprav při extrémních klimatických podmínkách, kdy zainteresované příslušné orgány mohou souhlasit s nižší nebo mohou požadovat vyšší teplotu, pokud je to vhodné.

4.2.1.9.5 Ustanovení 4.2.1.9.2 až 4.2.1.9.4.1 se nevztahují na přemístitelné cisterny, které obsahují látky udržované během přepravy při teplotě vyšší než 50°C (např. ohřívacím zařízením). Pro přemístitelné cisterny vybavené ohřívacím zařízením musí být použit tepelný regulátor pro zajištění, že nejvyšší stupeň plnění nepřekročí nikdy 95 % během přepravy.

4.2.1.9.5.1 Nejvyšší stupeň plnění (v %) pro tuhé látky přepravované při teplotě vyšší, než je jejich bod tání, a pro kapaliny přepravované při zvýšené teplotě se stanoví podle tohoto vzorce:

$$\text{Stupeň plnění} = 95 \frac{d_r}{d_f}$$

ve kterém d_r a d_f jsou hustoty kapaliny při střední teplotě kapaliny během plnění a případně nejvyšší střední teplotě naplněné látky během přepravy.

4.2.1.9.6 Přemístitelné cisterny nesmějí být předány k přepravě:

- jestliže stupeň plnění, u kapalin majících viskozitu menší než 2680 mm²/s při 20 °C nebo nejvyšší teplotu látky během přepravy v případě zahřáté látky, je vyšší než 20 %, ale menší než 80 %, ledaže by nádrže přemístitelných cisteren byly rozděleny přepážkami nebo peřejníky na komory o vnitřním objemu nejvýše 7500 litrů;
- se zbytkem látek v ní předtím přepravovaných, ulpívajícím na vnějším povrchu nádrže nebo provozní výstroje;

- (c) pokud netěsní nebo jsou poškozeny takovým způsobem, že může být ovlivněna celistvost přemístitelné cisterny nebo jejich zvedacích nebo upevňovacích zařízení a
- (d) pokud provozní výstroj nebyla přezkoušena a shledána v dobrém provozním stavu.

4.2.1.9.7 Kapsy pro zvedací vidlice u přemístitelných cisteren musí být během plnění cisteren uzavřeny. Toto ustanovení se nevztahuje na přemístitelné cisterny, jejichž kapsy pro zvedací vidlice nemusí být podle 6.7.2.17.4 opatřeny uzávěry.

4.2.1.10 *Dodatečná ustanovení pro přepravu látek třídy 3 v přemístitelných cisternách*

4.2.1.10.1 Všechny přemístitelné cisterny určené pro přepravu hořlavých kapalných látek musí být uzavřeny a opatřeny zařízeními pro vyrovnávání tlaku podle pododdílů 6.7.2.8 až 6.7.2.15.

4.2.1.10.1.1 U přemístitelných cisteren určených pouze pro pozemní dopravu smí být použity otevřené větrací systémy, pokud je to dovoleno podle kapitoly 4.3.

4.2.1.11 *Dodatečná ustanovení vztahující se na přepravu látek tříd 4.1 (kromě samovolně se rozkládajících látek), 4.2 nebo 4.3 v přemístitelných cisternách*

(Vyhrazeno)

POZNÁMKA: Pro samovolně se rozkládající látky třídy 4.1 viz. 4.2.1.13.1.

4.2.1.12 *Dodatečná ustanovení vztahující se na přepravu látek třídy 5.1 v přemístitelných cisternách*

(Vyhrazeno)

4.2.1.13 *Dodatečná ustanovení vztahující se na přepravu látek třídy 5.2 a samovolně se rozkládajících látek třídy 4.1 v přemístitelných cisternách*

4.2.1.13.1 Každá látka musí být zkoušena a zpráva předána příslušnému orgánu země původu ke schválení. Sdělení o tom musí být zasláno příslušnému orgánu země určení. Sdělení musí obsahovat relevantní přepravní informace a zprávu s výsledky zkoušek. Provedené zkoušky musí zahrnovat nejméně:

- (a) Prokázání snášenlivosti všech materiálů přicházejících normálně do styku s látkou během přepravy;
- (b) Získání údajů pro konstrukci zařízení pro vyrovnávání tlaku a nouzových pojistných zařízení s přihlédnutím ke konstrukčním charakteristikám přemístitelné cisterny.

Jakékoli dodatečné požadavky nezbytné pro bezpečnou přepravu látky musí být jasně popsány ve zprávě.

4.2.1.13.2 Následující ustanovení se vztahují na přemístitelné cisterny určené pro přepravu organických peroxidů typu F nebo samovolně se rozkládajících látek typu F s teplotou samourchlujícího se rozkladu (SADT) 55 °C nebo vyšší. V případě odlišnosti těchto ustanovení upřednostňují se tato před ustanoveními uvedenými v oddílu 6.7.2. Nouzové situace, které musí být vzaty v úvahu, jsou i samourchlující se rozklad látky a požár jak je popsáno v 4.2.1.13.8.

4.2.1.13.3 Dodatečné požadavky pro přepravu organických peroxidů nebo samovolně se rozkládajících látek s teplotou SADT menší než 55°C v přemístitelných cisternách musí být stanoveny příslušným orgánem země původu. Sdělení o tom musí být zasláno příslušnému orgánu země určení.

4.2.1.13.4 Přemístitelná cisterna musí být konstruována pro zkušební tlak nejméně 0.4 MPa (4 bary).

4.2.1.13.5 Přemístitelné cisterny musí být opatřeny přístroji snímajícími teplotu.

4.2.1.13.6 Přemístitelné cisterny musí být opatřeny zařízeními pro vyrovnávání tlaku a nouzovými pojistnými zařízeními. Podtlaková pojistná zařízení mohou být též použita. Zařízení pro vyrovnávání tlaku musí fungovat při tlacích stanovených jednak podle vlastností látky a jednak podle konstrukčních charakteristik přemístitelné cisterny. Tavné prvky v nádrži nejsou dovoleny.

4.2.1.13.7 Zařízení pro vyrovnávání tlaku musí tvořit pružinové ventily, určené k zamezení výrazného nárůstu tlaku v přemístitelné cisterně vlivem produktů rozkladu a par, které se uvolňují při teplotě 50 °C, . Průtok a otevírací tlak pojistných ventilů musí být stanoven na základě výsledků zkoušek uvedených v 4.2.1.13.1. Otevírací tlak však musí být takový, že v žádném případě nesmí unikat kapalina z ventilu(ů), jestliže se přemístitelná cisterna převrátí.

4.2.1.13.8 Nouzové pojistné zařízení smí být pružinového nebo průtržného typu nebo kombinací obou, konstruované pro odvětrání všech produktů rozkladu a par vyvíjejících se během doby nejméně jedné hodiny působení ohně, což se vypočte podle tohoto vzorce:

$$q = 70961 F A^{0,82}$$

kde:

q = absorpce tepla (W)
 A = mokrá plocha [m²]
 F = izolační faktor [-]
 F = 1 pro neizolované nádrže, nebo

$$F = \frac{U (923 - T)}{47032} \quad \text{pro izolované nádrže}$$

kde:

K = tepelná vodivost izolační vrstvy [Wm⁻¹K⁻¹]
 L = tloušťka izolační vrstvy [m]
 U = K/L = koeficient prostupu tepla izolace [Wm⁻²K⁻¹]
 T = teplota látky při odlehčených podmínkách [K]

Otevírací tlak nouzového(ých) pojistného(ých) zařízení musí být větší než tlak uvedený v 4.2.1.13.7 a stanoven na základě výsledků zkoušek uvedených v 4.2.1.13.1. Nouzová pojistná zařízení musí být dimenzována takovým způsobem, aby nejvyšší tlak v přemístitelné cisterně nikdy nepřekročil zkušební tlak cisterny.

POZNÁMKA: Příklad metody pro stanovení rozměrů nouzového pojistného zařízení je uveden v dodatku 5 Příručky zkoušek a kritérií.

4.2.1.13.9 Pro izolované přemístitelné cisterny průtok a nastavení nouzového(ých) pojistného(ých) zařízení musí být určeny se započtením ztráty izolace o velikosti 1 % celkové plochy povrchu.

4.2.1.13.10 Podtlakové pojistné vakuové ventily a pružinové ventily musí být vybaveny pojistkou proti prošlehnutí plamene. Povinně musí být věnována pozornost omezení nouzového průtoku způsobenému pojistkou proti prošlehnutí plamene.

4.2.1.13.11 Provozní výstroj, jako jsou ventily a vnější potrubí, musí být uspořádány tak, aby v nich nezůstala žádná látka po naplnění přemístitelné cisterny.

4.2.1.13.12 Přemístitelné cisterny mohou být buď izolovány, nebo chráněny slunečním štítem. Jestliže teplota SADT látky v přemístitelné cisterně je 55 °C nebo méně, nebo je-li přemístitelná cisterna vyrobena z hliníku, pak musí být kompletně izolovaná. Vnější povrch musí mít bílý nátěr nebo musí být proveden ze světlého kovu.

4.2.1.13.13 Stupeň plnění nesmí překročit 90 % při 15 °C.

4.2.1.13.14 Značení předepsané v 6.7.2.20.2 musí zahrnovat UN číslo a technický název se schválenou koncentrací dotyčné látky.

4.2.1.13.15 Organické peroxidy a samovolně se rozkládající látky zvláště uvedené v pokynu pro přemístitelné cisterny T23 v 4.2.5.2.6 smí být přepravovány v přemístitelných cisternách.

4.2.1.14 *Dodatečná ustanovení vztahující se na přepravu látek třídy 6.1 v přemístitelných cisternách*

(Vyhrazeno)

4.2.1.15 *Dodatečná ustanovení vztahující se na přepravu látek třídy 6.2 v přemístitelných cisternách*

(Vyhrazeno)

4.2.1.16 *Dodatečná ustanovení vztahující se na přepravu látek třídy 7 v přemístitelných cisternách*

4.2.1.16.1 Přemístitelné cisterny používané pro přepravu radioaktivních látek nesmějí být používány pro přepravu jiných věcí.

4.2.1.16.2 Stupeň plnění přemístitelných cisteren nesmí překročit 90 % nebo případně jinou hodnotu schválenou příslušným orgánem.

4.2.1.17 *Dodatečná ustanovení vztahující se na přepravu látek třídy 8 v přemístitelných cisternách*

4.2.1.17.1 Zařízení pro vyrovnávání tlaku přemístitelných cisteren používaných pro přepravu látek třídy 8 musí být podrobena kontrolám ve lhůtách nepřesahujících jeden rok.

4.2.1.18 *Dodatečná ustanovení vztahující se na přepravu látek třídy 9 v přemístitelných cisternách*

(Vyhrazeno)

4.2.1.19 *Dodatečná ustanovení vztahující se na přepravu tuhých látek při teplotě vyšší, než je jejich bod tání*

4.2.1.19.1 Tuhé látky přepravované nebo podávané k přepravě při teplotě vyšší, než je jejich bod tání, které nemají přiřazen pokyn pro přemístitelné cisterny ve sloupci (10) tabulky A kapitoly 3.2 nebo pokud se uvedený pokyn pro přemístitelné cisterny nevztahuje na přepravu při teplotě vyšší, než je jejich bod tání, mohou být přepravovány v přemístitelných cisternách, pokud jsou tuhé látky zařazeny ve třídách 4.1, 4.2, 4.3, 5.1, 6.1, 8 nebo 9 a nepředstavují žádnou vedlejší nebezpečí, kromě nebezpečí třídy 6.1 nebo třídy 8, a jsou v obalové skupině II nebo III.

4.2.1.19.2 Pokud není v tabulce A kapitoly 3.2 uvedeno jinak, přemístitelné cisterny používané pro přepravu těchto tuhých látek při teplotě vyšší, než je jejich bod tání, musí odpovídat ustanovením pokynu pro přemístitelné cisterny T4 pro tuhé látky obalové skupiny III nebo T7 pro tuhé látky obalové skupiny II. Přemístitelná cisterna, která zaručuje rovnocennou nebo vyšší úroveň bezpečnosti, může být vybrána podle 4.2.5.2.5. Nejvyšší stupeň plnění (v %) se stanoví podle 4.2.1.9.5 (TP3).

4.2.2 *Všeobecná ustanovení pro používání přemístitelných cisteren pro přepravu nezchlazených zkapalněných plynů a chemických látek pod tlakem*

4.2.2.1 Tento oddíl obsahuje všeobecná ustanovení vztahující se na používání přemístitelných cisteren pro přepravu nezchlazených zkapalněných plynů a chemických látek pod tlakem.

4.2.2.2 Přemístitelné cisterny musí splňovat požadavky pro konstrukci, výrobu, inspekci a zkoušky uvedené v oddíle 6.7.3. Nezchlazené zkapalněné plyny a chemické látky pod tlakem musí být přepravovány v přemístitelných cisternách odpovídajících pokynu pro přemístitelné cisterny T50 popsanému v 4.2.5.2.6 a všem zvláštním ustanovením pro přemístitelné cisterny uvedeným pro nezchlazené zkapalněné plyny ve sloupci (11) tabulky A kapitoly 3.2 a popsaným v pododdíle 4.2.5.3.

4.2.2.3 Během přepravy musí být přemístitelné cisterny přiměřeně chráněny proti poškození nádrže a provozní

výstroje při podélném a příčném nárazu a při převrácení. Pokud nádrž a provozní výstroj jsou konstruovány tak, že odolávají nárazům a převrácení, pak taková ochrana není třeba. Příklady takové ochrany jsou uvedeny v 6.7.3.13.5.

4.2.2.4 Určité nezchlazené zkapalněné plyny jsou chemicky nestálé. Ty jsou připuštěny k přepravě pouze tehdy, byla-li učiněna nezbytná opatření pro zabránění jejich nebezpečnému rozkladu, přeměny nebo polymerizace během přepravy. Proto musí být zejména věnována pozornost tomu, aby přemístitelné cisterny neobsahovaly žádné nezchlazené zkapalněné plyny náchylné podporovat tyto reakce.

4.2.2.5 Pokud název přepravovaného(ých) plynu(ů) není uveden na kovovém štítku popsaném v 6.7.3.16.2, musí být na požádání příslušného orgánu předložena odesilatelem, příjemcem nebo zasilatelem kopie osvědčení uvedeného v 6.7.3.14.1.

4.2.2.6 Prázdné nevyčištěné a neodplyněné přemístitelné cisterny musí splňovat stejné požadavky jako přemístitelné cisterny naplněné předešlým nezchlazeným zkapalněným plynem.

4.2.2.7 *Plnění*

4.2.2.7.1 Před plněním přemístitelné cisterny musí být cisterna zkontrolována, aby se zajistilo, že je schválena pro přepravu nezchlazeného zkapalněného plynu nebo hnací látky chemické látky pod tlakem a že nebude naplněna nezchlazeným zkapalněným plynem nebo chemickými látkami pod tlakem, které jsou při styku s materiály nádrže, těsněním, provozní výstrojí a s jakýmkoliv ochranným vnitřním povlakem náchylné nebezpečně reagovat a tvořit s nimi nebezpečné látky nebo značně zeslabovat tyto materiály. Během plnění musí být teplota nezchlazeného zkapalněného plynu nebo hnací látky chemických látek pod tlakem v rozsahu limitů konstrukčních teplot.

4.2.2.7.2 Nejvyšší hmotnost nezchlazeného zkapalněného plynu na litr vnitřního objemu nádrže (kg/l) nesmí překročit hustotu nezchlazeného zkapalněného plynu při 50 °C vynásobenou 0,95. Kromě toho nádrž nesmí být zcela naplněna kapalinou při 60 °C.

4.2.2.7.3 Přemístitelné cisterny nesmějí být plněny nad svou nejvyšší dovolenou celkovou hmotností a nad nejvyšší dovolenou užitečnou hmotností stanovenou pro každý přepravovaný plyn.

4.2.2.8 Přemístitelné cisterny nesmějí být předány k přepravě:

- (a) s neúplným naplněním, při kterém vlnění obsahu může způsobit vytváření nepřipustných hydraulických sil v nádrži;
- (b) při netěsnosti;
- (c) při poškození v takovém rozsahu, že může být ovlivněna celistvost cisterny nebo jejích zvedacích nebo upevňovacích zařízení a
- (d) pokud provozní výstroj nebyla přezkoušena a shledána v dobrém provozním stavu.

4.2.2.9 Kapsy pro zvedací vidlice u přemístitelných cisteren musí být během plnění cisteren uzavřeny. Toto ustanovení se nevztahuje na přemístitelné cisterny, které podle 6.7.3.13.4 nemusí být opatřeny uzavěry kapes pro zvedací vidlice.

4.2.3 *Všeobecná ustanovení pro používání přemístitelných cisteren pro přepravu hluboce zchlazených zkapalněných plynů*

4.2.3.1 Tento oddíl obsahuje všeobecná ustanovení vztahující se na používání přemístitelných cisteren pro přepravu hluboce zchlazených zkapalněných plynů.

4.2.3.2 Přemístitelné cisterny musí splňovat konstrukční, výrobní, kontrolní a zkušební požadavky uvedené v oddíle 6.7.4. Hluboce zchlazené zkapalněné plyny musí být přepravovány v přemístitelných cisternách odpovídajících pokynu pro přemístitelné cisterny T75 popsanému v 4.2.5.2.6 a zvláštním ustanovením pro přemístitelné cisterny uvedeným pro každý plyn ve sloupci (11) tabulky A kapitoly 3.2 a popsaným v pododdílu 4.2.5.3.

4.2.3.3 Přemístitelné cisterny musí být během přepravy přiměřeně chráněny proti poškození nádrže a provozní výstroje následkem podélného a příčného nárazu a převrácení. Pokud nádrž a provozní výstroj jsou

konstruovány tak, že odolávají nárazům a převrácení, potom taková ochrana není potřebná. Příklady takové ochrany jsou uvedeny v 6.7.4.12.5.

4.2.3.4 Pokud název přepravovaného(-ých) plynu(-ů) není uveden na kovovém štítku popsaném v 6.7.4.15.2, musí být předložena příslušnému orgánu na jeho žádost odesílatelem, příjemcem nebo zasilatelem kopie osvědčení uvedeného v 6.7.4.13.1.

4.2.3.5 Prázdné nevyčištěné a neodplyněné přemístitelné cisterny musí splňovat stejné požadavky jako přemístitelné cisterny naplněné předešlou látkou.

4.2.3.6 *Plnění*

4.2.3.6.1 Před plněním přemístitelné cisterny musí být cisterna zkontrolována, aby se zajistilo, že je schválena pro přepravu hluboce zchlazeného zkvapalného plynu a že nebude naplněna hluboce zchlazenými zkvapalnými plyny, které při styku s materiály nádrže, těsnění, provozní výstroje a jakéhokoli ochranného vnitřního povlaku jsou náchylné s nimi nebezpečně reagovat a tvořit s nimi nebezpečné látky nebo značně zeslabovat tyto materiály. Během plnění musí být teplota hluboce zchlazeného zkvapalného plynu v rozsahu limitů konstrukčních teplot.

4.2.3.6.2 Při hodnocení prvního stupně plnění musí být uvažován nezbytný čas pro předpokládanou přepravu včetně jakýchkoli zpoždění, která by mohla nastat. S výjimkou ustanovení v 4.2.3.6.3 a 4.2.3.6.4, musí být první stupeň plnění takový, aby při nárůstu teploty obsahu, kromě helia, při které tenze par se rovná nejvyššímu dovolenému provoznímu tlaku, vnitřní objem zaplněný kapalinou nepřesáhl 98 %.

4.2.3.6.3 Nádrže určené pro přepravu helia mohou být plněny do úrovně vstupu, avšak nikoliv nad vstup do zařízení pro vyrovnávání tlaku.

4.2.3.6.4 Vyšší první stupeň plnění může být povolen schválením příslušným orgánem, pokud očekávané trvání přepravy je podstatně kratší než doba, po kterou je přemístitelná cisterna naplněna.

4.2.3.7 *Skutečná zádržná doba*

4.2.3.7.1 Skutečná zádržná doba musí být vypočtena pro každou jízdu podle postupu uznaného příslušným orgánem na základě následujících faktorů::

- (a) referenční zádržná doba pro přepravovaný hluboce zchlazený zkvapalný plyn (viz 6.7.4.2.8.1) (jak je uvedeno na štítku zmíněném v 6.7.4.15.1);
- (b) skutečná plnicí hustota;
- (c) skutečný plnicí tlak;
- (d) nejnižší nastavený tlak zařízení pro omezení tlaku .

4.2.3.7.2 Skutečná zádržná doba musí být vyznačena buď na přemístitelné cisterně samé, nebo na kovovém štítku pevně připevněném na přemístitelné cisterně v souladu s 6.7.4.15.2.

4.2.3.8 Přemístitelné cisterny nesmějí být předány k přepravě:

- (a) s neúplným naplněním, při kterém vlnění obsahu může způsobit vytváření nepřípustných hydraulických sil v nádrži;
- (b) při netěsnosti;
- (c) při poškození v takovém rozsahu, že může být ovlivněna celistvost cisterny nebo jejího zvedacího nebo upevňovacího zařízení;
- (d) jestliže provozní výstroj nebyla přezkoušena a shledána v dobrém provozním stavu;
- (e) pokud skutečná zádržná doba pro přepravovaný hluboce zchlazený zkvapalný plyn nebyla stanovena v souladu s pododdílem 4.2.3.7 a přemístitelná cisterna není označena podle 6.7.4.15.2; a
- (f) pokud doba přepravy, při zvážení všech možných zdržení, která by mohla nastat, přesáhne skutečnou zádržnou dobu.

4.2.3.9 Kapsy pro zvedací vidlice u přemístitelných cisteren musí být během plnění cisteren uzavřeny. Toto ustanovení se nevztahuje na přemístitelné cisterny, které podle 6.7.4.12.4 nemusí být opatřeny uzávěry kapes pro zvedací vidlice.

4.2.4 Všeobecná ustanovení pro používání UN vícečlánkových kontejnerů na plyn (MEGC)

4.2.4.1 Tento oddíl obsahuje všeobecné požadavky vztahující se na používání vícečlánkových kontejnerů na plyn (MEGC) pro přepravu nezchlazených plynů uvedených v oddílu 6.7.5;

4.2.4.2 MEGC musí splňovat konstrukční, výrobní, kontrolní a zkušební požadavky uvedené v oddílu 6.7.5. Články MEGC musí být periodicky kontrolovány podle ustanovení uvedených v pokynu pro balení P200 pododdílu 4.1.4.1 a v pododdílu 6.2.1.6;

4.2.4.3 MEGC musí být během přepravy chráněny proti poškození článků a provozní výstroje při podélných a příčných nárazech a převrácení. Pokud jsou články a provozní výstroj konstruovány tak, že odolávají nárazům a převrácení, není je třeba tímto způsobem chránit. Příklady takové ochrany jsou uvedeny v 6.7.5.10.4.

4.2.4.4 Požadavky na periodickou zkoušku a inspekci MEGC jsou stanoveny v pododdílu 6.7.5.12. MEGC nebo jejich články nesmějí být nakládány nebo plněny poté, co měly být podrobeny periodické inspekci, avšak mohou být přepravovány po uplynutí předepsané časové lhůty pro její provedení.

4.2.4.5 Plnění

4.2.4.5.1 Před plněním MEGC musí být zkontrolováno, že je schválen pro plyn určený k přepravě a že splňuje příslušná ustanovení ADR.

4.2.4.5.2 Články MEGC musí být plněny podle provozních tlaků, stupňů plnění a ustanovení pro plnění stanovených v pokynu pro balení P200 pododdílu 4.1.4.1 pro specifický plyn plněný do každého článku. V žádném případě nesmí být MEGC nebo skupina článků plněna jako jednotka nad nejnižší provozní tlak jakéhokoli daného článku.

4.2.4.5.3 MEGC nesmějí být plněny nad svou nejvyšší dovolenou celkovou hmotnost.

4.2.4.5.4 Izolační ventily musí být uzavřeny po naplnění a musí zůstat uzavřeny během přepravy. Toxické plyny (plyny skupin T, TF, TC, TO, TFC a TOC) smějí být přepravovány pouze v MEGC, kde je každý článek vybaven izolačním ventilem.

4.2.4.5.5 Otvor(y) pro plnění musí být uzavřeny čepičkami nebo zátkami. Těsnost uzávěrů a výstroje musí být ověřena plničem po naplnění.

4.2.4.5.6 MEGC nesmějí být přistaveny k plnění,

a) pokud jsou poškozeny v takovém rozsahu, že může být ovlivněna celistvost tlakových nádob (článků) nebo jejich konstrukční a provozní výstroje;

b) pokud prohlídka tlakové nádoby a její konstrukční a provozní výstroje prokázala jejich nevyhovující stav; a

c) pokud není čitelné předepsané označení týkající se schválení, periodické zkoušky a plnění.

4.2.4.6 Naplněné MEGC nesmějí být předány k přepravě,

a) pokud jsou netěsné;

b) pokud jsou poškozeny v takovém rozsahu, že může být ovlivněna celistvost tlakových nádob (článků) nebo jejich konstrukční nebo provozní výstroje;

- c) pokud prohlídka tlakové nádoby a její konstrukční a provozní výstroje prokázala jejich nevyhovující stav; a
- d) pokud není čitelné předepsané označení týkající se schválení, periodické zkoušky a plnění.

4.2.4.7 Prázdné MEGC, které nebyly vyčištěny a odplyněny, musí splňovat tytéž požadavky jako MEGC naplněné předchozí látkou.

4.2.5 Pokyny a zvláštní ustanovení pro přemístitelné cisterny

4.2.5.1 Všeobecně

4.2.5.1.1 Tento oddíl obsahuje pokyny pro přemístitelné cisterny a zvláštní ustanovení vztahující se na nebezpečné věci, jejichž přeprava je povolena v přemístitelných cisternách. Každý pokyn pro přemístitelné cisterny je identifikován alfa-numerickým kódem (např. T1). Sloupec (10) tabulky A kapitoly 3.2 uvádí pokyn pro přemístitelné cisterny, který musí být použit pro každou látku, kterou je dovoleno přepravovat v přemístitelné cisterně. Jestliže pro určitou látku není ve sloupci (10) uveden žádný pokyn pro přemístitelné cisterny pak tuto látku není dovoleno přepravovat v přemístitelných cisternách, ledaže příslušný orgán vydal povolení, jak je uvedeno v pododdíle 6.7.1.3. Zvláštní ustanovení pro přemístitelné cisterny vztahující se na určité nebezpečné věci jsou uvedena ve sloupci (11) tabulky A kapitoly 3.2. Každé zvláštní ustanovení pro přemístitelné cisterny je identifikováno alfa-numerickým kódem (např. TP1). Přehled zvláštních ustanovení pro přemístitelné cisterny je uveden v pododdíle 4.2.5.3.

***Poznámka:** Plyny povolené pro přepravu v MEGC jsou uvedeny s písmenem (M) ve sloupci (10) tabulky A kapitoly 3.2.*

4.2.5.2 Pokyny pro přemístitelné cisterny

4.2.5.2.1 Pokyny pro přemístitelné cisterny se vztahují na nebezpečné věci tříd 1 až 9. Pokyny pro přemístitelné cisterny obsahují zvláštní informace týkající se ustanovení pro přemístitelné cisterny vztahující se na určité látky. Tato ustanovení musí být dodržena jako doplňující k všeobecným ustanovením uvedeným v této kapitole a v kapitole 6.7.

4.2.5.2.2 Pro látky tříd 1 a 3 až 9 pokyny pro přemístitelné cisterny uvádějí nejnižší zkušební tlak, minimální tloušťku stěny nádrže (z referenční oceli), požadavky na spodní otvory a požadavky na zařízení pro vyrovnávání tlaku. V pokynu pro přemístitelné cisterny T23 jsou uvedeny samovolně se rozkládající látky třídy 4.1 a organické peroxidy třídy 5.2, které je dovoleno přepravovat v přemístitelných cisternách, s příslušnými řízeními a kontrolními teplotami.

4.2.5.2.3 Na nezchlazené zkapalněné plyny se vztahuje pokyn pro přemístitelné cisterny T50. T50 uvádí nejvyšší dovolené provozní tlaky, požadavky na otvory pod hladinou kapaliny, požadavky na zařízení pro vyrovnávání tlaku a požadavky na nejvyšší hustotu plnění nezchlazených zkapalněných plynů, jejichž přeprava v přemístitelných cisternách je povolena.

4.2.5.2.4 Na hluboce zchlazené zkapalněné plyny se vztahuje pokyn pro přemístitelné cisterny T75.

4.2.5.2.5 *Určení odpovídajících pokynů pro přemístitelné cisterny*

Jestliže je ve sloupci (10) tabulky A kapitoly 3.2 u určité položky nebezpečných věcí uveden určitý pokyn pro přemístitelné cisterny, mohou být kromě toho používány také přemístitelné cisterny s vyššími minimálními zkušebními tlaky, většími tloušťkami stěn, přísnějšími požadavky na spodní otvory a zařízení pro vyrovnávání tlaku. Následující pokyny se vztahují na stanovení vhodných přemístitelných cistern, které mohou být používány pro přepravu jednotlivých látek:

Pokyn pro přemístitelné cisterny	Další dovolené pokyny pro přemístitelné cisterny
T1	T2, T3, T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22
T2	T4, T5, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22
T3	T4, T5, T6, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22
T4	T5, T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22
T5	T10, T14, T19, T20, T22
T6	T7, T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22
T7	T8, T9, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22
T8	T9, T10, T13, T14, T19, T20, T21, T22
T9	T10, T13, T14, T19, T20, T21, T22
T10	T14, T19, T20, T22
T11	T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22
T12	T14, T16, T18, T19, T20, T22
T13	T14, T19, T20, T21, T22
T14	T19, T20, T22
T15	T16, T17, T18, T19, T20, T21, T22
T16	T18, T19, T20, T22
T17	T18, T19, T20, T21, T22
T18	T19, T20, T22
T19	T20, T22
T20	T22
T21	T22
T22	Žádný
T23	Žádný

4.2.5.2.6 Pokyny pro přemístitelné cisterny

Pokyny pro přemístitelné cisterny stanoví požadavky vztahující se na přemístitelné cisterny, pokud jsou používány pro přepravu určitých látek. Pokyny pro přemístitelné cisterny T1 až T 22 stanoví příslušné nejnižší zkušební tlaky, minimální tloušťku nádrže (v mm referenční oceli), požadavky na zařízení pro vyrovnávání tlaku a požadavky na spodní otvory.

T1 - T22		POKYNY PRO PŘEMÍSTITELNÉ CISTERNY			T1 - T22
<i>Tyto pokyny pro přemístitelné cisterny se vztahují na kapalné a tuhé látky tříd 3 až 9. Všeobecná ustanovení oddílu 4.2.1 a požadavky oddílu 6.7.2 musí být dodrženy.</i>					
Pokyn pro přemístitelné cisterny	Nejnižší zkušební tlak (bar)	Minimální tloušťka nádrže (v mm referenční oceli) (viz 6.7.2.4)	Požadavky na zařízení pro vyrovnávání tlaku ^a (viz 6.7.2.8)	Požadavky na spodní otvory ^b (viz 6.7.2.6)	
T1	1,5	Viz 6.7.2.4.2	Normální	Viz 6.7.2.6.2	
T2	1,5	Viz 6.7.2.4.2	Normální	Viz 6.7.2.6.3	
T3	2,65	Viz 6.7.2.4.2	Normální	Viz 6.7.2.6.2	
T4	2,65	Viz 6.7.2.4.2	Normální	Viz 6.7.2.6.3	
T5	2,65	Viz 6.7.2.4.2	Viz 6.7.2.8.3	Nedovolený	
T6	4	Viz 6.7.2.4.2	Normální	Viz 6.7.2.6.2	
T7	4	Viz 6.7.2.4.2	Normální	Viz 6.7.2.6.3	
T8	4	Viz 6.7.2.4.2	Normální	Nedovolený	
T9	4	6 mm	Normální	Nedovolený	
T10	4	6 mm	Viz 6.7.2.8.3	Nedovolený	
T11	6	Viz 6.7.2.4.2	Normální	Viz 6.7.2.6.3	
T12	6	Viz 6.7.2.4.2	Viz 6.7.2.8.3	Viz 6.7.2.6.3	
T13	6	6 mm	Normální	Nedovolený	
T14	6	6 mm	Viz 6.7.2.8.3	Nedovolený	
T15	10	Viz 6.7.2.4.2	Normální	Viz 6.7.2.6.3	
T16	10	Viz 6.7.2.4.2	Viz 6.7.2.8.3	Viz 6.7.2.6.3	
T17	10	6 mm	Normální	Viz 6.7.2.6.3	
T18	10	6 mm	Viz 6.7.2.8.3	Viz 6.7.2.6.3	
T19	10	6 mm	Viz 6.7.2.8.3	Nedovolený	
T20	10	8 mm	Viz 6.7.2.8.3	Nedovolený	
T21	10	10 mm	Normální	Nedovolený	
T22	10	10 mm	Viz 6.7.2.8.3	Nedovolený	

^a Pokud je uvedeno slovo „Normální“, musí být splněny všechny požadavky uvedené v pododdílu 6.7.2.8, kromě požadavků uvedených v 6.7.2.8.3.

^b Pokud je v tomto sloupci uvedeno „Nedovolený“, nejsou spodní otvory dovoleny, je-li látka, která se má přepravovat, látkou kapalnou (viz 6.7.2.6.1). Pokud je látka, která se má přepravovat, látkou tuhou při všech teplotách, které se mohou vyskytnout za normálních podmínek přepravy, jsou spodní otvory odpovídající požadavkům uvedeným v 6.7.2.6.2 dovoleny.

T23		POKYN PRO PŘEMÍSTITELNÉ CISTERNY						T23	
<p><i>Tento pokyn pro přemístitelné cisterny se vztahuje na samovolně se rozkládající látky třídy 4.1 a na organické peroxidy třídy 5.2. Všeobecná ustanovení oddílu 4.2.1 a požadavky oddílu 6.7.2 musí být dodrženy. Dodatečná ustanovení pro samovolně se rozkládající látky třídy 4.1 a organické peroxidy třídy 5.2 v 4.2.1.13 musí být též dodržena.</i></p>									
UN č.	Látka	Nejnižší zkušební tlak (bar)	Minimální tloušťka nádrže (mm-referenční oceli)	Požadavky na spodní otvory	Požadavky na zařízení pro vyrovnávání tlaku	Stupeň plnění	Řízená teplota	Kritická teplota	
3109	<p>ORGANICKÝ PEROXID, TYP F, KAPALNÝ</p> <p>Terc-Butylhydroperoxid^a, s nejvýše 72% vody</p> <p>Kumylhydroperoxid, nejvýše 90% v ředidle typu A</p> <p>Di-terc-butylperoxid, Nejvýše 32% v ředidle typu A</p> <p>Isopropylkumylhydroperoxid, nejvýše 72% v ředidle typu A</p> <p>p-Menthylhydroperoxid, nejvýše 72 % v ředidle typu A</p> <p>Pinanylhydroperoxid, nejvýše 50% v ředidle typu A</p>	4	Viz 6.7.2.4.2	Viz 6.7.2.6.3	Viz 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	Viz 4.2.1.13.13			
3110	<p>ORGANICKÝ PEROXID, TYP F, TUHÝ</p> <p>Dikumylperoxid^b</p>	4	Viz 6.7.2.4.2	Viz 6.7.2.6.3	Viz 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	Viz 4.2.1.13.13			

^a Pokud byla provedena opatření pro dosažení bezpečnosti rovnocenné 65% terc-Butylhydroperoxidu a 35 % vody.

^b Maximální množství na přemístitelnou cisternu 2000 kg.

T23		POKYN PRO PŘEMÍSTITELNÉ CISTERNY (POKR.)					T23	
Tento pokyn pro přemístitelné cisterny se vztahuje na samovolně se rozkládající látky třídy 4.1 a na organické peroxidy třídy 5.2. Všeobecná ustanovení oddílu 4.2.1 a požadavky oddílu 6.7.2 musí být dodrženy. Dodatečná ustanovení pro samovolně se rozkládající látky třídy 4.1 a organické peroxidy třídy 5.2 v 4.2.1.13 musí být též dodržena.								
UN č.	Látka	Nejnižší zkušební tlak (bar)	Minimální tloušťka nádrže (mm-referenční oceli)	Požadavky na spodní otvory	Požadavky na zařízení pro vyrovnání tlaku	Stupeň plnění	Rízená teplota	Kritická teplota
3119	ORGANICKÝ PEROXID, TYP F, KAPALNÝ, ŘÍZENÁ TEPLOTA terc-Amylperoxyneodecanoat, nejvýše 47 % v ředidle typu A Terc-Butylperoxyacetat, nejvýše 32% v ředidle typu B terc-Butylperoxy-2-ethylhexanoát, nejvýše 32% v ředidle typu B terc-Butylperoxypivalát, nejvýše 27% v ředidle typu B terc-Butylperoxy-3,5,5-trimethylhexanoát, nejvýše 32% v ředidle typu B Di-(3,5,5-trimethylhexanoyl)peroxid, nejvýše 38 % v ředidle typu A nebo typu B Kyselina peroxyoctová, destilovaná, typu F, stabilizovaná ^c	4	Viz 6.7.2.4.2	Viz 6.7.2.6.3	Viz 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	Viz 4.2.1.13.13	- 10 °C +30 °C +15 °C +5 °C +35 °C 0 °C +30 °C	- 5 °C +35 °C +20 °C +10 °C +40 °C +5 °C +35 °C

^c Jak bylo schváleno příslušným orgánem.

^d Přípravek vydestilovaný z kyseliny peroxyoctové obsahující nejvýše 41 % kyseliny peroxyoctové s vodou, celkově aktivní kyslík (kyselina peroxyoctová + H₂O₂) ≤ 9,5 %, který splňuje kritéria Příručky zkoušek a kritérií, odstavce 2.4.3 (f).

T23		POKYN PRO PŘEMÍSTITELNÉ CISTERNY (POKR.)							T23
<p><i>Tento pokyn pro přemístitelné cisterny se vztahuje na samovolně se rozkládající látky třídy 4.1 a na organické peroxidy třídy 5.2. Všeobecná ustanovení oddílu 4.2.1 a požadavky oddílu 6.7.2 musí být dodrženy. Dodatečná ustanovení pro samovolně se rozkládající látky třídy 4.1 a organické peroxidy třídy 5.2 v 4.2.1.13 musí být též dodržena</i></p>									
UN č.	Látka	Nejnižší zkušební tlak (bar)	Minimální tloušťka nádrže (mm-referenční oceli)	Požadavky na spodní otvory	Požadavky na zařízení pro vyrovnávání tlaku	Stupeň plnění	Řízená teplota	Kritická teplota	
3120	ORGANICKÝ PEROXID, TYP F, TUHÝ, ŘÍZENÁ TEPLOTA	4	Viz 6.7.2.4.2	Viz 6.7.2.6.3	Viz 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	Viz 4.2.1.13.1 3	^c	^c	
3229	SAMOVOLNĚ SE ROZKLÁDAJÍCÍ LÁTKA, KAPALNÁ, TYP F	4	Viz 6.7.2.4.2	Viz 6.7.2.6.3	Viz 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	Viz 4.2.1.13.1 3			
3230	SAMOVOLNĚ SE ROZKLÁDAJÍCÍ LÁTKA, TUHÁ, TYP F	4	Viz 6.7.2.4.2	Viz 6.7.2.6.3	Viz 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	Viz 4.2.1.13.13			
3239	SAMOVOLNĚ SE ROZKLÁDAJÍCÍ LÁTKA, KAPALNÁ, TYP F, ŘÍZENÁ TEPLOTA	4	Viz 6.7.2.4.2	Viz 6.7.2.6.3	Viz 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	Viz 4.2.1.13.13	^c	^c	
3240	SAMOVOLNĚ SE ROZKLÁDAJÍCÍ LÁTKA, TUHÁ, TYP F, ŘÍZENÁ TEPLOTA	4	Viz 6.7.2.4.2	Viz 6.7.2.6.3	Viz 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	Viz 4.2.1.13.13	^c	^c	

^c Jak bylo schváleno příslušným orgánem.

T50		POKYN PRO PŘEMÍSTITELNÉ CISTERNY		T50	
Tento pokyn pro přemístitelné cisterny se vztahuje na nezchlazené zkvapalněné plyny a na chemické látky pod tlakem (UN čísel 3500, 3501, 3502, 3503, 3504 a 3505). Všeobecná ustanovení oddílu 4.2.2 a požadavky oddílu 6.7.3 musí být dodrženy.					
UN č.	Nezchlazené zkvapalněné plyny	Nejvyšší dovolený provozní tlak (bar) Malý; Neizolovaný; Sluneční štít; Izolovaný Resp. ^a	Otvory pod hladinou kapaliny	Požadavky na zařízení pro vyrovnávání tlaku ^b (viz 6.7.3.7)	Nejvyšší stupeň plnění
1005	AMONIAK (ČPAVEK), BEZVODÝ	29,0 25,7 22,0 19,7	DOVOLENY	Viz 6.7.3.7.3	0,53
1009	BROMTRIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 13B1)	38,0 34,0 30,0 27,5	Dovoleny	Normální	1,13
1010	Butadieny, stabilizované	7,5 7,0 7,0 7,0	Dovoleny	Normální	0,55
1010	Butadieny a uhlovodík, směs, stabilizovaná	Viz MAWP definice v 6.7.3.1	Dovoleny	Normální	Viz 4.2.2.7
1011	Butan	7,0 7,0 7,0 7,0	Dovoleny	Normální	0,51
1012	Buteny	8,0 7,0 7,0 7,0	Dovoleny	Normální	0,53
1017	Chlór	19,0 17,0 15,0 13,5	Nepovoleny	Viz 6.7.3.7.3	1,25
1018	CHLORDIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 22)	26,0 24,0 21,0 19,0	Dovoleny	Normální	1,03
1020	CHLORPENTAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 115)	23,0 20,0 18,0 16,0	Dovoleny	Normální	1,06

^a „Malý“ platí pro cisterny s nádrží o průměru nejvýše 1,5 m;
 „Neizolovaný“ platí pro nádrže o průměru větším než 1,5 m bez izolace nebo slunečního štítu (viz 6.7.3.2.12);
 „Sluneční štít“ platí pro cisterny s nádrží o průměru větším než 1,5 m se slunečním štítem (viz 6.7.3.2.12);
 „Izolovaný“ platí pro cisterny s nádrží o průměru větším než 1,5 m s izolací (viz 6.7.3.2.12); /Viz definici „Konstrukční referenční teplota“ v 6.7.3.1).

^b Slovo „Normální“ ve sloupci Požadavky na zařízení pro vyrovnávání tlaku značí, že se nevyžaduje průtřzný kotouč, jak je uvedeno v 6.7.3.7.3.

T50		POKYN PRO PŘEMÍSTITELNÉ CISTERNY (pokr.)			T50
<i>Tento pokyn pro přemístitelné cisterny se vztahuje na nezchlazené zkapalněné plyny. Všeobecná ustanovení oddílu 4.2.2 a požadavky oddílu 6.7.3 musí být dodrženy.</i>					
UN č.	Nezchlazené zkapalněné plyny	Nejvyšší dovolený provozní tlak (bar) Malý; Neizolovaný; Slunečný štít; Izolovaný resp. ^a	Otvory pod hladinou kapaliny	Požadavky na zařízení pro vyrovnávání tlaku (viz 6.7.3.7) ^b	Nejvyšší stupeň plnění
1021	1-CHLOR-1,2,2,2-TETRAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 124)	10,3 9,8 7,9 7,0	Dovoleny	Normální	1,20
1027	Cyklopropan	18,0 16,0 14,5 13,0	Dovoleny	Normální	0,53
1028	DICHLORDIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 12)	16,0 15,0 13,0 11,5	Dovoleny	Normální	1,15
1029	DICHLORFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 21)	7,0 7,0 7,0 7,0	Dovoleny	Normální	1,23
1030	1,1-DIFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 152A)	16,0 14,0 12,4 11,0	Dovoleny	Normální	0,79
1032	Dimethylamin, bezvodý	7,0 7,0 7,0 7,0	Dovoleny	Normální	0,59
1033	Dimethylether	15,5 13,8 12,0 10,6	Dovoleny	Normální	0,58
1036	Ethylamin	7,0 7,0 7,0 7,0	Dovoleny	Normální	0,61
1037	Chlorethan (Ethylchlorid)	7,0 7,0 7,0 7,0	Dovoleny	Normální	0,80

- ^a „Malý“ platí pro cisterny s nádrží o průměru nejvýše 1,5 m ;
 „Neizolovaný“ platí pro nádrže o průměru větším než 1,5 m bez izolace nebo slunečního štítu (viz 6.7.3.2.12);
 „Sluneční štít“ platí pro cisterny s nádrží o průměru větším než 1,5 m se slunečním štítem (viz 6.7.3.2.12);
 „Izolovaný“ platí pro cisterny s nádrží o průměru větším než 1,5 m s izolací (viz 6.7.3.2.12); /Viz definici „Konstrukční referenční teplota“ v 6.7.3.1).
- ^b Slovo „Normální“ ve sloupci Požadavky na zařízení pro vyrovnávání tlaku značí, že se nevyžaduje průtržný kotouč, jak je uvedeno v 6.7.3.7.3.

T50		POKYN PRO PŘEMÍSTITELNÉ CISTERNY (pokr.)			T50
<i>Tento pokyn pro přemístitelné cisterny se vztahuje na nezchlazené zkpalněné plyny. Všeobecná ustanovení oddílu 4.2.2 a požadavky oddílu 6.7.3 musí být dodrženy.</i>					
UN č.	Nezchlazené zkpalněné plyny	NEjvyšší dovolený provozní tlak (bar) Malý; Neizolovaný; Slunečný štít; Izolovaný resp. ^a	Otvory pod hladinou kapaliny	Požadavky na zařízení pro vyrovnávání tlaku (viz 6.7.3.7) ^b	Nejvyšší stupeň plnění
1040	Ethylenoxid s dusíkem až do celkového tlaku 1MPa (10 bar) při 50 °C	- - - 10,0	Nedovoleny	Viz 6.7.3.7.3	0,78
1041	Ethylenoxid a oxid uhličitý, směs s více než 9 %, ale nejvýše 87% ethylenoxidu	Viz MDPT definice v 6.7.3.1	Dovoleny	Normální	Viz 4.2.2.7
1055	Isobuten	8,1 7,0 7,0 7,0	Dovoleny	Normální	0,52
1060	Methylacetylen a propadien, směs, stabilizovaná	28,0 24,5 22,0 20,0	Dovoleny	Normální	0,43
1061	Methylamin, bezvodý	10,8 9,6 7,8 7,0	Dovoleny	Normální	0,58
1062	Brommethan (Methylbromid) s nejvýše 2 % chlorpikrinu	7,0 7,0 7,0 7,0	Nedovoleny	Viz 6.7.3.7.3	1,51
1063	CHLORMETHAN (METHYLCHLORID) (PLYN JAKO CHLADICÍ PROSTŘEDEK R 40)	14,5 12,7 11,3 10,0	Dovoleny	Normální	0,81
1064	METHANTHIOL (Methylmerkaptan)	7,0 7,0 7,0 7,0	Nedovoleny	Viz 6.7.3.7.3	0,78
1067	Oxid dusičitý	7,0 7,0 7,0 7,0	Nedovoleny	Viz 6.7.3.7.3	1,30
1075	PLYNY ROPNÉ, ZKAPALNĚNÉ	Viz MDPT definice v 6.7.3.1	Dovoleny	Normální	Viz 4.2.2.7

- ^a „Malý“ platí pro cisterny s nádrží o průměru nejvýše 1,5 m ;
 „Neizolovaný“ platí pro nádrže o průměru větším než 1,5 m bez izolace nebo slunečního štítu (viz 6.7.3.2.12);
 „Sluneční štít“ platí pro cisterny s nádrží o průměru větším než 1,5 m se slunečním štítem (viz 6.7.3.2.12);
 „Izolovaný“ platí pro cisterny s nádrží o průměru větším než 1,5 m s izolací (viz 6.7.3.2.12); /Viz definici „Konstrukční referenční teplota“ v 6.7.3.1).
- ^b Slovo „Normální“ ve sloupci Požadavky na zařízení pro vyrovnávání tlaku značí, že se nevyžaduje průtřzný kotouč, jak je uvedeno v 6.7.3.7.3.

T50		POKYN PRO PŘEMÍSTITELNÉ CISTERNY (pokr.)			T50
<i>Tento pokyn pro přemístitelné cisterny se vztahuje na nezchlazené zkapalněné plyny. Všeobecná ustanovení oddílu 4.2.2 a požadavky oddílu 6.7.3 musí být dodrženy.</i>					
UN č.	Nezchlazené zkapalněné plyny	Nejvyšší dovolený provozní tlak (bar) Malý; Neizolovaný; Slunečný štít; Izolovaný resp. ^a	Otvory pod hladinou kapaliny	Požadavky na zařízení pro vyrovnávání tlaku (viz 6.7.3.7) ^b	Nejvyšší stupeň plnění
1077	Propylen	28,0 24,5 22,0 20,0	Dovoleny	Normální	0,43
1078	PLYN JAKO CHLADICÍ PROSTŘEDEK, J.N.	Viz MDPT definice v 6.7.3.1	Dovoleny	Normální	Viz 4.2.2.7
1079	Oxid siřičitý	11,6 10,3 8,5 7,6	Nedovoleny	Viz 6.7.3.7.3	1,23
1082	CHLORTRIFLUORETHYLEN, STABILIZOVANÝ	17,0 15,0 13,1 11,6	Nedovoleny	Viz 6.7.3.7.3	1,13
1083	Trimethylamin, bezvodý	7,0 7,0 7,0 7,0	Dovoleny	Normální	0,56
1085	Vinylbromid, stabilizovaný	7,0 7,0 7,0 7,0	Dovoleny	Normální	1,37
1086	Vinylchlorid, stabilizovaný	10,6 9,3 8,0 7,0	Dovoleny	Normální	0,81
1087	Vinylmethylether, stabilizovaný	7,0 7,0 7,0 7,0	Dovoleny	Normální	0,67
1581	Chlorpikrin a methylbromid, směs, s více než 2 % chlorpikrinu	7,0 7,0 7,0 7,0	Nedovoleny	Viz 6.7.3.7.3	1,51
1582	Chlorpikrin a methylchlorid, směs	19,2 16,9 15,1 13,1	Nedovoleny	Viz 6.7.3.7.3	0,81

^a „Malý“ platí pro cisterny s nádrží o průměru nejvýše 1,5 m ;
 „Neizolovaný“ platí pro nádrže o průměru větším než 1,5 m bez izolace nebo slunečního štítu (viz 6.7.3.2.12);
 „Sluneční štít“ platí pro cisterny s nádrží o průměru větším než 1,5 m se slunečním štítem (viz 6.7.3.2.12);
 „Izolovaný“ platí pro cisterny s nádrží o průměru větším než 1,5 m s izolací (viz 6.7.3.2.12); /Viz definici „Konstrukční referenční teplota“ v 6.7.3.1).

^b Slovo „Normální“ ve sloupci Požadavky na zařízení pro vyrovnávání tlaku značí, že se nevyžaduje průtržný kotouč, jak je uvedeno v 6.7.3.7.3.

T50		POKYN PRO PŘEMÍSTITELNÉ CISTERNY (pokr.)			T50
Tento pokyn pro přemístitelné cisterny se vztahuje na nezchlazené zkpalněné plyny. Všeobecná ustanovení oddílu 4.2.2 a požadavky oddílu 6.7.3 musí být dodrženy.					
UN č.	Nezchlazené zkpalněné plyny	Nejvyšší dovolený provozní tlak (bar) Malý; Neizolovaný; Sluneční štít; Izolovaný resp. ^a	Otvory pod hladinou kapaliny	Požadavky na zařízení pro vyrovnávání tlaku (viz 6.7.3.7) ^b	Nejvyšší stupeň plnění
1858	HEXAFLUORPROPYLEN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 1216)	19,2 16,9 15,1 13,1	Dovoleny	Normální	1,11
1912	CHLORMETHAN (METHYLCHLORID) A DICHLORMETHAN, SMĚS	15,2 13,0 11,6 10,1	Dovoleny	Normální	0,81
1958	1,2 DICHLORTETRAFLUORETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 114)	7,0 7,0 7,0 7,0	Dovoleny	Normální	1,30
1965	Uhlovodíky plynné, směs, zkpalněná, j.n.	Viz MDPT definice v 6.7.3.1	Dovoleny	Normální	Viz 4.2.2.7
1969	Isobutan	8,5 7,5 7,0 7,0	Dovoleny	Normální	0,49
1973	Chlordifluormethan a chlorpentafluorethan, směs, s pevným bodem varu, s přibližně 49 % chlordifluormethanu (PLYN JAKO CHLADICÍ PROSTŘEDEK R 502)	28,3 25,3 22,8 20,3	Dovoleny	Normální	1,05
1974	BROMCHLORDIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 12B1)	7,4 7,0 7,0 7,0	Dovoleny	Normální	1,61
1976	OKTAFLUORCYKLOBUTAN (PLYN JAKO CHLADICÍ PROSTŘEDEK RC 318)	8,8 7,8 7,0 7,0	Dovoleny	Normální	1,34
1978	Propan	22,5 20,4 18,0 16,5	Dovoleny	Normální	0,42

^a „Malý“ platí pro cisterny s nádrží o průměru nejvýše 1,5 m ;
 „Neizolovaný“ platí pro nádrže o průměru větším než 1,5 m bez izolace nebo slunečního štítu (viz 6.7.3.2.12);
 „Sluneční štít“ platí pro cisterny s nádrží o průměru větším než 1,5 m se slunečním štítem (viz 6.7.3.2.12);
 „Izolovaný“ platí pro cisterny s nádrží o průměru větším než 1,5 m s izolací (viz 6.7.3.2.12); /Viz definici „Konstrukční referenční teplota“ v 6.7.3.1).

^b Slovo „Normální“ ve sloupci Požadavky na zařízení pro vyrovnávání tlaku značí, že se nevyžaduje průtržný kotouč, jak je uvedeno v 6.7.3.7.3.

T50		POKYN PRO PŘEMÍSTITELNÉ CISTERNY (pokr.)			T50
<i>Tento pokyn pro přemístitelné cisterny se vztahuje na nezchlazené zkapalněné plyny. Všeobecná ustanovení oddílu 4.2.2 a požadavky oddílu 6.7.3 musí být dodrženy.</i>					
UN č.	Nezchlazené zkapalněné plyny	Nejvyšší dovolený provozní tlak (bar) Malý; Neizolovaný; Slunečný štít; Izolovaný resp. ^a	Otvory pod hladinou kapaliny	Požadavky na zařízení pro vyrovnávání tlaku (viz 6.7.3.7) ^b	Nejvyšší stupeň plnění
1983	1-Chlor-2,2,2-trifluorethan (PLYN JAKO CHLADICÍ PROSTŘEDEK R 133A)	7,0 7,0 7,0 7,0	Dovoleny	Normální	1,18
2035	1,1,1-TRIFLUORETAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 143A)	31,0 27,5 24,2 21,8	Dovoleny	Normální	0,76
2424	OKTAFLUORPROPAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 218)	23,1 20,8 18,6 16,6	Dovoleny	Normální	1,07
2517	1-CHLOR-1,1-DIFLUORETAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 142B)	8,9 7,8 7,0 7,0	Dovoleny	Normální	0,99
2602	DICHLORDIFLUORMETAN A 1,1-DIFLUORETAN AZEOTROPNÍ SMĚS s cca 74% dichlordifluometanu (PLYN JAKO CHLADICÍ PROSTŘEDEK R 500)	20,0 18,0 16,0 14,5	Dovoleny	Normální	1,01
3057	Trifluoracetylchlorid	14,6 12,9 11,3 9,9	Nedovoleny	6.7.3.7.3	1,17
3070	Ethylenoxid a dichlordifluormethan, směs s nejvýše 12.5 % ethylenoxidu	14,0 12,0 11,0 9,0	Dovoleny	6.7.3.7.3	1,09
3153	Perfluormethylvinylether	14,3 13,4 11,2 10,2	Dovoleny	Normální	1,14
3159	1,1,1,2-Tetrafluorethan (PLYN JAKO CHLADICÍ PROSTŘEDEK R 134A)	17,7 15,7 13,8 12,1	Dovoleny	Normální	1,04

^a „Malý“ platí pro cisterny s nádrží o průměru nejvýše 1,5 m ;
 „Neizolovaný“ platí pro nádrže o průměru větším než 1,5 m bez izolace nebo slunečního štítu (viz 6.7.3.2.12);
 „Sluneční štít“ platí pro cisterny s nádrží o průměru větším než 1,5 m se slunečním štítem (viz 6.7.3.2.12);
 „Izolovaný“ platí pro cisterny s nádrží o průměru větším než 1,5 m s izolací (viz 6.7.3.2.12); /Viz definici „Konstrukční referenční teplota“ v 6.7.3.1).

^b Slovo „Normální“ ve sloupci Požadavky na zařízení pro vyrovnávání tlaku značí, že se nevyžaduje průtržný kotouč, jak je uvedeno v 6.7.3.7.3.

T50		POKYN PRO PŘEMÍSTITELNÉ CISTERNY (pokr.)			T50	
<i>Tento pokyn pro přemístitelné cisterny se vztahuje na nezchlazené zkvapalněné plyny. Všeobecná ustanovení oddílu 4.2.2 a požadavky oddílu 6.7.3 musí být dodrženy.</i>						
UN č.	Nezchlazené zkvapalněné plyny	Nejvyšší dovolený provozní tlak (bar) Malý; Neizolovaný; Sluneční štít; Izolovaný resp. ^a	Otvory pod hladinou kapaliny	Požadavky na zařízení pro vyrovnávání tlaku (viz 6.7.3.7) ^b	Nejvyšší stupeň plnění	
3161	PLYN ZKAPALNĚNÝ, hořlavý, j.n.	Viz MDPT definice v 6.7.3.1	Dovoleny	Normální	Viz 4.2.2.7	
3163	PLYN ZKAPALNĚNÝ, j.n.	Viz MDPT definice v 6.7.3.1	Dovoleny	Normální	Viz 4.2.2.7	
3220	Pentafluorethan (PLYN JAKO CHLADICÍ PROSTŘEDEK R 125)	34,4 30,8 27,5 24,5	Dovoleny	Normální	0,87	
3252	DIFLUORMETHAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 32)	43,0 39,0 34,4 30,5	Dovoleny	Normální	0,78	
3296	HEPTAFLUORPROPAN (PLYN JAKO CHLADICÍ PROSTŘEDEK R 227)	16,0 14,0 12,5 11,0	Dovoleny	Normální	1,20	
3297	Ethylenoxid a chlortetrafluorethan, směs, s nejvýše 8.8 % ethylenoxidu	8,1 7,0 7,0 7,0	Dovoleny	Normální	1,16	
3298	Ethylenoxid a pentafluorethan, směs, s nejvýše 7.9 % ethylenoxidu	25,9 23,4 20,9 18,6	Dovoleny	Normální	1,02	
3299	Ethylenoxid a tetrafluorethan, směs, s nejvýše 5.6 % ethylenoxidu	16,7 14,7 12,9 11,2	Dovoleny	Normální	1,03	
3318	AMONIAK (ČPAVEK), vodný ROZTOK s hustotou menší než 0,88 kg/l při 15 °C s více než 50 % amoniaku (čpavku)	Viz MDPT definice v 6.7.3.1	Dovoleny	Viz 6.7.3.7.3	Viz 4.2.2.7	

^a „Malý“ platí pro cisterny s nádrží o průměru nejvýše 1,5 m ;
 „Neizolovaný“ platí pro nádrže o průměru větším než 1,5 m bez izolace nebo slunečního štítu (viz 6.7.3.2.12);
 „Sluneční štít“ platí pro cisterny s nádrží o průměru větším než 1,5 m se slunečním štítem (viz 6.7.3.2.12);
 „Izolovaný“ platí pro cisterny s nádrží o průměru větším než 1,5 m s izolací (viz 6.7.3.2.12); /Viz definici „Konstrukční referenční teplota“ v 6.7.3.1).

^b Slovo „Normální“ ve sloupci Požadavky na zařízení pro vyrovnávání tlaku značí, že se nevyžaduje průtržný kotouč, jak je uvedeno v 6.7.3.7.3.

T50		POKYN PRO PŘEMÍSTITELNÉ CISTERNY (pokr.)			T50
Tento pokyn pro přemístitelné cisterny se vztahuje na nezchlazené zkvalněné plyny. Všeobecná ustanovení oddílu 4.2.2 a požadavky oddílu 6.7.3 musí být dodrženy.					
UN č.	Nezchlazené zkvalněné plyny	Nejvyšší dovolený provozní tlak (bar) Malý; Neizolovaný; Sluneční štít; Izolovaný resp. ^a	Otvory pod hladinou kapaliny	Požadavky na zařízení pro vyrovnávání tlaku (viz 6.7.3.7) ^b	Nejvyšší stupeň plnění
3337	PLYN JAKO CHLADICÍ PROSTŘEDEK R 404A	31,6 28,3 25,3 22,5	Dovoleny	Normální	0,82
3338	PLYN JAKO CHLADICÍ PROSTŘEDEK, R 407A	31,3 28,1 25,1 22,4	Dovoleny	Normální	0,94
3339	PLYN JAKO CHLADICÍ PROSTŘEDEK, R 407B	33,0 29,6 25,6 23,6	Dovoleny	Normální	0,93
3340	PLYN JAKO CHLADICÍ PROSTŘEDEK, R 407C	29,9 26,8 23,9 21,3	Dovoleny	Normální	0,95
3500	Chemická látka pod tlakem, j.n.	Viz definici MAWP v 6.7.3.1	Dovoleny	Viz 6.7.3.7.3	TP4 ^c
3501	Chemická látka pod tlakem, hořlavá, j.n.	Viz definici MAWP v 6.7.3.1	Dovoleny	Viz 6.7.3.7.3	TP4 ^c
3502	Chemická látka pod tlakem, toxická, j.n.	Viz definici MAWP v 6.7.3.1	Dovoleny	Viz 6.7.3.7.3	TP4 ^c
3503	Chemická látka pod tlakem, žíravá, j.n.	Viz definici MAWP v 6.7.3.1	Dovoleny	Viz 6.7.3.7.3	TP4 ^c
3504	Chemická látka pod tlakem, hořlavá, toxická, j.n.	Viz definici MAWP v 6.7.3.1	Dovoleny	Viz 6.7.3.7.3	TP4 ^c
3505	Chemická látka pod tlakem, hořlavá, žíravá, j.n.	Viz definici MAWP v 6.7.3.1	Dovoleny	Viz 6.7.3.7.3	TP4 ^c

T75		POKYN PRO PŘEMÍSTITELNÉ CISTERNY			T75
Tento pokyn pro přemístitelné cisterny se vztahuje na hluboce zchlazené zkvalněné plyny. Všeobecná ustanovení oddílu 4.2.3 a požadavky oddílu 6.7.4 musí být dodrženy.					

- ^a „Malý“ platí pro cisterny s nádrží o průměru nejvýše 1,5 m ;
 „Neizolovaný“ platí pro nádrže o průměru větším než 1,5 m bez izolace nebo slunečního štítu (viz 6.7.3.2.12);
 „Sluneční štít“ platí pro cisterny s nádrží o průměru větším než 1,5 m se slunečním štítem (viz 6.7.3.2.12);
 „Izolovaný“ platí pro cisterny s nádrží o průměru větším než 1,5 m s izolací (viz 6.7.3.2.12); /Viz definici „Konstrukční referenční teplota“ v 6.7.3.1).
- ^b Slovo „Normální“ ve sloupci Požadavky na zařízení pro vyrovnávání tlaku značí, že se nevyžaduje průtržný kotouč, jak je uvedeno v 6.7.3.7.3.
- ^c Pro UN čísla 3500, 3501, 3502, 3503, 3504 a 3505 se musí namísto na nejvyšší stupeň plnění brát zřetel na stupeň plnění.

4.2.5.3 Zvláštní ustanovení pro přemístitelné cisterny

Zvláštní ustanovení pro přemístitelné cisterny se vztahují na určité látky a uvádějí ustanovení, která jsou doplňková nebo nahrazují ty, která jsou uvedena v pokynech pro přemístitelné cisterny, nebo požadavky uvedené v kapitole 6.7. Zvláštní ustanovení pro přemístitelné cisterny jsou označena použitím alfanumerického kódu začínajícího písmeny „TP“ (tank provisions) a jsou přiřazena k určitým látkám ve sloupci (11) tabulky A kapitoly 3.2. Dále je uveden seznam zvláštních ustanovení pro přemístitelné cisterny:

TP1 Stupeň plnění předepsaný v 4.2.1.9.2 nesmí být překročen.

$$(\text{Stupeň plnění} = \frac{97}{1 + \alpha (t_r - t_i)})$$

TP2 Stupeň plnění předepsaný v 4.2.1.9.3 nesmí být překročen.

$$(\text{Stupeň plnění} = \frac{95}{1 + \alpha (t_r - t_i)})$$

TP3 Nejvyšší stupeň plnění (v %) pro tuhé látky přepravované při teplotě vyšší, než je jejich bod tání, a pro kapaliny přepravované při zvýšené teplotě se stanoví podle 4.2.1.9.5.

$$(\text{Stupeň plnění} = 95 \frac{d_r}{d_r})$$

TP4 Stupeň plnění nesmí překročit 90% nebo jinou hodnotu schválenou příslušným orgánem (viz 4.2.1.16.2).

TP5 Stupeň plnění předepsaný v pododdílu 4.2.3.6 musí být dodržen.

TP6 Pro zabránění roztržení cisterny při jakékoli události, včetně zachvácení požárem, musí být cisterna vybavena zařízením pro vyrovnávání tlaku, která jsou přiměřená ve vztahu k vnitřnímu objemu cisterny a povaze přepravované látky. Zařízení musí být též snášitelná s přepravovanou látkou.

TP7 Vzduch musí být odstraněn z výparného prostoru dusíkem nebo jinými prostředky.

TP8 Zkušební tlak může být snížen na 1,5 baru, je-li bod vzplanutí přepravované látky vyšší než 0 °C.

TP9 Látka podle tohoto popisu smí být přepravována v přemístitelné cisterně pouze po schválení příslušným orgánem.

TP10 Vyžaduje se olověný vnitřní povlak o tloušťce nejméně 5 mm, který musí být každoročně zkoušen, nebo vnitřní povlak z jiného vhodného materiálu schváleného příslušným orgánem.

TP12 (Vypuštěno)

TP13 (Vyhrazeno)

TP16 Cisterna musí být vybavena zvláštním zařízením pro ochranu před podtlakem a přetlakem za normálních přepravních podmínek.

Toto zařízení musí být schváleno příslušným orgánem. Požadavky na zařízení pro vyrovnávání tlaku jsou uvedeny v 6.7.2.8.3, aby se zabránilo krystalizaci látky v tlakovém pojistném ventilu.

- TP17 Pro tepelnou izolaci cisterny smějí být používány pouze anorganické nehořlavé materiály.
- TP18 Teplota musí být udržována mezi 18 °C a 40 °C. Přemístitelné cisterny obsahující ztuhlou kyselinu methakrylovou nesmějí být během přepravy znovu zahřívány.
- TP19 Vypočtená tloušťka stěny nádrže musí být zvětšena o 3 mm. Tloušťka stěny nádrže musí být ověřena ultrazvukem v polovičních lhůtách mezi periodickými hydraulickými zkouškami.
- TP20 Tato látka smí být přepravována pouze v izolovaných cisternách pod vrstvou dusíku.
- TP21 Tloušťka stěny nádrže nesmí být menší než 8 mm. Cisterny musí být podrobeny hydraulické zkoušce a prohlídce vnitřku ve lhůtách nepřekračujících 2,5 roku.
- TP22 Mazadla pro těsnění nebo jiná zařízení musí být snášitelná s kyslíkem.
- TP23 Přeprava povolena za zvláštních podmínek předepsaných příslušným orgánem.
- TP24 Přemístitelné cisterny mohou být vybaveny zařízením umístěným při maximálních plnicích podmínkách ve výparném prostoru nádrže, aby se zabránilo zvýšení tlaku v důsledku pomalého rozkladu přepravované látky. Toto zařízení musí též v případě převrácení cisterny zabránit nepřípustnému úniku kapaliny nebo vniknutí cizích látek do cisterny. Toto zařízení musí být schváleno příslušným orgánem nebo jím pověřenou organizací.
- TP25 Oxid siřičitý čistoty nejméně 99,95 % smí být přepravován v cisternách bez inhibitoru za podmínky, že je udržován na teplotě nejméně 32,5 °C.
- TP26 Při přepravě v zahřátém stavu musí být ohřívací zařízení upevněno na vnějšku nádrže. Na látku UN 3176 se vztahuje tento požadavek pouze tehdy, pokud látka reaguje nebezpečně s vodou.
- TP27 Přemístitelná cisterna mající minimální zkušební tlak 4 bary smí být používána, jestliže se prokáže, že podle definice zkušební tlaku v pododdílu 6.7.2.1 je přípustný zkušební tlak 4 bar nebo menší.
- TP28 Přemístitelná cisterna mající minimální zkušební tlak 2,65 bar smí být používána, jestliže se prokáže, že podle definice zkušební tlaku v pododdílu 6.7.2.1 je přípustný zkušební tlak 2,65 bar nebo menší.
- TP29 Přemístitelná cisterna mající minimální zkušební tlak 1,5 bar smí být používána, jestliže se prokáže, že podle definice zkušební tlaku v pododdílu 6.7.2.1 je přípustný zkušební tlak 1,5 bar nebo menší.
- TP30 Tato látka musí být přepravována v tepelně izolovaných cisternách.
- TP31 Tato látka smí být přepravována v cisternách jen v tuhém stavu.
- TP32 Pro UN čísla 0331,0332 a 3375 mohou být používány přemístitelné cisterny splňující tyto podmínky:
- Aby se zabránilo zbytečnému uzavírání, každá přemístitelná cisterna vyrobená z kovu musí být vybavena zařízením pro vyrovnávání tlaku, které může být opětne uzavíratelného pružinového typu, průtržným kotoučem nebo tavným prvkem. Nastavení vyprazdňovacího tlaku nebo tlaku pro roztržení, pokud je to vhodné, nesmí být vyšší než 2,65 baru pro přemístitelné cisterny s minimálními zkušebními tlaky vyššími než 4 bary.
 - Vhodnost pro přepravu v cisternách musí být prokázána. Jednou metodou pro hodnocení této vhodnosti je zkouška 8(d) v sérii zkoušek 8 (viz Příručka zkoušek a kritérií, část 1, pododíl 18.7).
 - Není dovoleno ponechat látku v přemístitelné cisterně po dobu, za kterou by v ní mohly ztvrdnout. Musí být učiněna vhodná opatření, aby se zabránilo usazení a ztuhnutí látek v cisterně (např. vyčištění atd.).
- TP33 Pokyny pro přemístitelné cisterny přiřazené k této látce se vztahují na zrnité a práškové tuhé látky a na tuhé látky, které jsou plněny a vyprazdňovány při teplotách vyšších, než je jejich bod tání, které jsou zchlazeny a přepravovány jako tuhá hmota. Pro tuhé látky, které jsou přepravovány při teplotě vyšší, než je jejich bod tání, viz pododíl 4.2.1.19.

- TP34 Přemístitelné cisterny nemusí být podrobeny zkoušce nárazem uvedené v 6.7.4.14.1, pokud jsou tyto cisterny označeny nápisem „ŽELEZNIČNÍ DOPRAVA ZAKÁZÁNA“ na štítku uvedeném v 6.7.4.15.1 a současně písmeny nejméně 10 cm vysokými na obou stranách vnějšího pláště.
- TP 35 Pokyny pro přemístitelné cisterny T14 předepsané v ADR platné do 31. prosince 2008 mohou se dále používat až do 31. prosince 2014.
- TP36 U přemístitelných cisteren směji být používány tavné prvky v parním prostoru.
- TP37 Pokyn pro přemístitelné cisterny T14 smí být dále používán až do 31. prosince 2016, s výjimkou toho, že do tohoto data:
- (a) pro UN 1810, 2474 a 2668 smí být používán T7;
 - (b) pro UN 2486 smí být používán T8; a
 - (c) pro UN 1838 smí být používán T10.
- TP38 Pokyn pro přemístitelné cisterny T9 předepsaný v ADR platné do 31. prosince 2012 smí být dále používán až do 31. prosince 2018.
- TP39 Pokyn pro přemístitelné cisterny T4 předepsaný v ADR platné do 31. prosince 2012 smí být dále používán až do 31. prosince 2018.
- TP40 Přemístitelné cisterny nesmějí být přepravovány, jsou-li spojeny s rozstříkovacím zařízením.

KAPITOLA 4.3

POUŽÍVÁNÍ NESNÍMATELNÝCH CISTEREN (CISTERNOVÝCH VOZIDEL), SNÍMATELNÝCH CISTEREN, CISTERNOVÝCH KONTEJNERŮ A CISTERNOVÝCH VÝMĚNNÝCH NÁSTAVEB, JEJICHŽ NÁDRŽE JSOU VYROBENY Z KOVOVÝCH MATERIÁLŮ, A BATERIOVÝCH VOZIDEL A VÍCEČLÁNKOVÝCH KONTEJNERŮ NA PLYN (MEGC)

POZNÁMKA: Pro přemístitelné cisterny a UN MEGC viz kapitola 4.2, pro cisterny z vyztužených plastů viz kapitola 4.4; pro cisterny pro podtlakové vyčerpávání odpadů viz kapitola 4.5.

4.3.1 Rozsah použití

4.3.1.1 Ustanovení, která jsou uvedena v celé šíři stránky se vztahují jak na nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla, tak i na cisternové kontejnery, cisternové výměnné nástavby a MEGC. Ustanovení uvedená pouze v jednom sloupci se vztahují jen na:

- nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla (levý sloupec);
- cisternové kontejnery, cisternové výměnné nástavby a MEGC (pravý sloupec).

4.3.1.2 Tato ustanovení se vztahují na:

nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla	cisternové kontejnery, cisternové výměnné nástavby a MEGC
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používané pro přepravu plyných, kapalných, práškovitých a zrnitých látek.

4.3.1.3 V oddílu 4.3.2 jsou uvedena ustanovení, která se vztahují na nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny, cisternové kontejnery a cisternové výměnné nástavby určené pro přepravu látek všech tříd a na bateriová vozidla a MEGC určená k přepravě plynů třídy 2. Oddíly 4.3.3 a 4.3.4 obsahují zvláštní ustanovení, která doplňují nebo mění ustanovení oddílu 4.3.2.

4.3.1.4 Požadavky na konstrukci, vstroj, schválení typu, zkoušky a značení viz kapitola 6.8.

4.3.1.5 Pro přechodná ustanovení týkající se použití této kapitoly viz oddíl

1.6.3	1.6.4
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4.3.2 Ustanovení vztahující se na všechny třídy

4.3.2.1 Použití

4.3.2.1.1 Látka podléhající ADR může být přepravována v nesnímatelných cisternách (cisternových vozidlech), snímatelných cisternách, bateriových vozidlech, cisternových kontejnerech, cisternových výměnných nástavbách a MEGC pouze tehdy, pokud je ve sloupci (12) tabulky A v kapitole 3.2 uveden kód cisterny podle 4.3.3.1.1. a 4.3.4.1.1.

4.3.2.1.2 Požadovaný typ cisterny, bateriového vozidla a MEGC je uveden v kódované formě ve sloupci (12) tabulky A v kapitole 3.2. Uvedené identifikační kódy se skládají z písmen a číslic ve stanoveném pořadí. Vysvětlivky k významu čtyř částí kódu jsou uvedeny v 4.3.3.1.1 (pokud látka, která se má přepravovat, patří do třídy 2) a v 4.3.4.1.1 (pokud látka, která se má přepravovat, patří do tříd 1 a 3 až 9)¹.

4.3.2.1.3 Požadovaný typ podle 4.3.2.1.2 odpovídá nejméně přísným konstrukčním požadavkům, které jsou přijatelné pro příslušnou nebezpečnou látku, pokud není v této kapitole nebo v kapitole 6.8 stanoveno jinak. Smějí být používány také cisterny odpovídající kódům, které předepisují vyšší minimální výpočtový tlak nebo přísnější požadavky na plnicí nebo vyprazdňovací otvory nebo pojistné ventily/zařízení (viz 4.3.3.1.1 pro třídu 2 a 4.3.4.1.1 pro třídy 3 až 9).

¹ Výjimka platí pro cisterny určené pro přepravu látek tříd 1, 5.2 nebo 7 (viz 4.3.4.1.3).

- 4.3.2.1.4** Na cisterny, bateriová vozidla a MEGC pro určité látky se vztahují dodatečná ustanovení, která jsou uvedena jako zvláštní ustanovení ve sloupci (13) tabulky A v kapitole 3.2.
- 4.3.2.1.5** Cisterny, bateriová vozidla a MEGC nesmějí být plněny jinými nebezpečnými látkami než těmi, pro jejichž přepravu byly schváleny podle 6.8.2.3.1 a které při styku s materiály nádrží, těsnění, výstroje a ochranných vnitřních povlaků nejsou náchylné s nimi nebezpečně reagovat (viz definice nebezpečné reakce v odstavci 1.2.1) a tvořit nebezpečné látky nebo tyto materiály výrazně zeslabovat².
- 4.3.2.1.6** Potraviny nesmějí být přepravovány v cisternách používaných pro nebezpečné látky, pokud nebyly učiněny nezbytné kroky, aby se zabránilo ohrožení veřejného zdraví.
- 4.3.2.1.7** Dokumentace cisterny musí být uložena u vlastníka nebo provozovatele, který musí být schopen tuto dokumentaci předložit na požádání příslušného orgánu. Dokumentace cisterny musí být udržována po dobu životnosti cisterny a archivována po dobu 15 měsíců po vyřazení cisterny z provozu.

Pokud dojde ke změně vlastníka nebo provozovatele v době životnosti cisterny, dokumentace cisterny musí být předána novému vlastníku nebo provozovateli.

Kopie dokumentace cisterny nebo všechny nezbytné doklady musí být přístupné znalci pro prohlídky a zkoušky cisteren podle 6.8.2.4.5 nebo 6.8.3.4.16 při periodických prohlídkách a zkouškách nebo mimořádných prohlídkách a zkouškách.

4.3.2.2 **Stupeň plnění**

- 4.3.2.2.1** Dále uvedené stupně plnění cisteren určených pro přepravu kapalin při teplotách okolí nesmějí být překročeny:

- (a) pro hořlavé látky bez dalších nebezpečných vlastností (např. toxicita nebo žíravost) v cisternách s odvětrávacím zařízením nebo s pojistnými ventily (také s předřazeným průtržným kotoučem):

$$\text{stupeň plnění} = \frac{100}{1 + \alpha (50 - tF)} \quad \% \text{ vnitřního objemu}$$

- (b) pro toxické nebo žíravé látky (hořlavé nebo nehořlavé) v cisternách s odvětrávacím zařízením nebo s pojistnými ventily (také s předřazeným průtržným kotoučem):

$$\text{stupeň plnění} = \frac{98}{1 + \alpha (50 - tF)} \quad \% \text{ vnitřního objemu}$$

- (c) pro hořlavé látky a pro slabě toxické nebo žíravé látky (hořlavé nebo nehořlavé) v hermeticky uzavřených cisternách bez pojistného zařízení:

$$\text{stupeň plnění} = \frac{97}{1 + \alpha (50 - tF)} \quad \% \text{ vnitřního objemu}$$

- (d) pro velmi toxické, toxické, silně žíravé nebo žíravé látky (hořlavé nebo nehořlavé) v hermeticky uzavřených cisternách bez pojistného zařízení:

$$\text{stupeň plnění} = \frac{95}{1 + \alpha (50 - tF)} \quad \% \text{ vnitřního objemu}$$

- 4.3.2.2.2** V těchto vzorcích znamená α střední koeficient objemové roztažnosti kapaliny mezi 15 °C a 50 °C, tj. pro zvýšení teploty nejvýše o 35 °C.

α se vypočte podle vzorce:

$$\alpha = \frac{d_{15} - d_{50}}{35 d_{50}}$$

² Někdy může být nezbytné konzultovat s výrobcem látky a příslušným orgánem snášlivost látky s materiály cisteren, bateriových vozidel nebo MEGC.

přičemž d15 a d50 znamená relativní hustoty kapaliny při 15 °C a 50 °C a tF střední teplotu kapaliny při plnění.

4.3.2.2.3 Ustanovení 4.3.2.2.1(a) až (d) se nevztahují na cisterny, jejichž obsah je udržován během přepravy ohřívacím zařízením na teplotě vyšší než 50 °C. V tomto případě musí být stupeň plnění na začátku přepravy stanoven a teplota řízena tak, aby cisterna nebyla během přepravy naplněna více než do 95 % svého vnitřního objemu a plnicí teplota nebyla překročena.

4.3.2.2.4 Nádrže určené pro přepravu látek v kapalném stavu nebo hluboce zchlazených zkvapalněných plynů, které nejsou rozděleny přepážkami nebo peřejníky do komor s vnitřním objemem nejvýše 7500 litrů, musí být plněny nejméně na 80 % nebo nejvýše do 20 % jejich objemu.

Toto ustanovení se nevztahuje na:

- kapaliny s kinematickou viskozitou při 20 °C nejméně 2680 mm²/s;
- roztavené látky s kinematickou viskozitou při teplotě plnění nejméně 2680 mm²/s;
- UN 1963 HELIUM, HLUBOCE ZCHLAZENÉ, KAPALNÉ a UN 1966 VODÍK, HLUBOCE ZCHLAZENÝ, KAPALNÝ.

4.3.2.3 **Provoz**

4.3.2.3.1 Tloušťka stěn nádrže se nesmí během celé doby používání cisterny zmenšit pod nejmenší hodnotu, která je předepsána v:

6.8.2.1.17 až 6.8.2.1.21 | 6.8.2.1.17 až 6.8.2.1.20

4.3.2.3.2 Cisternové kontejnery/MEGC musí být při přepravě naloženy na nosném vozidle tak, aby byly dostatečně chráněny zařízením nosného vozidla nebo samotného cisternového kontejneru/MEGC proti podélným a příčným nárazům a proti převrácení. Jsou – li cisternové kontejnery/MEGC, včetně provozní výstroje, konstruovány tak, že mohou odolat nárazům nebo převrácení, pak není nutné je tímto způsobem chránit.

4.3.2.3.3 Během plnění a vyprazdňování cisteren, bateriových vozidel a MEGC musí být učiněna náležitá opatření, aby se zabránilo uvolnění nebezpečného množství plynů a par. Cisterny, bateriová vozidla a MEGC musí být uzavřeny tak, aby nemohlo dojít k samovolnému úniku obsahu. Spodní výpusti cisteren musí být uzavřeny čepičkami se šroubením, slepými přírubami nebo jinými stejně účinnými zařízeními. Po naplnění se musí plnič přesvědčit, že všechny uzávěry cisteren, bateriových vozidel a MEGC jsou v uzavřené poloze a že nedochází k žádnému úniku. Toto ustanovení se vztahuje také na horní část ponorné trubky.

4.3.2.3.4 Je-li několik uzávěrů zabudováno za sebou, musí se nejdříve uzavřít ten, který je nejbližší k přepravované látce.

4.3.2.3.5 Během přepravy nesmějí na vnější straně cisteren lpět žádné zbytky naplněné látky.

4.3.2.3.6 Látky, které spolu mohou nebezpečně reagovat, nesmějí být přepravovány v sousedních komorách cisteren.

Látky, které spolu mohou nebezpečně reagovat, smějí být přepravovány v sousedních komorách cisteren, pokud jsou tyto komory od sebe odděleny přepážkou, která má stejnou nebo větší tloušťku, než má sama cisterna. Tyto látky smějí být přepravovány také v komorách jedné cisterny, pokud jsou jimi naplněné komory od sebe odděleny prázdným meziprostorem nebo prázdnou komorou.

4.3.2.4 **Prázdné nevyčištěné cisterny, bateriová vozidla a MEGC**

POZNÁMKA: Pro prázdné nevyčištěné cisterny, bateriová vozidla a MEGC mohou být použita zvláštní ustanovení TU1, TU2, TU4, TU16 a TU35 oddílu 4.3.5.

4.3.2.4.1 Během přepravy nesmějí na vnější straně cisteren lpět žádné zbytky naplněné látky.

3 Příklady pro ochranu nádrží:

- Ochranu proti bočnímu nárazu mohou tvořit např. podélné nárazníky po obou stranách ve výši střední roviny nádrže.
- Ochranu proti převrácení mohou tvořit např. výztužné prstence nebo nárazníky upevněné příčně ve vztahu k rámu.
- Ochranu proti nárazu zezadu může tvořit např. nárazník nebo rám.

- 4.3.2.4.2** Pro připuštění k přepravě musí být prázdné nevyčištěné cisterny, bateriová vozidla a MEGC uzavřeny a utěsněny stejně, jako kdyby byly plné.
- 4.3.2.4.3** Nejsou-li prázdné nevyčištěné cisterny, bateriová vozidla a MEGC uzavřeny tak hermeticky jako v naplněném stavu a nemohou-li být dodržena ustanovení ADR, pak musí být přepraveny za dostatečných bezpečnostních opatření při přepravě do nejbližšího vhodného místa, kde může být provedeno vyčištění nebo oprava. Za dostatečnou bezpečnost při přepravě se považuje, pokud jsou učiněna odpovídající opatření, která zabezpečí bezpečnost odpovídající ustanovením ADR a zabrání nekontrolovatelnému úniku nebezpečných věcí.
- 4.3.2.4.4** Prázdné nevyčištěné nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny, bateriová vozidla, cisternové kontejnery, cisternové výměnné nástavby a MEGC se smějí přepravovat i po uplynutí lhůt stanovených v 6.8.2.4.2 a 6.8.2.4.3 k provedení inspekce.

4.3.3 Zvláštní ustanovení pro třídu 2

4.3.3.1 Kódování a hierarchie cisteren

4.3.3.1.1 Kódování cisteren, bateriových vozidel a MEGC

Čtyři části kódů (kódů cisteren) uvedených ve sloupci (12) tabulky A v kapitole 3.2 mají následující význam:

Část	Popis	Kód cisterny
1	Druhy cisterny, bateriového vozidla nebo MEGC	C = cisterna, bateriové vozidlo nebo MEGC pro stlačené plyny; P = cisterna, bateriové vozidlo nebo MEGC pro zkapalněné nebo rozpuštěné plyny; R = cisterna pro hluboce zchlazené zkapalněné plyny;
2	Výpočtový tlak	X = hodnota příslušného nejnižšího zkušební tlaku podle tabulky v 4.3.3.2.5; nebo 22 = nejnižší výpočtový tlak v barech;
3	Otvory (viz. pododdíl 6.8.2.2 a 6.8.3.2)	B = cisterna se spodními plnicími nebo vyprazdňovacími otvory se 3 uzávěry; nebo bateriové vozidlo nebo MEGC s otvory pod hladinou kapaliny nebo pro stlačené plyny; C = cisterna s horními plnicími nebo vyprazdňovacími otvory se 3 uzávěry, jen s otvory pro čištění pod hladinou kapaliny; D = cisterna s horními plnicími nebo vyprazdňovacími otvory se 3 uzávěry; nebo bateriové vozidlo nebo MEGC bez otvorů pod hladinou kapaliny;
4	Pojistné ventily/zařízení	N = cisterna, bateriové vozidlo nebo MEGC s pojistným ventilem podle 6.8.3.2.9 nebo 6.8.3.2.10, která není hermeticky uzavřena; H = hermeticky uzavřená cisterna, bateriové vozidlo nebo MEGC (viz. oddíl 1.2.1).

POZNÁMKA 1: U některých plynů uváděné zvláštní ustanovení TU17 ve sloupci (13) tabulky A v kapitole 3.2 znamená, že plyn může být přepravován jen v bateriových vozidlech nebo MEGC, jehož články jsou tvořeny nádobami.

POZNÁMKA 2: Zvláštní ustanovení TU40 uvedené ve sloupci (13) tabulky A kapitoly 3.2 pro určité plyny znamená, že tento plyn smí být přepravován jen v bateriových vozidlech nebo MEGC, jejichž články jsou tvořeny bezešvými nádobami.

POZNÁMKA 3: Tlaky uvedené na cisterně samé nebo na tabulce nesmějí být menší než hodnota pro "X" nebo nejnižší výpočtový tlak.

4.3.3.1.2 Hierarchie cisteren

Kód cisterny	Další kód(y) cisterny(en) povolený(é) pro látky pod tímto kódem
C*BN	C#BN, C#CN, C#DN, C#BH, C#CH, C#DH
C*BH	C#BH, C#CH, C#DH
C*CN	C#CN, C#DN, C#CH, C#DH
C*CH	C#CH, C#DH
C*DN	C#DN, C#DH
C*DH	C#DH
P*BN	P#BN, P#CN, P#DN, P#BH, P#CH, P#DH
P*BH	P#BH, P#CH, P#DH
P*CN	P#CN, P#DN, P#CH, P#DH
P*CH	P#CH, P#DH
P*DN	P#DN, P#DH
P*DH	P#DH
R*BN	R#BN, R#CN, R#DN
R*CN	R#CN, R#DN
R*DN	R#DN

Číslice zastoupená značkou “#“ musí být rovna nebo větší než číslice zastoupená značkou “*“.

POZNÁMKA: Tato hierarchie nebere v úvahu zvláštní ustanovení (viz. oddíly 4.3.5 a 6.8.4) pro každou položku.

4.3.3.2 Podmínky plnění a zkušební tlaky

4.3.3.2.1 Zkušební tlak pro cisterny určené pro přepravu stlačených plynů musí být nejméně 1,5 násobek provozního tlaku, jak je definován v oddílu 1.2.1 pro tlakové nádoby.

4.3.3.2.2 Zkušební tlak pro cisterny určené pro přepravu:

- vysokotlakých zkvalněných plynů; a
- rozpuštěných plynů.

musí být takový, aby po naplnění nádže na nejvyšší stupeň plnění tlak dosažený v nádrži látkou při teplotě 55 °C pro cisterny s tepelnou izolací nebo při teplotě 65 °C pro cisterny bez tepelné izolace nepřekročil zkušební tlak.

4.3.3.2.3 Zkušební tlak pro cisterny určené pro přepravu nízkotlakých zkvalněných plynů bude:

- (a) jsou-li cisterny opatřeny tepelnou izolací, nejméně roven tenzi par kapaliny při 60 °C, snížený o 0,1 MPa (1 bar), nejméně však 1 MPa (10 barů);
- (b) nejsou-li cisterny opatřeny tepelnou izolací, nejméně roven tenzi pak kapaliny při 65 °C, snížený o 0,1 MPa (1 bar), nejméně však 1 MPa (10 barů).

Nejvyšší dovolená hmotnost obsahu na litr vnitřního objemu se vypočte takto:

Nejvyšší dovolená hmotnost obsahu na litr vnitřního objemu = 0,95 x hustota kapalné fáze při 50 °C (v kg/l);

Kromě toho nesmí plynná fáze pod 60 °C vymizet.

Je-li průměr nádrží nejvýše 1,5 m, musí být použity hodnoty zkušební tlaku a nejvyšší dovolená hmotnost obsahu na litr vnitřního objemu podle pokynu pro balení P200 v pododdílu 4.1.4.1.

4.3.3.2.4 Zkušební tlak pro cisterny určené pro přepravu hluboce zchlazených zkvalněných plynů musí být nejméně 1,3 násobek nejvyššího dovoleného provozního tlaku vyznačeného na cisterně, avšak nejméně 300 kPa (3 bary) (přetlak); pro cisterny s vakuovou izolací musí být zkušební tlak nejméně 1,3 násobek nejvyššího dovoleného provozního tlaku zvýšený o 100 kPa (1 bar).

4.3.3.2.5 Tabulka plynů a směsí plynů, které mohou být přepravovány v nesnímatelných cisternách (cisternových vozidlech), bateriových vozidlech, snímatelných cisternách, cisternových kontejnerech nebo MEGC uvádějící nejnižší zkušební tlak pro cisterny a případně nejvyšší dovolenou hmotnost obsahu na litr vnitřního objemu.

U plynů a směsí plynů zařazených pod j.n. položky musí být hodnoty zkušební tlaku a nejvyšší dovolená hmotnost obsahu na litr vnitřního objemu předepsány znalcem schváleným příslušným orgánem.

Pokud byly cisterny pro stlačené nebo vysokotlaké zkvalněné plyny vystaveny nižšímu zkušebnímu tlaku než tlaku uvedenému v tabulce a cisterny jsou opatřeny tepelnou izolací, může znalec schválený příslušným orgánem předepsat nižší maximální hmotnost za předpokladu, že tlak dosažený v cisterně látkou při teplotě 55 °C nepřekročí zkušební tlak vyražený na cisterně.

UN číslo	Pojmenování	Klasifikační kód	Nejnižší zkušební tlak pro cisterny				Nevyšší dovolená hmotnost obsahu na litr vnitř. objemu
			s tepelnou izolací		bez tepelné izolace		
			MPa	Bar	MPa	bar	kg
1001	acetylen, rozpuštěný	4 F	pouze v bateriových vozidlech a MEGC složených z nádob				
1002	vzduch, stlačený (vzduch, tlakový)	1 A	viz 4.3.3.2.1				
1003	vzduch, hluboce zchlazený, kapalný	3 O	viz 4.3.3.2.4				
1005	amoniak (čpavek), bezvodý	2 TC	2,6	26	2,9	29	0,53
1006	argon, stlačený	1 A	viz 4.3.3.2.1				
1008	fluorid boritý,	2 TC	22,5 30	225 300	22,5 30	225 300	0,715 0,86
1009	bromtrifluormethan (plyn jako chladicí prostředek R 13B1)	2 A	12	120	4,2 12 25	42 120 250	1,50 1,13 1,44 1,60
1010	butadieny, stabilizované (1,2-butadien) nebo butadieny, stabilizované (1,3-butadien) nebo butadieny, směs s uhlovodíkem, stabilizované	2 F 2 F 2 F	1 1 1	10 10 10	1 1 1	10 10 10	0,59 0,55 0,50
1011	Butan	2 F	1	10	1	10	0,51
1012	buteny, směs nebo	2 F	1	10	1	10	0,53
1012	1-buten nebo		1	10	1	10	0,54
1012	2-buten cis nebo		1	10	1	10	0,55
1012	2-buten trans		1	10	1	10	0,50
1013	oxid uhličitý	2 A	19 22,5	190 225	19 25	190 250	0,73 0,78 0,66 0,75
1016	oxid uhelnatý, stlačený	1 TF	viz 4.3.3.2.1				

UN číslo	Pojmenování	Klasifikační kód	Nejnižší zkušební tlak pro cisterny				Nejvyšší dovolená hmotnost obsahu na litr vnitř. objemu
			s tepelnou izolací		bez tepelné izolace		
			MPa	Bar	MPa	bar	kg
1017	Chlór	2 TOC	1,7	17	1,9	19	1,25
1018	chlordifluormethan (plyn jako chladicí prostředek R 22)	2 A	2,4	24	2,6	26	1,03
1020	chlorpentafluorethan (plyn jako chladicí prostředek R 115)	2 A	2	20	2,3	23	1,08
1021	1-chlor-1,2,2,2-tetrafluorethan (plyn jako chladicí prostředek R 124)	2 A	1	10	1,1	11	1,20
1022	chlortrifluormethan (plyn jako chladicí prostředek R13)	2 A	12 22,5	120 225	10 12 19 25	100 120 190 250	0,96 1,12 0,83 0,90 1,04 1,10
1023	svítíplyn, stlačený	1 TF	viz 4.3.3.2.1				
1026	Dikyan	2 TF	10	100	10	100	0,70
1027	Cyklopropan	2 F	1,6	16	1,8	18	0,53
1028	dichlordifluormethan (plyn jako chladicí prostředek R 12)	2 A	1,5	15	1,6	16	1,15
1029	dichlorfluormethan (plyn jako chladicí prostředek R 21)	2 A	1	10	1	10	1,23
1030	1,1-difluorethan (plyn jako chladicí prostředek R 152a)	2 F	1,4	14	1,6	16	0,79
1032	dimethylamin, bezvodý	2 F	1	10	1	10	0,59
1033	Dimethylether	2 F	1,4	14	1,6	16	0,58
1035	Ethan	2 F	12	120	9,5 12 30	95 120 300	0,32 0,25 0,29 0,39
1036	Ethylamin	2 F	1	10	1	10	0,61
1037	chlorethan (ethylchlorid)	2 F	1	10	1	10	0,80
1038	ethylen, hluboce zchlazený, kapalný	3 F	viz 4.3.3.2.4				
1039	Ethylmethylether	2 F	1	10	1	10	0,64
1040	ethylenoxid s dusíkem až do nejvýše přípustného celkového tlaku 1 MPa (10 bar) při 50 °C	2 TF	1,5	15	1,5	15	0,78
1041	ethylenoxid a oxid uhličitý, směs s více než 9%, ale nejvýše 87% ethylenoxidu	2 F	2,4	24	2,6	26	0,73
1046	helium, stlačené	1 A	viz 4.3.3.2.1				
1048	bromovodík, bezvodý	2 TC	5	50	5,5	55	1,54
1049	vodík, stlačený	1 F	viz 4.3.3.2.1				

UN číslo	Pojmenování	Klasifikační kód	Nejnižší zkušební tlak pro cisterny				Nejvyšší dovolená hmotnost obsahu na litr vnitř. objemu
			s tepelnou izolací		bez tepelné izolace		
			MPa	Bar	MPa	bar	kg
1050	chlorovodík, bezvodý	2 TC	12	120	10 12 15 20	100 120 150 200	0,69 0,30 0,56 0,67 0,74
1053	Sirovodík	2 TF	4,5	45	5	50	0,67
1055	Isobuten	2 F	1	10	1	10	0,52
1056	krypton, stlačený	1 A	viz 4.3.3.2.1				
1058	plyny zkvalněné, nehořlavé, překryté dusíkem, oxidem uhličitým nebo vzduchem	2 A	1,5 x plnicí tlak viz 4.3.3.2.2 nebo 4.3.3.2.3				
1060	methylacetylen a propadien, směs, stabilizovaná	2 F	viz 4.3.3.2.2 nebo 4.3.3.2.3				
	směs P 1		2,5	25	2,8	28	0,49
	směs P 2		2,2	22	2,3	23	0,47
	propadien s 1% až 4% methylacetylenem		2,2	22	2,2	22	0,50
1061	methylamin, bezvodý	2 F	1	10	1,1	11	0,58
1062	brommetan (metylbromid) s nejvýše 2 % chlorpikrinu	2 T	1	10	1	10	1,51
1063	chlormethan (methylchlorid) (plyn jako chladicí prostředek R 40)	2 F	1,3	13	1,5	15	0,81
1064	methanthiol (methylmerkaptan)	2 TF	1	10	1	10	0,78
1065	neon, stlačený	1 A	viz 4.3.3.2.1				
1066	dusík, stlačený	1 A	viz 4.3.3.2.1				
1067	oxid dusičitý	2 TOC	pouze v bateriových vozidlech a MEGC složených z nádob				
1070	oxid dusný (rajský plyn)	2 O	22,5	225	18 22,5 25	180 225 250	0,78 0,68 0,74 0,75
1071	plyn ropný, stlačený	1 TF	viz 4.3.3.2.1				
1072	kyslík, stlačený	1 O	viz 4.3.3.2.1				
1073	kyslík, hluboce zchlazený, kapalný	3 O	viz 4.3.3.2.4				
1075	plyny ropné, zkvalněné	2 F	viz 4.3.3.2.2 nebo 4.3.3.2.3				
1076	Fosgen	2 TC	pouze v bateriových vozidlech a MEGC složených z nádob				
1077	propen	2 F	2,5	25	2,7	27	0,43

UN číslo	Pojmenování	Klasifikační kód	Nejnižší zkušební tlak pro cisterny				Nejvyšší dovolená hmotnost obsahu na litr vnitř. objemu
			s tepelnou izolací		bez tepelné izolace		
			MPa	Bar	MPa	bar	kg
1078	plyn jako chladicí prostředek, J. N., jako směs F1 směs F2 směs F3 jiné směsi	2 A	1 1,5 2,4	10 15 24	1,1 1,6 2,7	11 16 27	1,23 1,15 1,03
			viz 4.3.3.2.2 nebo 4.3.3.2.3				
1079	oxid siřičitý	2 TC	1	10	1,2	12	1,23
1080	fluorid sírový	2 A	12	120	7 14 16	70 140 160	1,34 1,04 1,33 1,37
1081	Tetrafluorethylen, stabilizovaný	2 F	jen v bateriových vozidlech nebo MEGC tvořených bezešvými nádobami				
1082	chlortrifluorethylen, stabilizovaný	2 TF	1,5	15	1,7	17	1,13
1083	trimethylamin, bezvodý	2 F	1	10	1	10	0,56
1085	vinylbromid, stabilizovaný	2 F	1	10	1	10	1,37
1086	vinylchlorid, stabilizovaný	2 F	1	10	1,1	11	0,81
1087	vinylmethylether, stabilizovaný	2 F	1	10	1	10	0,67
1581	chlorpikrin a brommethan (methylbromid), směs, s více než 2 % chlorpikrinu	2 T	1	10	1	10	1,51
1582	chlorpikrin a chlormethan (methylchlorid), směs	2 T	1,3	13	1,5	15	0,81
1612	hexaethyltetrafosfát a stlačený plyn, směs	1 T	viz 4.3.3.2.1				
1749	fluorid chloritý	2 TOC	3	30	3	30	1,40
1858	hexafluorpropylen (plyn jako chladicí prostředek R1216)	2 A	1,7	17	1,9	19	1,11
1859	fluorid křemičitý	2 TC	20 30	200 300	20 30	200 300	0,74 1,10
1860	vinylfluorid, stabilizovaný	2 F	12 22,5	120 225	25	250	0,58 0,65 0,64
1912	chlormethan (methylchlorid) a dichlormethan, směs	2 F	1,3	13	1,5	15	0,81
1913	neon, hluboce zchlazený, kapalný	3 A	viz 4.3.3.2.4				
1951	argon, hluboce zchlazený, kapalný	3 A	viz 4.3.3.2.4				
1952	ethylenoxid a oxid uhličitý, směs, obsahující nejvýše 9 % ethylenoxidu	2 A	19 25	190 250	19 25	190 250	0,66 0,75
1953	plyn stlačený, toxický, hořlavý, j. n. a	1 TF	viz 4.3.3.2.1 nebo 4.3.3.2.2				
1954	plyn stlačený, hořlavý, j. n.	1 F	viz 4.3.3.2.1 nebo 4.3.3.2.2				
1955	plyn stlačený, toxický, j. n. a	1 T	viz 4.3.3.2.1 nebo 4.3.3.2.2				

UN číslo	Pojmenování	Klasifikační kód	Nejnižší zkušební tlak pro cisterny				Nejvyšší dovolená hmotnost
			s tepelnou izolací		bez tepelné izolace		obsahu na litr vnitř. objemu
			MPa	Bar	MPa	bar	kg
1956	plyn stlačený, j. n.	1 A	viz 4.3.3.2.1 nebo 4.3.3.2.2				
1957	deuterium, stlačené	1 F	viz 4.3.3.2.1				
1958	1,2dichlortetrafluorethan (plyn jako chladicí prostředek R 114)	2 A	1	10	1	10	1,30
1959	1,1-difluorethylen (plyn jako chladicí prostředek R 1132a)	2 F	12 22,5	120 225	25	250	0,66 0,78 0,77
1961	ethan, hluboce zchlazený, kapalný	3 F	viz 4.3.3.2.4				
1962	ethylen,	2 F	12 22,5	120 225	22,5 30	225 300	0,25 0,36 0,34 0,37
1963	helium, hluboce zchlazené, kapalné	3 A	viz 4.3.3.2.4				
1964	uhlovodíky plynné, směs, stlačená, j.n.	1 F	viz 4.3.3.2.1 nebo 4.3.3.2.2				
1965	uhlovodíky plynné, směs, zkapalněná, j.n. směs A směs A01 směs A02 směs A0 směs A1 směs B1 směs B2 směs B směs C	2 F	1 1,2 1,2 1,2 1,6 2 2 2 2,5	10 12 12 12 16 20 20 20 25	1 1,4 1,4 1,4 1,8 2,3 2,3 2,3 2,7	10 14 14 14 18 23 23 23 27	0,50 0,49 0,48 0,47 0,46 0,45 0,44 0,43 0,42
	jiné směsi		viz 4.3.3.2.2 nebo 4.3.3.2.3				
1966	vodík, hluboce zchlazený, kapalný	3F	viz 4.3.3.2.4				
1967	insekticid plynný, toxický, j.n.a	2 T	viz 4.3.3.2.2 nebo 4.3.3.2.3				
1968	insekticid plynný, j.n.	2 A	viz 4.3.3.2.2 nebo 4.3.3.2.3				
1969	Isobutan	2 F	1	10	1	10	0,49
1970	krypton, hluboce zchlazený, kapalný	3 A	viz 4.3.3.2.4				
1971	methan, stlačený nebo plyn zemní, stlačený, s vysokým obsahem methanu	1 F	viz 4.3.3.2.1				
1972	methan, hluboce zchlazený, kapalný nebo plyn zemní, hluboce zchlazený, kapalný s vysokým obsahem methanu	3 F	viz 4.3.3.2.4				
1973	chlordifluormethan a chlorpentafluorethan, směs s konstantním bodem varu, s cca 49 % chlordifluormethanu (plyn jako chladicí prostředek R 502)	2 A	2,5	25	2,8	28	1,05
1974	bromchlordifluormethan (plyn jako chladicí prostředek R 12B1)	2 A	1	10	1	10	1,61
1976	oktafluorcyklobutan (plyn jako chladicí	2 A	1	10	1	10	1,34

UN číslo	Pojmenování	Klasifikační kód	Nejnižší zkušební tlak pro cisterny				Nejvyšší dovolená hmotnost obsahu na litr vnitř. objemu
			s tepelnou izolací		bez tepelné izolace		
			MPa	Bar	MPa	bar	kg
	prostředek RC 318)						
1977	dusík, hluboce zchlazený, kapalný	3 A	viz 4.3.3.2.4				
1978	Propan	2 F	2,1	21	2,3	23	0,42
1982	tetrafluormethan, (plyn jako chladicí prostředek R 14)	2 A	20 30	200 300	20 30	200 300	0,62 0,94
1983	1-chlor-2,2,2-trifluorethan (plyn jako chladicí prostředek R 133a)	2 A	1	10	1	10	1,18
1984	trifluormethan (plyn jako chladicí prostředek R 23)	2 A	19 25	190 250	19 25	190 250	0,92 0,99 0,87 0,95
2034	vodík a methan, směs, stlačená	1 F	viz 4.3.2.2.1				
2035	1,1,1-trifluorethan (plyn jako chladicí prostředek R 143a)	2 F	2,8	28	3,2	32	0,79
2036	xenon,	2 A	12	120	13	130	1,30 1,24
2044	2,2-dimethylpropan	2 F	1	10	1	10	0,53
2073	amoniak (čpavek), roztok, vodný, s relativní hustotou menší než 0,88 kg/l při 15 °C s více než 35 %, ale nejvýše 50 % amoniaku (čpavku)	4 A	1 1,2	10 12	1 1,2	10 12	0,80 0,77
2187	oxid uhličitý, hluboce zchlazený, kapalný	3 A	viz 4.3.3.2.4				
2189	dichlorsilan	2 TFC	1	10	1	10	0,90
2191	fluorid sulfurylu (sulfurylfluorid)	2 T	5	50	5	50	1,10
2193	hexafluorethan, (plyn jako chladicí prostředek R116)	2 A	16 20	160 200	20	200	1,28 1,34 1,10
2197	jodovodík, bezvodý	2 TC	1,9	19	2,1	21	2,25
2200	propadien, stabilizovaný	2 F	1,8	18	2,0	20	0,50
2201	oxid dusný, hluboce zchlazený, kapalný	3 O	viz 4.3.3.2.4				
2203	silan b	2 F	22,5 25	225 250	22,5 25	225 250	0,32 0,36
2204	sulfid karbonylu (karbonylsulfid)	2 TF	2,7	27	3,0	30	0,84
2417	fluorid karbonylu (karbonylfluorid)	2 TC	20 30	200 300	20 30	200 300	0,47 0,70
2419	bromtrifluorethylen	2 F	1	10	1	10	1,19
2420	hexafluoraceton	2 TC	1,6	16	1,8	18	1,08
2422	oktafluor-2-buten (plyn jako chladicí prostředek R 1318)	2 A	1	10	1	10	1,34

UN číslo	Pojmenování	Klasifikační kód	Nejnižší zkušební tlak pro cisterny				Nejvyšší dovolená hmotnost
			s tepelnou izolací		bez tepelné izolace		obsahu na litr vnitř. objemu
			MPa	Bar	MPa	bar	kg
2424	oktafluorpropan (plyn jako chladicí prostředek R 218)	2 A	2,1	21	2,3	23	1,07
2451	fluorid dusitý	2 O	20 30	200 300	20 30	200 300	0,50 0,75
2452	ethylacetylen, stabilizovaný	2 F	1	10	1	10	0,57
2453	fluorethan (ethylfluorid) (plyn jako chladicí prostředek R 161)	2 F	2,1	21	2,5	25	0,57
2454	fluormethan (methylfluorid) (plyn jako chladicí prostředek R 41)	2 F	30	300	30	300	0,36
2517	1-chlor-1,1-difluorethan (plyn jako chladicí prostředek R 142b)	2 F	1	10	1	10	0,99
2591	xenon, hluboce zchlazený, kapalný	3 A	viz 4.3.3.2.4				
2599	chlortrifluormethan a trifluormethan, azeotropní směs s cca 60 % chlortrifluormethanu (plyn jako chladicí prostředek R 503)	2 A	3,1 4,2 10	31 42 100	3,1 4,2 10	31 42 100	0,11 0,21 0,76 0,20 0,66
2601	cyklobutan	2 F	1	10	1	10	0,63
2602	dichlordifluormethan a 1,1-difluorethan, azeotropní směs s cca 74 % dichlordifluormethanu (plyn jako chladicí prostředek R 500)	2 A	1,8	18	2	20	1,01
2901	chlorid bromu (bromchlorid)	2 TOC	1	10	1	10	1,50
3057	trifluoracetylchlorid	2 TC	1,3	13	1,5	15	1,17
3070	ethylenoxid a dichlordifluormethan, směs s nejvýše 12,5 % ethylenoxidu	2 A	1,5	15	1,6	16	1,09
3083	perchlorfluorid	2 TO	2,7	27	3,0	30	1,21
3136	trifluormethan, hluboce zchlazený, kapalný	3 A	viz 4.3.3.2.4				
3138	ethylen, acetylen a propylen, směs, hluboce zchlazená, kapalná s nejméně 71,5 % ethylenu, nejvýše 22,5 % acetyleny a nejvýše 6 % propylenu	3 F	viz 4.3.3.2.4				
3153	perfluormethylvinylether	2 F	1,4	14	1,5	15	1,14
3154	perfluorethylvinylether	2 F	1	10	1	10	0,98
3156	plyn stlačený, oxidující, j. n.	1 O	viz 4.3.3.2.1 nebo 4.3.3.2.2				
3157	plyn zkapalněný, oxidující, j. n.	2 O	viz 4.3.3.2.2 nebo 4.3.3.2.3				
3158	plyn hluboce zchlazený, kapalný, j.n.	3 A	viz 4.3.3.2.4				
3159	1,1,1,2-tetrafluorethan (plyn jako chladicí prostředek R 134a)	2 A	1,6	16	1,8	18	1,04
3160	plyn zkapalněný, toxický, hořlavý, J. N.a	2 TF	viz 4.3.3.2.2 nebo 4.3.3.2.3				
3161	plyn zkapalněný, hořlavý, j. n.	2 F	viz 4.3.3.2.2 nebo 4.3.3.2.3				
3162	plyn zkapalněný, toxický, j. n.a	2 T	viz 4.3.3.2.2 nebo 4.3.3.2.3				

UN číslo	Pojmenování	Klasifikační kód	Nejnižší zkušební tlak pro cisterny				Nejvyšší dovolená hmotnost obsahu na litr vnitř. objemu
			s tepelnou izolací		bez tepelné izolace		
			MPa	Bar	MPa	bar	kg
3163	plyn zkvapalněný, j. n.	2 A	viz 4.3.3.2.2 nebo 4.3.3.2.3				
3220	pentafluorethan (plyn jako chladicí prostředek R125)	2 A	4,1	41	4,9	49	0,95
3252	difluormethan (plyn jako chladicí prostředek R 32)	2 F	3,9	39	4,3	43	0,78
3296	heptafluorpropan (plyn jako chladicí prostředek R227)	2 A	1,4	14	1,6	16	1,20
3297	ethylenoxid a chlortetrafluorethan, směs s nejvýše 8,8 % ethylenoxidu	2 A	1	10	1	10	1,16
3298	ethylenoxid a pentafluorethan, směs s nejvýše 7,9 % ethylenoxidu	2 A	2,4	24	2,6	26	1,02
3299	ethylenoxid a tetrafluorethan, směs s nejvýše 5,6 % ethylenoxidu	2 A	1,5	15	1,7	17	1,03
3300	ethylenoxid a oxid uhlíčitý, směs s více než 87% ethylenoxidu	2 TF	2,8	28	2,8	28	0,73
3303	plyn stlačený, toxický, podporující hoření, j.n.a	1 TO	viz 4.3.3.2.1 nebo 4.3.3.2.2				
3304	plyn stlačený, toxický, žíravý, j.n.a	1 TC	viz 4.3.3.2.1 nebo 4.3.3.2.2				
3305	plyn stlačený, toxický, hořlavý, žíravý, j.n.a	1 TFC	viz 4.3.3.2.1 nebo 4.3.3.2.2				
3306	plyn stlačený, toxický, podporující hoření, žíravý, j.n. a	1 TOC	viz 4.3.3.2.1 nebo 4.3.3.2.2				
3307	plyn zkvapalněný, toxický, podporující hoření, j.n. a	2 TO	viz 4.3.3.2.2 nebo 4.3.3.2.3				
3308	plyn zkvapalněný, toxický, žíravý, j.n. a	2 TC	viz 4.3.3.2.2 nebo 4.3.3.2.3				
3309	plyn zkvapalněný, toxický, hořlavý, žíravý, j.n. a	2 TFC	viz 4.3.3.2.2 nebo 4.3.3.2.3				
3310	plyn zkvapalněný, toxický, podporující hoření, žíravý, j.n. a	2 TOC	viz 4.3.3.2.2 nebo 4.3.3.2.3				
3311	plyn hluboce zchlazený, kapalný, podporující hoření, j.n.	3 O	viz 4.3.3.2.4				
3312	plyn hluboce zchlazený, kapalný, hořlavý, j.n.	3 F	viz 4.3.3.2.4				
3318	amoniak (čpavek), vodný roztok s relativní hustotou menší než 0,88 kg/l při 15 °C, s více než 50 % amoniaku (čpavku)	4 TC	viz 4.3.3.2.2				
3337	plyn jako chladicí prostředek R 404A	2 A	2,9	29	3,2	32	0,84
3338	plyn jako chladicí prostředek R 407A	2 A	2,8	28	3,2	32	0,95
3339	plyn jako chladicí prostředek R 407B	2 A	3,0	30	3,3	33	0,95
3340	plyn jako chladicí prostředek R 407C	2 A	2,7	27	3,0	30	0,95
3354	insekticid plynný, hořlavý, j.n.	2 F	viz 4.3.3.2.2 nebo 4.3.3.2.3				
3355	insekticid plynný, toxický, hořlavý, j.n.a	2 TF	viz 4.3.3.2.2 nebo 4.3.3.2.3				

- a Dovoleno, pokud LC50 je rovno nebo větší než 200 ppm.
b Považováno za pyroforní.

4.3.3.3 Provoz

- 4.3.3.3.1** Pokud jsou cisterny, bateriová vozidla nebo MEGC schváleny pro různé plyny, pak změna jejich použití vyžaduje jejich vyprázdnění, vyčištění a odplynování v takovém rozsahu, aby byla zajištěna bezpečnost jejich provozu.
- 4.3.3.3.2** Při předávání cisteren, bateriových vozidel nebo MEGC k přepravě smějí být viditelné jen údaje pro skutečně naplněný, nebo pokud jsou prázdné, pro posledně naplněný plyn, uvedené v 6.8.3.5.6; všechny údaje týkající se jiných plynů musí být zakryty.
- 4.3.3.3.3** Všechny články bateriového vozidla nebo MEGC smějí obsahovat jen jeden a tentýž plyn.
- 4.3.3.3.4** Jestliže by vnější přetlak mohl být vyšší než je odolnost cisterny vůči vnějšímu tlaku (např. v důsledku nízkých teplot okolí), musí být přijata přiměřená opatření k ochraně cisteren přepravujících nízkotlaké zkapalněné plyny proti nebezpečí deformace, např. jejich naplněním dusíkem nebo jiným inertním plynem, aby se udržel dostatečný tlak uvnitř cisterny.
- 4.3.3.4** (Vyhrazeno)

4.3.4 Zvláštní ustanovení pro třídy 1 a 3 až 9

4.3.4.1 Kódování, racionální přiřazování a hierarchie cisteren

4.3.4.1.1 Kódování cisteren

Čtyři části kódů (kódů cisteren) uvedené ve sloupci (12) tabulky A v kapitole 3.2 mají následující význam:

Část	Popis	Kód cisterny
1	Druhy cisterny	L = cisterna pro látky v kapalném stavu (kapaliny nebo tuhé látky podávané k přepravě v roztaveném stavu); S = cisterna pro látky v tuhém stavu (práškovém nebo zrnitém);
2	Výpočtový tlak	G = nejnižší výpočtový tlak podle všeobecných požadavků v 6.8.2.1.14; nebo 1,5; 2,65; 4; 10; 15 nebo 21= nejnižší výpočtový tlak v barech (viz 6.8.2.1.14);
3	Otvory (viz. 6.8.2.2.2)	A = cisterna se spodními plnicími a spodními vyprazdňovacími otvory se 2 uzávěry; B = cisterna se spodními plnicími a spodními vyprazdňovacími otvory se 3 uzávěry; C = cisterna s horními plnicími a vyprazdňovacími otvory, jen s čistícími otvory pod hladinou kapaliny; D = cisterna s horními plnicími a vyprazdňovacími otvory, bez jakýchkoliv otvorů pod hladinou kapaliny;
4	Pojistné ventily/ zařízení	V = cisterna s odvodušňovacím zařízením podle 6.8.2.2.6, ale bez zařízení chránící proti prošlenutí plamene; nebo cisterna, která není odolná proti tlaku při výbuchu; F = cisterna s odvodušňovacím zařízením podle 6.8.2.2.6 se zařízením chránícím proti prošlenutí plamene; nebo cisterna odolná proti tlaku při výbuchu; N = cisterna bez odvodušňovacího zařízení podle 6.8.2.2.6 a která není hermeticky uzavřena; H = hermeticky uzavřená cisterna (viz 1.2.1).

4.3.4.1.2

Racionální přiřazování kódů cisteren ke skupinám látek a hierarchie cisteren

POZNÁMKA: Některé látky a skupiny látek nejsou uvedeny v tomto racionálním přiřazování, viz 4.3.4.1.3.

Racionální přiřazování kódů			
Kód cisteren	Povolené skupiny látek		
	Třída	Klasifikační kód	Obalová skupina
LGAV	3	F2	III
	9	M9	III
LGBV	4.1	F2	II, III
	5.1	O1	III
	9	M6	III
	9	M11	III
jakož i skupiny látek povolené pro kód cisteren LGAV			
LGBF	3	F1	II tenze par při 50 °C ≤ 1,1 bar
	3	F1	III
	3	D	II tenze par při 50 °C ≤ 1,1 bar
	3	D	III
jakož i skupiny látek povolené pro kódy cisteren LGAV a LGBV			
L1,5BN	3	F1	II tenze par při 50 °C > 1,1 bar
	3	F1	III bod vzplanutí < 23 °C, viskózní, tenze par při 50 °C > 1,1 bar, bod varu > 35 °C
	3	D	II; tenze par při 50 °C > 1,1 bar
jakož i skupiny látek povolené pro kódy cisteren LGAV, LGBV a LGBF			
L4BN	3	F1	I, III bod varu ≤ 35 °C
	3	FC	III
	3	D	I
	5.1	O1	I, II
	5.1	OT1	I
	8	C1	II, III
	8	C3	II, III
	8	C4	II, III
	8	C5	II, III
	8	C7	II, III
	8	C8	II, III
	8	C9	II, III
	8	C10	II, III
	8	CF1	II
	8	CF2	II
	8	CS1	II
	8	CW1	II
	8	CW2	II
	8	CO1	II
	8	CO2	II
8	CT1	II, III	
8	CT2	II, III	
8	CFT	II	

Racionální přiřazení kódů			
Kód cisteren	Povolené skupiny látek		
	Třída	Klasifikační kód	Obalová skupina
	9	M11	III
	jakož i skupiny látek povolené pro kódy cisteren LGAV, LGBV, LGBF a L1,5BN		
L4BH	3	FT1	II, III
	3	FT2	II
	3	FC	II
	3	FTC	II
	6.1	T1	II, III
	6.1	T2	II, III
	6.1	T3	II, III
	6.1	T4	II, III
	6.1	T5	II, III
	6.1	T6	II, III
	6.1	T7	II, III
	6.1	TF1	II
	6.1	TF2	II, III
	6.1	TF3	II
	6.1	TS	II
	6.1	TW1	II
	6.1	TW2	II
	6.1	TO1	II
	6.1	TO2	II
	6.1	TC1	II
	6.1	TC2	II
	6.1	TC3	II
	6.1	TC4	II
	6.1	TFC	II
	6.2	I4	
	9	M2	II
	jakož i skupiny látek povolené pro kódy cisteren LGAV, LGBV, LGBF, L1,5BN a L4BN		
L4DH	4.2	S1	II, III
	4.2	S3	II, III
	4.2	ST1	II, III
	4.2	ST3	II, III
	4.2	SC1	II, III
	4.2	SC3	II, III
	4.3	W1	II, III
	4.3	WF1	II, III
	4.3	WT1	II, III
	4.3	WC1	II, III
	8	CT1	II,III
		jakož i skupiny látek povolené pro kódy cisteren LGAV, LGBV, LGBF, L1,5BN, L4BN a L4BH	
L10BH	8	C1	I
	8	C3	I
	8	C4	I
	8	C5	I
	8	C7	I
	8	C8	I
	8	C9	I
	8	C10	I

Racionální přiřazení kódů			
Kód cisteren	Povolené skupiny látek		
	Třída	Klasifikační kód	Obalová skupina
	8	CF1	I
	8	CF2	I
	8	CS1	I
	8	CW1	I
	8	CW2	I
	8	CO1	I
	8	CO2	I
	8	CT1	I
	8	CT2	I
	8	COT	I
	jakož i skupiny látek povolené pro kódy cisteren LGAV, LGBV, LGBF, L1,5BN, L4BN a L4BH		
L10CH	3	FT1	I
	3	FT2	I
	3	FC	I
	3	FTC	I
	6.1*	T1	I
	6.1	T2	I
	6.1	T3	I
	6.1	T4	I
	6.1	T5	I
	6.1	T6	I
	6.1	T7	I
	6.1	TF1	I
	6.1	TF2	I
	6.1	TF3	I
	6.1	TS	I
	6.1	TW1	I
	6.1	TO1	I
	6.1	TC1	I
	6.1	TC2	I
	6.1	TC3	I
	6.1	TC4	I
	6.1	TFC	I
	6.1	TFW	I
	jakož i skupiny látek povolené pro kódy cisteren LGAV, LGBV, LGBF, L1,5BN, L4BN, L4BH a L10BH		
L10DH	4.3	W1	I
	4.3	WF1	I
	4.3	WT1	I
	4.3	WC1	I
	4.3	WFC	I
	5.1	OTC	I
	8	CT1	I
	jakož i skupiny látek povolené pro kódy cisteren LGAV, LGBV, LGBF, L1,5BN, L4BN, L4BH, L4DH, L10BH a L10CH		

* Látky s LC50 nejvýše 200 ml/m³ a koncentrací nasycené páry nejméně 500 LC50 musí být přiřazeny ke kódu cisteren L15CH.

Racionální přiřazení kódů			
Kód cisteren	Povolené skupiny látek		
	Třída	Klasifikační kód	Obalová skupina
L15CH	3	FT1	I
	6.1**	T1	I
	6.1	T4	I
	6.1	TF1	I
	6.1	TW1	I
	6.1	TO1	I
	6.1	TC1	I
	6.1	TC3	I
	6.1	TFC	I
	6.1	TFW	I
jakož i skupiny látek povolené pro kódy cisteren LGAV, LGBV, LGBF, L1,5BN, L4BN, L4BH, L10BH a L10CH			
L21DH	4.2	S1	I
	4.2	S3	I
	4.2	SW	I
	4.2	ST3	I
jakož i skupiny látek povolené pro kódy cisteren LGAV, LGBV, LGBF, L1,5BN, L4BN, L4BH, L4DH, L10BH, L10CH, L10DH a L15CH			
SGAV	4.1	F1	III
	4.1	F3	III
	4.2	S2	II, III
	4.2	S4	III
	5.1	O2	II, III
	8	C2	II, III
	8	C4	III
	8	C6	III
	8	C8	III
	8	C10	II, III
	8	CT2	III
	9	M7	III
9	M11	II, III	
SGAN	4.1	F1	II
	4.1	F3	II
	4.1	FT1	II, III
	4.1	FT2	II, III
	4.1	FC1	II, III
	4.1	FC2	II, III
	4.2	S2	II
	4.2	S4	II, III
	4.2	ST2	II, III
	4.2	ST4	II, III
	4.2	SC2	II, III
	4.2	SC4	II, III
	4.3	W2	II, III
	4.3	WF2	II

** Látky s LC50 nejvýše 200 ml/m³ a koncentrací nasycené páry nejméně 500 LC50 musí být přiřazeny k tomuto kódu cisteren.

Racionální přiřazování kódů			
Kód cisteren	Povolené skupiny látek		
	Třída	Klasifikační kód	Obalová skupina
	4.3	WS	II, III
	4.3	WT2	II, III
	4.3	WC2	II, III
	5.1	O2	II, III
	5.1	OT2	II, III
	5.1	OC2	II, III
	8	C2	II
	8	C4	II
	8	C6	II
	8	C8	II
	8	C10	II
	8	CF2	II
	8	CS2	II
	8	CW2	II
	8	CO2	II
	8	CT2	II
	9	M3	III
	jakož i skupiny látek povolené pro kód cisteren SGAV		
SGAH	6.1	T2	II, III
	6.1	T3	II, III
	6.1	T5	II, III
	6.1	T7	II, III
	6.1	T9	II
	6.1	TF3	II
	6.1	TS	II
	6.1	TW2	II
	6.1	TO2	II
	6.1	TC2	II
	6.1	TC4	II
	9	M1	II, III
	jakož i skupiny látek povolené pro kódy cisteren SGAV a SGAN		
S4AH	9	M2	II
	6.2	I3	II
	jakož i skupiny látek povolené pro kódy cisteren SGAV, SGAN a SGAH		
S10AN	8	C2	I
	8	C4	I
	8	C6	I
	8	C8	I
	8	C10	I
	8	CF2	I
	8	CS2	I
	8	CW2	I
	8	CO2	I
	8	CT2	I
	jakož i skupiny látek povolené pro kódy cisteren SGAV a SGAN		

Racionální přiřazování kódů			
Kód cisteren	Povolené skupiny látek		
	Třída	Klasifikační kód	Obalová skupina
S10AH	6.1	T2	I
	6.1	T3	I
	6.1	T5	I
	6.1	T7	I
	6.1	TS	I
	6.1	TW2	I
	6.1	TO2	I
	6.1	TC2	I
	6.1	TC4	I
jakož i skupiny látek povolené pro kódy cisteren SGAV, SGAN, SGAH a S10AN			

Hierarchie cisteren

Cisterny s kódy cisteren odlišnými od kódů uvedených v této tabulce nebo v tabulce A kapitoly 3.2 mohou být též používány, pokud jakákoli část (číslice nebo písmeno) částí 1 až 4 těchto kódů cisteren odpovídá úrovni bezpečnosti nejméně rovnocenné odpovídající části kódu cisterny uvedeného v tabulce A kapitoly 3.2, a to podle následujícího vzestupného pořadí:

Část 1: Typy cisteren

S → L

Část 2: Výpočtový tlak

G → 1,5 → 2,65 → 4 → 10 → 15 → 21 bar

Část 3: Otvory

A → B → C → D

Část 4: Pojistné ventily / zařízení

V → F → N → H

Například

- cisterna s kódem cisterny L10CN je povolena pro přepravu látky, ke které byl přiřazen kód cisterny L4BN;
- cisterna s kódem cisterny L4BN je povolena pro přepravu látky, ke které byl přiřazen kód cisterny SGAN.

POZNÁMKA: Hierarchie nebere v úvahu zvláštní ustanovení (viz oddíly 4.3.5 a 6.8.4) pro každou položku.

4.3.4.1.3

Následující látky a skupiny látek, u kterých je ve sloupci (12) tabulky A v kapitole 3.2 uvedeno za kódem cisterny znaménko "(+)", podléhají zvláštním ustanovením. V tomto případě je dovoleno alternativní použití cisteren pro jiné látky a skupiny látek pouze tehdy, pokud je to uvedeno v osvědčení o schválení typu. Cisterny vyšší hodnoty podle ustanovení na konci tabulky v 4.3.4.1.2 mohou být použity se zřetelem ke zvláštním ustanovením uvedeným ve sloupci (13) tabulky A v kapitole 3.2.

- (a) Třída 1
Podtřída 1.5, UN 0331 trhavina, typ B: kód S2,65AN;
- (b) Třída 4.1:
UN 2448 síra, roztavená: kód LGBV;
- (c) Třída 4.2:
UN 1381 fosfor, bílý nebo žlutý, suchý nebo pod vodou nebo v roztoku a UN 2447 fosfor, bílý, roztavený: kód L10DH;
UN 1402 karbid vápenatý, obalová skupina I: kód S2,65AN;

- (d) Třída 4.3:
- UN 1389 amalgam alkalických kovů; kapalný;
 - UN 1391 disperze alkalických kovů nebo disperze kovů alkalických zemin;
 - UN 1392 amalgam kovů alkalických zemin; kapalný;
 - UN 1415 lithium;
 - UN 1420 slitiiny draslíku, kovové; kapalné;
 - UN 1421 slitina alkalických kovů, kapalná, j. n.;
 - UN 1422 slitiiny draslíku a sodíku; kapalné;
 - UN 1428 sodík; a
 - UN 2257 draslík: kód L10BN;
 - UN 3401 amalgam alkalických kovů, tuhý;
 - UN 3402 amalgam kovů alkalických zemin, tuhý;
 - UN 3404 slitiiny draslíku a sodíku, tuhé a UN 3482 disperze alkalických kovů, hořlavá nebo UN 3482 disperze kovů alkalických zemin, hořlavá;
 - UN 3404 slitiiny draslíku a sodíku, tuhé: kód L10BN;
 - UN 1407 cesium a
 - UN 1423 rubidium: kód L10CH;
- (e) Třída 5.1:
- UN 1873 kyselina chloristá, roztok s více než 50 % hmot., ale nejvýše 72 % hmot. čisté kyseliny: kód L4DN;
 - UN 2015 peroxid vodíku, vodný roztok, stabilizovaný s více než 70 % peroxidu vodíku: kód L4DV;
 - UN 2015 peroxid vodíku, vodný roztok, stabilizovaný s více než 60 %, ale nejvýše 70 % peroxidu vodíku: kód L4BV;
 - UN 2014 peroxid vodíku, vodný roztok s nejméně 20 %, ale nejvýše 60 % peroxidu vodíku a UN 3149 peroxid vodíku a kyselina peroctová, směs, stabilizovaná: kód L4BV;
 - UN 2426 dusičnan amonný, kapalný, horký koncentrovaný roztok v koncentrací vyšší než 80 %, ale nepřesahující 93 %: kód L4BV;
 - UN 3375 dusičnan amonný, emulze, suspenze nebo gel, kapalný: kód LGAV;
 - UN 3375 dusičnan amonný, emulze, suspenze nebo gel, tuhý: kód SGAV;
- (f) Třída 5.2:
- UN 3109 peroxid organický, typ F, kapalný a UN 3119 peroxid organický, typ F, kapalný, řízená teplota: kód L4BN;
 - UN 3110 peroxid organický, typ F, tuhý a UN 3120 peroxid organický, typ F, tuhý, řízená teplota: kód S4AN;
- (g) Třída 6.1:
- UN 1613 kyanovodík, vodný roztok (kyselina kyanovodíková) a UN 3294 kyanovodík, alkoholický roztok: kód L15DH;
- (h) Třída 7:
- Všechny látky: speciální cisterny;
 - Minimální požadavky pro kapaliny: kód L2,65CN; pro tuhé látky: kód S2,65AN;
 - Odchylně od všeobecných požadavků tohoto odstavce cisterny používané pro radioaktivní látky mohou být používány také pro přepravu jiných věcí, pokud jsou splněny požadavky pododdílu 5.1.3.2;
- (i) Třída 8:
- UN 1052 fluorovodík, bezvodý a UN 1790 kyselina fluorovodíková, roztok, obsahující více než 85 % kyseliny fluorovodíkové: kód L21DH;

UN 1744 brom nebo brom, roztok: kód L21DH;

UN 1791 chlornan, roztok a UN 1908 chloritan, roztok: kód L4BV.

4.3.4.1.4 Cisterny určené pro přepravu kapalných odpadů splňující požadavky kapitoly 6.10 a vybavené dvěma uzávěry podle pododdílu 6.10.3.2 musí být přiřazeny ke kódu cisterny L4AH. Pokud jsou tyto cisterny vybaveny pro alternativní přepravu kapalných a tuhých látek, musí být přiřazeny ke kombinovaným kódům cisteren L4AH+S4AH.

4.3.4.2 Všeobecná ustanovení

4.3.4.2.1 V případě nakládky zahřátých látek nesmí teplota na vnějším povrchu cisterny nebo její tepelné izolace během přepravy překročit 70 °C.

4.3.4.2.2 Spojovací potrubí mezi nezávislými, ale navzájem propojenými cisternami dopravní jednotky musí být během přepravy vyprázdněné. Flexibilní plnicí a vyprazdňovací potrubí, které není permanentně připojeno k nádržím, musí být během přepravy vyprázdněné.

4.3.4.2.3 (Vyhrazeno)

4.3.5 Zvláštní ustanovení

Následující zvláštní ustanovení se musí použít, pokud jsou uvedena u příslušné položky ve sloupci (13) tabulky A v kapitole 3.2:

TU1 Cisterny nesmějí být podány k přepravě před úplným ztuhnutím látky a jejím pokrytím inertním plynem. Nevyčištěné prázdné cisterny, které tyto látky obsahovaly, musí být naplněny inertním plynem.

TU2 Látka musí být pokryta inertním plynem. Nevyčištěné prázdné cisterny, které tyto látky obsahovaly, musí být naplněny inertním plynem.

TU3 Vnitřek nádrže a všechny části, které mohou přijít do styku s látkou, musí být udržovány v čistotě. Pro čerpadla, ventily a ostatní zařízení se nesmí používat žádná maziva, která se mohou s látkou nebezpečně slučovat.

TU4 Během přepravy musí být tyto látky pokryty vrstvou inertního plynu, jehož přetlak musí činit nejméně 50 kPa (0,5 baru).

Nevyčištěné prázdné cisterny, které obsahovaly tyto látky, musí být při podání k přepravě naplněny inertním plynem o přetlaku nejméně 50 kPa (0,5 baru).

TU5 (Vyhrazeno)

TU6 Není dovoleno přepravovat v cisternách, bateriových vozidlech a MEGC, pokud je hodnota LC₅₀ nižší než 200 ppm.

TU7 Materiály používané k utěsnění spojů nebo k údržbě uzávěrů musí být snášlivé s obsahem.

TU8 Cisterny z hliníkových slitin se nesmějí používat k přepravě, ledaže jsou výlučně vyhrazeny pro takovou přepravu a acetaldehyd neobsahuje kyselinu.

TU9 UN 1203 benzín s tenzí par při 50 °C vyšší než 110 kPa (1,1 baru), ale nejvýše 150 kPa (1,5 baru) smí být přepravován také v cisternách konstruovaných podle 6.8.2.1.14(a) a jejichž výstroj odpovídá 6.8.2.2.6.

TU10 (Vyhrazeno)

TU11 Během plnění nesmí teplota této látky překročit 60 °C. Nejvyšší plnicí teplota 80 °C je povolena, pokud se zabrání vzniku doutnajících míst a jsou splněny dále uvedené podmínky. Po ukončení plnění musí být cisterny natlakovány (např. stlačeným vzduchem), aby se zkontrolovala jejich

- těsnost. Musí se zabezpečit, aby během přepravy nedošlo ke vzniku podtlaku. Před vyprázdněním se musí zkontrolovat, jestli tlak v cisternách je stále vyšší než tlak atmosférický. Pokud tomu tak není, musí se před započítím vyprazdňování do cisteren zavést inertní plyn.
- TU12 Při změně používání musí být z nádrže a výstroje před a po přepravě této látky dokonale vyčištěny všechny zbytky této látky.
- TU13 Cisterny musí být při plnění prosty všech nečistot. Provozní výstroj, jako ventily a vnější potrubí, musí být po naplnění nebo vyprázdnění cisterny vyprázdněny.
- TU14 Ochranné kryty uzávěrů musí být během přepravy uzamčeny.
- TU15 Cisterny se nesmějí použít k přepravě potravin, poživatin a krmiv.
- TU16 Nevyčištěné prázdné cisterny musí být při podání k přepravě:
- buď naplněny dusíkem,
 - nebo naplněny vodou nejméně na 96 % a nejvíce na 98 % svého vnitřního objemu; v době od 1. října do 31. března musí voda obsahovat dostatečné množství ochranného prostředku proti zamrznutí, aby nemohla voda během přepravy zamrznout. Ochranný prostředek proti zamrznutí nesmí mít žádné korozivní účinky a nesmí reagovat s fosforem.
- TU17 Smí se přepravovat jen v bateriových vozidlech nebo MEGC, jejichž články jsou nádoby.
- TU18 Stupeň plnění cisteren musí být stanoven tak, aby při zahřátí obsahu na teplotu, při níž se tenze par rovná otevíracímu tlaku pojistného ventilu, objem kapaliny dosáhl 95 % vnitřního objemu cisterny při této teplotě. Ustanovení 4.3.2.3.4 se nepoužije.
- TU19 Cisterny smějí být naplněny do 98% při plnicí teplotě a tlaku. Ustanovení 4.3.2.3.4 se nepoužije.
- TU20 (Vyhrazeno)
- TU21 Látky musí být v době plnění, je-li použita voda jako ochranný prostředek, pokryta vrstvou nejméně 12 cm vody; stupeň plnění při teplotě 60 °C nesmí překročit 98 %. Je-li použit dusík jako ochranný prostředek, stupeň plnění při teplotě 60 °C nesmí překročit 96 %. Zbylý prostor musí být naplněn dusíkem tak, aby ani po ochlazení neklesl tlak nikdy pod atmosférický tlak. Cisterna musí být uzavřena tak, aby nemohlo dojít k úniku plynu.
- TU22 Cisterny smějí být plněny nejvýše do 90 % svého vnitřního objemu; pro kapaliny při střední teplotě kapaliny 50 °C musí zůstat v nádrži z hlediska bezpečnosti ještě prázdný prostor 5 %.
- TU23 Stupeň plnění nesmí překročit 0,93 kg na litr vnitřního objemu, plní-li se hmotnostně. Plní-li se objemově, nesmí stupeň plnění překročit 85 %.
- TU24 Stupeň plnění nesmí překročit 0,95 kg na litr vnitřního objemu, plní-li se hmotnostně. Plní-li se objemově, nesmí stupeň plnění překročit 85 %.
- TU25 Stupeň plnění nesmí překročit 1,14 kg na litr vnitřního objemu, plní-li se hmotnostně. Plní-li se objemově, nesmí stupeň plnění překročit 85 %.
- TU26 Stupeň plnění nesmí překročit 85 %.
- TU27 Cisterny smějí být plněny nejvýše do 98 % svého vnitřního objemu.
- TU28 Cisterny smějí být plněny při referenční teplotě 15 °C nejvýše do 95% svého vnitřního objemu.
- TU29 Cisterny smějí být plněny nejvýše do 97 % svého vnitřního objemu a nejvyšší teplota po naplnění nesmí překročit 140 °C.
- TU30 Cisterny musí být plněny podle zkušebního protokolu pro schválení konstrukčního typu cisterny, avšak nejvýše do 90 % svého vnitřního objemu.
- TU31 Cisterny smějí být plněny nejvýše do 1 kg na litr vnitřního objemu.
- TU32 Cisterny smějí být plněny nejvýše do 88 % svého vnitřního objemu.
- TU33 Cisterny smějí být plněny nejméně do 88 % a nejvýše do 92 % svého vnitřního objemu, nebo do 2,86 kg na litr svého vnitřního objemu.
- TU34 Cisterny smějí být plněny nejvýše do 0,84 kg na litr svého vnitřního objemu.
- TU35 Prázdné nevyčištěné nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a cisternové kontejnery, které obsahovaly tyto látky, nepodléhají požadavkům ADR, pokud byla provedena přiměřená opatření k vyloučení jakéhokoli nebezpečí.
- TU36 Stupeň plnění podle pododdílu 4.3.2.2 nesmí při referenční teplotě 15 °C překročit 93 % svého vnitřního objemu.
- TU37 Přeprava v cisternách je omezena na látky obsahující původce nemocí, které nepředstavují vážné

nebezpečí a proti kterým, přestože při expozici mohou způsobit vážnou nákazu, jsou k dispozici účinný léčebný postup i preventivní opatření a nebezpečí přenosu nákazy je omezené (tj. mírné nebezpečí pro jednotlivce a malé nebezpečí pro společnost).

TU38

(Vyhrazeno)

TU39

Vhodnost látky pro přepravu v cisternách musí být prokázána. Metoda hodnocení vhodnosti musí být schválena příslušným orgánem. Jedna z metod je zkouška 8(d) v sérii zkoušek 8 (viz Příručka zkoušek a kritérií, část 1, pododdíl 18.7).

Není dovoleno ponechat látky v cisterně po dobu, za kterou by v ní mohly ztvrdnout. Musí být učiněna vhodná opatření, aby se zabránilo usazení a ztuhnutí látek v cisterně (např. vyčištění atd.).

TU 40

Smějí být přepravovány jen v bateriových vozidlech nebo MEGC, jejichž články jsou tvořeny bezešvými nádobami.

TU 41

Vhodnost látky pro přepravu v cisternách musí být prokázána ke spokojenosti příslušného orgánu každé země, přes kterou nebo do které je přeprava prováděna.

Metoda vyhodnocení této vhodnosti musí být schválena příslušným orgánem kterékoli smluvní strany ADR, který může také uznat schválení udělené příslušným orgánem země, která není smluvní stranou ADR, za podmínky, že toto schválení bylo uděleno v souladu s postupy platnými podle ADR, RID, ADN nebo IMDG Code.

Látkám nesmí být dovoleno zůstat v cisterně po dobu, která by mohla vést k jejich spékání. Musí být učiněna vhodná opatření, aby se zamezilo shromažďování a usazování látek v cisterně (např. čištění).

KAPITOLA 4.4

POUŽÍVÁNÍ NESNÍMATELNÝCH CISTEREN (CISTERNOVÝCH VOZIDEL), SNÍMATELNÝCH CISTEREN, CISTERNOVÝCH KONTEJNERŮ A CISTERNOVÝCH VÝMĚNNÝCH NÁSTAVEB Z VYZTUŽENÝCH PLASTŮ (FRP)

POZNÁMKA: *Pro přemístitelné cisterny a UN MEGC viz kapitola 4.2; pro nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny, cisternové kontejnery a cisternové výměnné nástavby s nádržemi vyrobenými z kovových materiálů, bateriová vozidla a vícečlánkové kontejnery na plyn (MEGC), jiné než UN MEGC, viz kapitola 4.3; pro kontejnery pro podtlakové vyčerpávání odpadů viz kapitola 4.5.*

4.4.1 Všeobecná ustanovení

Přeprava nebezpečných látek v cisternách z vyztužených plastů (FRP) je povolena, pouze pokud jsou splněny následující podmínky:

- (a) látky jsou zařazeny ve třídě 3, 5.1, 6.1, 6.2, 8 nebo 9;
- (b) nejvyšší tenze par (absolutní tlak) při 50 °C látky nepřevyšuje 110 kPa (1.1 baru);
- (c) přeprava látky v kovových cisternách je povolena podle 4.3.2.1.1;
- (d) výpočtový tlak stanovený pro tuto látku v části 2 kódu cisterny uvedeného ve sloupci (12) tabulky A v kapitole 3.2 nepřevyšuje 4 bary (viz též 4.3.4.1.1), a
- (e) cisterna odpovídá ustanovením kapitoly 6.9 vztahujícím se na přepravu dané látky.

4.4.2 Provoz

4.4.2.1 Ustanovení 4.3.2.1.5 až 4.3.2.2.4, 4.3.2.3.3 až 4.3.2.3.6, 4.3.2.4.1, 4.3.2.4.2 a 4.3.4.1 a 4.3.4.2 musí být splněna.

4.4.2.2 Teplota přepravované látky nesmí v době plnění převýšit nejvyšší provozní teplotu uvedenou na štítku cisterny, který je uveden v oddílu 6.9.6.

4.4.2.3 Pokud platí pro přepravu v kovových cisternách, platí také zvláštní ustanovení (TU) oddílu 4.3.5 uvedená ve sloupci (13) tabulky A v kapitole 3.2.

KAPITOLA 4.5

POUŽÍVÁNÍ CISTEREN PRO PODTLAKOVÉ VYČERPÁVÁNÍ ODPADŮ

POZNÁMKA: *Pro přemístitelné cisterny a UN MEGC viz kapitola 4.2; pro nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny, cisternové kontejnery a cisternové výměnné nástavby s nádržemi vyrobenými z kovových materiálů, bateriová vozidla a vícečlánkové kontejnery na plyn (MEGC), jiné než UN MEGC, viz kapitola 4.3; pro cisterny z vyztužených plastů viz kapitola 4.4.*

4.5.1 Používání

4.5.1.1 Odpady tvořené látkami tříd 3, 4.1, 5.1, 6.1, 6.2, 8 a 9 mohou být přepravovány v cisternách pro podtlakové vyčerpávání odpadů odpovídajících kapitole 6.10, pokud jejich přeprava v nesnímatelných cisternách, snímatelných cisternách, cisternových kontejnerech a cisternových výměnných nástavbách je povolena podle kapitoly 4.3. Látky přiřazené kódu cisterny L4BH ve sloupci (12) tabulky A kapitoly 3.2 nebo jinému kódu dovolenému podle hierarchie uvedené v 4.3.3.1.2 smějí být přepravovány v cisternách pro podtlakové odčerpávání odpadů s písmenem „A“ nebo „B“ ve třetí části kódu cisterny, který je uveden v bodu 9.5 osvědčení o schválení vozidla odpovídajícího vzoru v 9.1.3.5.

4.5.2 Provoz

4.5.2.1 Ustanovení kapitoly 4.3, kromě ustanovení uvedených v 4.3.2.2.4 a 4.3.2.3.3, se vztahují na přepravu v cisternách pro podtlakové odčerpávání odpadů a jsou doplněna ustanoveními pododdílů 4.5.2.2 až 4.5.2.4 uvedených níže.

4.5.2.2 Pro přepravu kapalin, které svým bodem vzplanutí odpovídají kritériím třídy 3, musí být cisterny pro podtlakové vyčerpávání odpadů plněny plnicím zařízením, které vyúsťuje v cisterně na její spodní úrovni. Musí být učiněna opatření, aby bylo minimalizováno rozstříkávání.

4.5.2.3 Při vyprazdňování hořlavých kapalin s bodem vzplanutí nižším než 23°C tlakem vzduchu je nejvyšší dovolený tlak 100 kPa (1 bar).

4.5.2.4 Použití cisteren vybavených vnitřním pístem fungujícím jako stěna komory je dovoleno pouze tehdy, pokud látky na kterékoli straně stěny (pístu) nereagují nebezpečně navzájem jedna s druhou (viz 4.3.2.3.6).

KAPITOLA 4.6

(Vyhrazeno)

KAPITOLA 4.7

POUŽÍVÁNÍ MOBILNÍCH JEDNOTEK PŘIPRAVUJÍCÍCH VÝBUŠNINY (MEMU)

POZNÁMKA 1: Pro kusy viz kapitola 4.1; pro přemístitelné cisterny viz kapitola 4.2; pro nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny, cisternové kontejnery a cisternové výměnné nástavby s nádržemi vyrobenými z kovových materiálů viz kapitola 4.3; pro cisterny z vyztužených plastů viz kapitola 4.4; pro cisterny pro podtlakové vyčerpávání odpadů viz kapitola 4.5.

POZNÁMKA 2: Pro požadavky na konstrukci, výstroj, schválení typu, zkoušky a značení viz kapitoly 6.7, 6.8, 6.9, 6.11 a 6.12.

4.7.1 Používání

4.7.1.1 Látky tříd 3, 5.1, 6.1 a 8 mohou být přepravovány v MEMU odpovídajících kapitole 6.12, v přemístitelných cisternách, pokud jejich přeprava je povolena podle kapitoly 4.2; nebo ve snímatelných cisternách, cisternových kontejnerech nebo cisternových výměnných nástavbách, pokud jejich přeprava je povolena podle kapitoly 4.3; nebo v cisternách z vyztužených plastů, pokud jejich přeprava je povolena podle kapitoly 4.4; nebo v kontejnerech pro volně ložené látky, pokud jejich přeprava je povolena podle kapitoly 7.3.

4.7.1.2 Výbušné látky nebo předměty třídy 1 podléhající schválení příslušného orgánu (viz 7.5.5.2.3) mohou být přepravovány v kusech, ve zvláštních komorách odpovídajících oddílu 6.12.5, pokud obal je dovolen podle kapitoly 4.1 a jejich přeprava je povolena podle kapitoly 7.2 a 7.5.

4.7.2 Provoz

4.7.2.1 Následující ustanovení se vztahují na provoz cisteren podle kapitoly 6.12:

- (a) Pro cisterny s vnitřním objemem 1 000 litrů nebo větším, ustanovení kapitoly 4.2, kapitoly 4.3, kromě 4.3.1.4, 4.3.2.3.1, 4.3.3 a 4.3.4, nebo kapitoly 4.4 se vztahují na přepravu v MEMU, a jsou doplněna níže uvedenými ustanoveními 4.7.2.2, 4.7.2.3 a 4.7.2.4.
- (b) Pro cisterny s vnitřním objemem menším než 1 000 litrů, ustanovení kapitoly 4.2, kapitoly 4.3, kromě 4.3.1.4, 4.3.2.1, 4.3.2.3.1, 4.3.3 a 4.3.4, nebo kapitoly 4.4 se vztahují na přepravu v MEMU, a jsou doplněny níže uvedenými ustanoveními 4.7.2.2, 4.7.2.3 a 4.7.2.4.

4.7.2.2 Tloušťka stěn nádrže během celé doby jejího používání se nesmí snížit pod nejmenší hodnotu předepsanou v příslušných konstrukčních předpisech.

4.7.2.3 Ohebné vypouštěcí potrubí, stabilně připojené nebo nepřipojené, a výsyvky musí být během přepravy prázdné beze směsných nebo znečistivěných výbušných látek.

4.7.2.4 Pokud jsou použitelná pro přepravu v cisternách, musí se též použít zvláštní ustanovení (TU) 4.3.5 uvedená ve sloupci (13) tabulky A kapitoly 3.2.

4.7.2.5 Dopravce musí zajistit, že zámky uvedené v 9.8.9 jsou během přepravy používány.

ČÁST 5

POSTUPY PŘI ODESÍLÁNÍ

KAPITOLA 5.1

VŠEOBECNÁ USTANOVENÍ

5.1.1 Rozsah použití a všeobecná ustanovení

Tato část obsahuje ustanovení pro odesílání nebezpečných věcí týkající se nápisů, bezpečnostních značek a dokladů a případně povolení pro odeslání a předběžné oznámení.

5.1.2 Použití přepravních obalových souborů

5.1.2.1

a) Přepravní obalový soubor musí být:

- (i) označen nápisem „PŘEPRAVNÍ OBALOVÝ SOUBOR“; a
- (ii) označen UN číslem s předřazenými písmeny „UN“, jak je vyžadováno pro kusy v 5.2.1.1 a 5.2.1.2, opatřen bezpečnostními značkami, jak je vyžadováno pro kusy v 5.2.2, a označen značkou pro látky ohrožující životní prostředí, jak je vyžadováno pro kusy v 5.2.1.8, pro každou položku nebezpečných věcí obsaženou v přepravním obalovém souboru;

leďaže jsou UN čísla, bezpečnostní značky a značka pro látky ohrožující životní prostředí, charakterizující všechny nebezpečné věci obsažené v přepravním obalovém souboru, zvnějšku viditelné, s výjimkou požadavků uvedených v 5.2.2.1.11. Je-li pro různé kusy vyžadováno stejné UN číslo, stejná bezpečnostní značka nebo značka pro látky ohrožující životní prostředí, může být umístěno (umístěna) na přepravním obalovém souboru pouze jednou.

Nápis „PŘEPRAVNÍ OBALOVÝ SOUBOR“ musí být snadno viditelný a čitelný, musí být v úředním jazyce země původu a také, pokud tímto jazykem není angličtina, francouzština nebo němčina, v angličtině, francouzštině nebo němčině, pokud případné dohody uzavřené mezi státy dotčenými přepravou nestanoví jinak.

b) Orientační šipky znázorněné v 5.2.1.9 musí být umístěny na dvou protilehlých stranách dále uvedených přepravních obalových souborů:

- (i) přepravní obalové soubory obsahující kusy, které musí být označeny podle 5.2.1.9, pokud označení nezůstane viditelné; a
- (ii) přepravní obalové soubory obsahující kapaliny v kusech, které nemusí být označeny podle 5.2.1.9, pokud uzávěry nezůstanou viditelné.

5.1.2.2 Každý kus s nebezpečnými věcmi uložený v přepravním obalovém souboru musí odpovídat všem relevantním ustanovením ADR. Předpokládaná funkce každého kusu nesmí být negativně ovlivněna přepravním obalovým souborem.

5.1.2.3 Každý kus, který je opatřen orientačními šípkami předepsanými v pododdíle 5.2.1.9 a který je uložen do přepravního obalového souboru nebo do velkého obalu, musí být orientován v souladu s tímto označením.

5.1.2.4 Zákaz společné nakládky se vztahuje též na tyto přepravní obalové soubory.

5.1.3 Prázdné nevyčištěné obaly (včetně IBC a velkých obalů), cisterny, MEMU, vozidla a kontejnery pro přepravu ve volně loženém stavu

5.1.3.1

Prázdné nevyčištěné obaly (včetně IBC a velkých obalů), cisterny (včetně cisternových vozidel, bateriových vozidel, snímatelných cisteren, přemístitelných cisteren, cisternových kontejnerů, MEGC, MEMU), vozidla a kontejnery pro přepravu ve volně loženém stavu, které obsahovaly nebezpečné látky jiných tříd než třídy 7, musí být označeny nápisy a bezpečnostními značkami, jako by byly plné.

POZNÁMKA: O dokladech viz kapitola 5.4.

5.1.3.2 Obaly, včetně IBC a cisterny používané pro přepravu radioaktivních látek nesmějí být používány pro skladování nebo přepravu jiných věcí, ledaže by byly dekontaminovány pod úroveň 0,4 Bq/cm² pro beta a gama zářiče, jakož i pro nízkotoxické alfa zářiče a pod úroveň 0,04 Bq/cm² pro všechny ostatní alfa zářiče.

5.1.4 Společné balení

Pokud jsou dvě nebo více nebezpečných věcí zabaleny do téhož vnějšího obalu, musí být tento kus opatřen nápisem a bezpečnostní značkou předepsanou pro každou látku nebo předmět. Jestliže je pro různé věci požadována stejná bezpečnostní značka, může být použita pouze jedna.

5.1.5. Všeobecná ustanovení pro třídu 7

5.1.5.1 Povolení pro odeslání a oznamování

5.1.5.1.1 Všeobecně

Kromě schválení konstrukcí kusu popsaného v kapitole 6.4 vyžaduje se též za určitých okolností vícestranné schválení (5.1.5.1.2 a 5.1.5.1.3). Za některých okolností je též nezbytné informovat příslušné orgány o odeslání (5.1.5.1.4).

5.1.5.1.2 Povolení odeslání

Vícestranné povolení se vyžaduje pro:

- (a) odeslání kusů typu B(M), které nesplňují požadavky uvedené v pododdílu 6.4.7.5 nebo jsou konstruovány tak, že dovolují řízené občasné odvětrávání;
- (b) odeslání kusů typu B(M) obsahujících radioaktivní látku, jejíž aktivita je větší než 3000 A₁ nebo 3000 A₂, případně 1000 TBq, podle toho, která hodnota je nižší;
- (c) odeslání kusů obsahujících štěpné látky, jestliže součet indexů kritické bezpečnosti kusů v jednom voze nebo kontejneru překročí 50; a

s výjimkou toho, že příslušný orgán může povolit přepravu do svého státu nebo přes svůj stát bez schválení odeslání podle zvláštního ustanovení v jeho schválení konstrukce (viz 5.1.5.2.1).

5.1.5.1.3 Povolení odeslání podle zvláštního ujednání

Příslušný orgán může schválit ustanovení, podle kterých může být zásilka nesplňující všechny příslušné požadavky ADR přepravena podle zvláštního ujednání (viz 1.7.4).

5.1.5.1.4 Oznamování

Oznámení příslušným orgánům se vyžaduje v následujících případech:

- (a) Před prvním odesláním každého kusu, které vyžaduje povolení příslušného orgánu, musí odesílatel zajistit, aby kopie každého vhodného osvědčení příslušného orgánu, která se týkají konstrukce kusu, byla předložena příslušnému orgánu země původu zásilky a příslušnému orgánu každého státu, kterým nebo do kterého má být zásilka přepravována. Odesílatel nemusí vyčkat na potvrzení příslušného orgánu, ani příslušný orgán není povinen vydat potvrzení o příjmu osvědčení;
- (b) Při každém z následujících typů odeslání:
 - (h) kusů typu C obsahujících radioaktivní látku s aktivitou větší než 3000 A₁ nebo popřípadě 3000 A₂, nebo 1000 TBq, podle toho, která hodnota je nižší;
 - (ii) kusů typu B(U) obsahujících radioaktivní látku s aktivitou větší než 3000 A₁ nebo popřípadě 3000 A₂, nebo 1000 TBq podle toho, která hodnota je nižší;
 - (iii) kusů typu B(M);
 - (iv) odeslání podle zvláštního ujednání;

Odesílatel musí zaslat oznámení příslušnému orgánu země původu zásilky a příslušnému orgánu každého státu, do kterého nebo kterým se má zásilka přepravovat. Toto oznámení musí dostat každý příslušný orgán před začátkem odeslání zásilky a podle možností 7 dnů předem;

- (c) Odesílatel nemusí odeslat samostatné oznámení, pokud požadované informace jsou uvedeny v žádosti o povolení odeslání;
- (d) Oznámení o odeslání zásilky musí obsahovat:
 - (i) dostatečné údaje umožňující identifikaci kusu nebo kusů, včetně všech vhodných čísel osvědčení a identifikačních značek;
 - (ii) údaje o datu odeslání, předpokládaném datu příjezdu a navrhované trase;
 - (iii) pojmenování radioaktivní(ch) látky(ek) nebo nuklidu(ů);
 - (iv) popisy fyzikálního a chemického stavu radioaktivní látky nebo údaje, že se jedná o radioaktivní látku zvláštní formy nebo o málo rozpustitelnou radioaktivní látku; a
 - (v) nejvyšší aktivitu radioaktivního obsahu během přepravy vyjádřenou v becquerelech (Bq) s příslušným symbolem předpony SI (viz 1.2.2.1). U štěpných látek smí být místo aktivity udána hmotnost štěpných látek (nebo každého štěpného nuklidu pro směsi, pokud je to nutné) v gramech (g) nebo jejich násobku.

5.1.5.2 Osvědčení vydávaná příslušným orgánem

5.1.5.2.1 Osvědčení vydávaná příslušným orgánem se vyžadují pro:

- (a) Konstrukce pro:
 - (i) radioaktivní látky zvláštní formy;
 - (ii) málo rozpustitelné radioaktivní látky;
 - (iii) kusy obsahující 0,1 kg nebo více hexafluoridu uranu;
 - (iv) všechny kusy obsahující štěpné látky, pokud nejsou vyňaty podle pododílu 6.4.11.2;
 - (v) kusy typu B(U) a kusy typu B(M);
 - (vi) kusy typu C;
- (b) Zvláštní ujednání;
- (c) Určitá odeslání (viz 5.1.5.1.2).

Osvědčení musí potvrzovat, že příslušné požadavky jsou splněny a že pro schválení konstrukce byla konstrukci přidělena identifikační značka.

Osvědčení o schválení konstrukce kusu a osvědčení o povolení odeslání mohou být spojena do jednoho osvědčení.

Osvědčení a žádosti o tato osvědčení musí být v souladu s požadavky uvedenými v oddílu 6.4.23.

5.1.5.2.2 Odesílatel musí vlastnit kopii každého příslušného osvědčení.

5.1.5.2.3 Pro konstrukce kusu, pro které se nevyžaduje osvědčení vydané příslušným orgánem, musí odesílatel na požádání předložit příslušnému orgánu, ke kontrole dokumentární evidenci o souladu konstrukce kusu se všemi příslušnými požadavky.

5.1.5.3 Určení přepravního indexu (TI) a indexu kritické bezpečnosti (CSI)

5.1.5.3.1 Přepravní index (TI) pro kus, přepravní obalový soubor nebo kontejner, nebo pro nezabalenou látku LSA-I nebo nezabalený předmět SCO-I je číslo, které se určí tímto postupem:

- (a) Zjistí se nejvyšší dávková intenzita v jednotkách milisievertů za hodinu (mSv/h) ve vzdálenosti 1 m od vnějších povrchů kusu, přepravního obalového souboru, kontejneru, nebo nezabalených látek LSA-I a předmětů SCO-I. Takto zjištěná hodnota se vynásobí 100 a výsledné číslo je přepravní index. U uranových a thoriových rud a jejich koncentrátů smějí být vzaty následující hodnoty pro nejvyšší dávkovou intenzitu v každém bodě vzdáleném 1 m od vnějšího povrchu nákladu:

0,4 mSv/h pro rudy a fyzikální koncentráty uranu a thoria;

0,3 mSv/h pro chemické koncentráty thoria;

0,02 mSv/h pro chemické koncentráty uranu, kromě hexafluoridu uranu;

- (b) Pro cisterny, kontejnery a nezabalené látky LSA-I a předměty SCO-I musí být hodnota zjištěná v kroku podle (a) výše vynásobena multiplikačním faktorem z tabulky 5.1.5.3.1;
- (c) Hodnota zjištěná v krocích podle (a) a (b) výše se zaokrouhuje nahoru na první desetinné místo (např. z 1,13 bude 1,2), s výjimkou toho, že hodnota 0,05 nebo nižší smí být považována za nulu.

Tabulka 5.1.5.3.1: Multiplikační faktory pro cisterny, kontejnery a nebalené LSA-I a SCO-I

Velikost nákladu ^a	Multiplikační faktor
velikost nákladu $\leq 1 \text{ m}^2$	1
$1 \text{ m}^2 < \text{velikost nákladu} \leq 5 \text{ m}^2$	2
$5 \text{ m}^2 < \text{velikost nákladu} \leq 20 \text{ m}^2$	3
$20 \text{ m}^2 < \text{velikost nákladu}$	10

^a největší naměřená plocha příčného průřezu nákladu

- 5.1.5.3.2** Přepravní index pro každý přepravní obalový soubor, každý kontejner nebo každé vozidlo se určí buď součtem přepravních indexů všech obsažených kusů, nebo přímým měřením dávkové intenzity, kromě případu netuhých přepravních obalových souborů, pro které musí být přepravní index určen pouze součtem přepravních indexů všech kusů.
- 5.1.5.3.3** Index kritické bezpečnosti (CSI) pro každý přepravní obalový soubor nebo kontejner se určí jako součet CSI všech obsažených kusů. Stejný postup se musí použít pro určení celkového součtu CSI v zásilce nebo ve vozidle.
- 5.1.5.3.4** Kusy a přepravní obalové soubory musí být zařazeny do jedné z kategorií I-BÍLÁ, II-ŽLUTÁ nebo III-ŽLUTÁ v souladu s podmínkami stanovenými v tabulce 5.1.5.3.4 a podle následujících ustanovení:
- (a) Při určení příslušné kategorie pro kus nebo přepravní obalový soubor musí být zohledněn jak přepravní index, tak dávková intenzita na povrchu. Splňuje-li přepravní index podmínky pro jednu kategorii, ale dávková intenzita na povrchu podmínky pro jinou kategorii, potom se kus nebo přepravní obalový soubor zařadí do vyšší kategorie. Pro tento účel se nahlíží na kategorii I-BÍLÁ jako na nejnižší kategorii;
- (b) Přepravní index se určuje postupy stanovenými v odstavcích 5.1.5.3.1 a 5.1.5.3.2;
- (c) Je-li dávková intenzita na povrchu větší než 2 mSv/h, musí být kus nebo přepravní obalový soubor přepravován za vylučného použití a podle ustanovení oddílu 7.5.11, CV33 (1.3) a (3.5) (a);
- (d) Je-li kus přepravován na základě zvláštního ujednání, musí být zařazen do kategorie III-ŽLUTÁ, podle ustanovení uvedených v 5.1.5.3.5;
- (e) Přepravní obalový soubor, který obsahuje kusy přepravované na základě zvláštního ujednání, musí být zařazen do kategorie III-ŽLUTÁ, podle ustanovení uvedených v 5.1.5.3.5.

Tabulka 5.1.5.3.4 Kategorie kusů a přepravních obalových souborů

Podmínky		Kategorie
Přepravní index	Nejvyšší dávková intenzita v kterémkoli bodě vnějšího povrchu	
0a	nejvýše 0,005 mSv/h	I-BÍLÁ
více než 0, avšak nejvýše 1 ^a	více než 0,005 mSv/h, avšak nejvýše 0,5 mSv/h	II-ŽLUTÁ
více než 1, avšak nejvýše 10	více než 0,5 mSv/h, avšak nejvýše 2 mSv/h	III-ŽLUTÁ
více než 10	více než 2 mSv/h, avšak nejvýše 10 mSv/h	III-ŽLUTÁ ^b

^a Není-li naměřený přepravní index větší než 0,05, smí být jeho hodnota v souladu s 5.1.5.3.1 (c) zaokrouhlena na nulu.

^b Musí být přepravován také za vylučného použití. “

5.1.5.3.5 Ve všech případech mezinárodní přepravy kusů vyžadujících schválení konstrukčního vzoru kusu nebo odeslání příslušným orgánem, pro něž se používají v různých zemích, jichž se přeprava týká, různé druhy schválení, musí být kategorizace v souladu s osvědčením země původu konstrukčního vzoru kusu.

5.1.5.4 **Zvláštní ustanovení pro vyjmuté kusy**

5.1.5.4.1 Vyjmuté kusy musí být na vnější straně obalu čitelně a trvanlivě označeny těmito údaji:

- (a) UN číslem s předřazenými písmeny „UN“;
- (b) identifikací buď odesílatele, nebo příjemce, nebo obou; a
- (c) povolenou hrubou (brutto) hmotností, jestliže překračuje 50 kg.

5.1.5.4.2 Požadavky na dokumentaci kapitoly 5.4 se na vyjmuté kusy s radioaktivními látkami nevztahují, kromě toho, že UN číslo s předřazenými písmeny „UN“ a název a adresa odesílatele a příjemce musí být uvedeny v přepravním dokladu, jako jsou náložní (náložný) list, letecký nákladní list nebo nákladní list CMR nebo CIM.

5.1.5.5 **Přehled požadavků na schválení a oznámení před odesláním**

POZNÁMKA 1: Před prvním odesláním každého kusu vyžadujícího schválení konstrukce příslušným orgánem musí odesílatel zajistit, aby kopie schvalovacího osvědčení této konstrukce byla zaslána příslušnému orgánu každého dotčeného státu, jímž bude přeprava probíhat (viz 5.1.5.1.4 (a)).

POZNÁMKA 2: Oznámení se vyžaduje, pokud obsah převyšuje $3 \times 10^3 A_1$ nebo $3 \times 10^3 A_2$ nebo 1000 TBq (viz 5.1.5.1.4 (b)).

POZNÁMKA 3: Vícestranné schválení odeslání se vyžaduje, pokud obsah převyšuje $3 \times 10^3 A_1$ nebo $3 \times 10^3 A_2$ nebo 1000 TBq nebo jestliže je povoleno občasné řízené odvětrání (viz 5.1.5.1).

POZNÁMKA 4: Viz ustanovení o schválení a oznámení před odesláním vhodného kusu pro přepravu této látky.

Předmět	UN číslo	Požadováno schválení příslušným orgánem		Požadováno oznámení odesílatele příslušným orgánům státu původu a dotčených států; před každým odesláním ^a	Odkaz
		státu původu	dotčených států ^a		
Vypočet neuvedených hodnot A_1 a A_2	-	Ano	Ano	Ne	-
Vyjmuté kusy - konstrukce kusu - odeslání	2908, 2909, 2910, 2911	Ne Ne	Ne Ne	Ne Ne	-
LSA látky ^b a SCO ^b Průmyslové kusy typ 1,2 nebo 3, neštěpné a štěpné vyjmuté - konstrukce kusu - odeslání	2912, 2913, 3321, 3322	Ne Ne	Ne Ne	Ne Ne	-
Kusy typu A ^b , neštěpné a štěpné vyjmuté - konstrukce kusu - odeslání	2915, 3332	Ne Ne	Ne Ne	Ne Ne	-
Kusy typu B(U) ^b , neštěpné a štěpné vyjmuté - konstrukce kusu - odeslání	2916	Ano Ne	Ne Ne	Viz pozn. 1 Viz pozn. 2	5.1.5.1.4 b), 5.1.5.2.1 a), 6.4.22.2

Předmět	UN číslo	Požadováno schválení příslušným orgánem		Požadováno oznámení odesílatele příslušným orgánům státu původu a dotčených států; před každým odesláním ^a	Odkaz
		státu původu	dotčených států ^a		
Kusy typu B(M) ^b , neštěpné a štěpné vyjmuté - konstrukce kusu - odeslání	2917	Ano Viz pozn. 3	Ano Viz pozn. 3	Ne Ano	5.1.5.1.4 b), 5.1.5.2.1 a), 5.1.5.1.2, 6.4.22.3
Kusy typu C ^b , neštěpné a štěpné vyjmuté - konstrukce kusu - odeslání	3323	Ano Ne	Ne Ne	Viz pozn. 1 Viz pozn. 2	5.1.5.1.4 b), 5.1.5.2.1 a), 6.4.22.2
Kusy pro štěpné látky - konstrukce kusu - odeslání - součet kritického bezpečnostního indexu nejvýše 50 - součet kritického bezpečnostního indexu větší než 50	2977, 3324, 3325, 3326, 3327, 3328, 3329, 3330, 3331, 3333	Ano ^c Ne ^d Ano	Ano ^c Ne ^d Ano	Ne Viz pozn. 2 Viz pozn. 2	5.1.5.2.1 a), 5.1.5.1.2, 6.4.22.4, 6.4.22.5
Radioaktivní látky zvláštní formy - konstrukce kusu - odeslání	- Viz pozn. 4	Ano Viz pozn. 4	Ne Viz pozn. 4	Ne Viz pozn. 4	1.6.6.3, 5.1.5.2.1 a), 6.4.22.5
Málo rozpustitelné radioaktivní látky - konstrukce kusu - odeslání	- Viz pozn. 4	Ano Viz pozn. 4	Ne Viz pozn. 4	Ne Viz pozn. 4	5.1.5.2.1 a), 6.4.22.3
Kusy obsahující nejméně 0,1 kg hexafluoridu uranu - konstrukce kusu - odeslání	- Viz pozn. 4	Ano Viz pozn. 4	Ne Viz pozn. 4	Ne Viz pozn. 4	5.1.5.2.1 a), 6.4.22.1
Zvláštní podmínky - odeslání	2919, 3331	Ano	Ano	Ano	1.7.4.2, 5.1.5.2.1 b), 5.1.5.1.4 b)
Schválení konstrukce kusů podléhajících přechodným opatřením	-	Viz oddíl 1.6.6	Viz oddíl 1.6.6	Viz pozn. 1	1.6.6.1, 1.6.6.2, 5.1.5.1.4 b), 5.1.5.2.1 a), 5.1.5.1.2

^a Státy ze kterých, kterými nebo do kterých je zásilka přepravována.

^b Pokud jsou radioaktivním obsahem štěpné látky, které nejsou vyjmuty z ustanovení pro kusy obsahující štěpné látky, pak se na ně vztahují ustanovení pro kusy obsahující štěpné látky (viz oddíl 6.4.11).

^c Konstrukce kusů pro štěpné látky mohou též vyžadovat schválení podle jednoho z jiných předmětů tabulky.

^d Pro odeslání se však mohou vyžadovat schválení podle jednoho z jiných předmětů tabulky.

KAPITOLA 5.2

NÁPISY A BEZPEČNOSTNÍ ZNAČKY

5.2.1 Značení kusů

POZNÁMKA: Pro značení s ohledem na konstrukci, zkoušení a schvalování obalů, velkých obalů, nádob na plyn a IBC, viz část 6.

5.2.1.1 Pokud není v ADR jinak předepsáno, musí být každý kus zřetelně a trvanlivě označen UN číslem odpovídajícím obsaženým nebezpečným věcem, kterému jsou předřazena písmena "UN". UN číslo a písmena „UN“ musí být nejméně 12 mm vysoká, s výjimkou kusů o vnitřním objemu nejvýše 30 litrů nebo 30kg nejvyšší čisté (netto) hmotnosti a pro láhve s nejvýše 60 litry hydraulického vnitřního objemu, kdy musí být nejméně 6 mm vysoká, a s výjimkou kusů velikosti nejvýše 5 litrů nebo 5 kg, kdy musí být přiměřené velikosti. U nezabalených předmětů musí být označení umístěno na předmět, na jeho podstavec nebo na jeho manipulační, úložné nebo spouštěcí zařízení.

5.2.1.2 Všechna označení kusů požadovaná touto kapitolou musí být:

- být zřetelně viditelná a čitelná;
- odolná vůči vlivu povětrnosti bez podstatného zhoršení jejich čitelnosti.

5.2.1.3 Záchrané obaly a záchrané tlakové nádoby musí být kromě toho opatřeny nápisem "ZÁCHRANNÝ".

5.2.1.4 Velké nádoby pro volně ložené látky (IBC) s vnitřním objemem větším než 450 litrů a velké obaly musí být označeny na dvou protilehlých stranách.

5.2.1.5 **Dodatečná ustanovení pro věci třídy 1**

Kusy s věcmi třídy 1 musí být kromě toho označeny oficiálním pojmenováním pro přepravu podle oddílu 3.1.2. Toto označení musí být dobře čitelné a nesmazatelné a musí být uvedeno v úředním jazyce země odeslání a, pokud tento jazyk není angličtina, francouzština nebo němčina, ještě v angličtině nebo francouzštině nebo němčině, pokud jiné dohody uzavřené mezi dotýčnými státy nestanoví jinak.

5.2.1.6 **Dodatečná ustanovení pro věci třídy 2**

Opakovaně plnitelné nádoby musí být opatřeny následujícími zřetelně čitelnými a trvanlivými údaji:

- UN číslo a oficiální pojmenování pro přepravu plynu nebo směsi plynů, jak jsou uvedeny v oddílu 3.1.2.
U plynů přiřazených pod j.n. položku musí být dodatečně k UN číslu uveden pouze technický název¹.
U směsí plynů není třeba udávat více než dva komponenty, které představují největší nebezpečí;
- u stlačených plynů plněných hmotnostně a u zkapalněných plynů buď nejvyšší dovolená hmotnost plnění a vlastní hmotnost nádoby, včetně výbavy a příslušenství upevněných v době plnění, nebo celková (brutto) hmotnost;
- datum (rok) příští periodické inspekce.

¹ Namísto technického názvu je povoleno použít jedno z následujících pojmenování:

- Pro UN 1078 plyn jako chladicí prostředek, j.n.: směs F1, směs F2, směs F3;
- Pro UN 1060 methylacetylen a propadien, směsi, stabilizované: směs P1, směs P2;
- Pro UN 1965 uhlovodíky plynné, směs, zkapalněná, j.n.: směs A nebo butan, směs A01 nebo butan, směs A02 nebo butan, směs A0 nebo butan, směs A1, směs B1, směs B2, směs B, směs C nebo propan.
- Pro UN číslo 1010 bitadieny, stabilizované: 1,2-butadien, stabilizovaný, 1-3butadien, stabilizovaný.

Toto označení může být buď vyraženo, nebo uvedeno na trvanlivém štítku nebo bezpečnostní značce upevněných na nádobě nebo uvedeno nalepeným a zřetelně čitelným nápisem, např. vytištěným nebo provedeným jiným rovnocenným způsobem.

POZNÁMKA 1: Viz také 6.2.2.7.

POZNÁMKA 2: Pro nádoby pro jedno použití, viz 6.2.2.8.

5.2.1.7 Ustanovení o zvláštním značení pro věci třídy 7

5.2.1.7.1 Každý kus musí být označen na vnější straně obalu čitelně a trvale identifikací buď odesilatele, nebo příjemce nebo obou.

5.2.1.7.2 Kromě vyjmutých kusů musí být každý kus na vnější straně obalu označen čitelně a trvale UN číslem s předřazenými písmeny "UN" a oficiálním pojmenováním pro přepravu. Označení vyjmutých kusů musí být odpovídat označení vyžadovanému podle 5.1.5.4.1.

5.2.1.7.3 Každý kus s celkovou (brutto) hmotností větší než 50 kg musí mít na vnější straně obalu čitelně a trvale uvedenu dovolenou celkovou (brutto) hmotnost.

5.2.1.7.4 Každý kus, který odpovídá

- (a) konstrukci kusu typu IP-1, kusu typu IP-2 nebo kusu typu IP-3, musí být na vnější straně obalu označen čitelně a trvale nápisem "TYP IP-1", "TYP IP-2" nebo případně "TYP IP-3";
- (b) konstrukci kusu typu A, musí být na vnější straně kusu čitelně a trvale označen nápisem "TYP A";
- (c) konstrukci kusu typu IP-2, kusu typu IP-3 nebo kusu typu A, musí být na vnější straně obalu označen čitelně a trvanlivě mezinárodním registračním kódem vozidla (VRI Code)² země původu konstrukčního vzoru kusu a buď jménem výrobce nebo jinou identifikací obalu stanovenou příslušným orgánem země původu konstrukčního vzoru kusu.

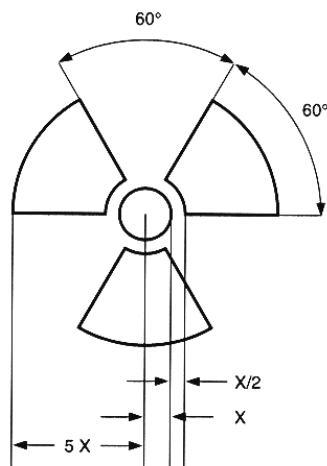
5.2.1.7.5 Každý kus, který odpovídá konstrukci schválené příslušným orgánem, musí být na vnější straně obalu čitelně a trvale označen následujícími údaji:

- (a) identifikační značkou přidělenou konstrukci příslušným orgánem;
- (b) sériovým číslem jednoznačně identifikujícím každý obal, který odpovídá této konstrukci;
- (c) v případě konstrukce kusu typu B(U) nebo typu B(M) údajem "TYP B(U)" nebo "TYP B(M)"; a
- (d) v případě konstrukce kusu typu C údajem "TYP C".

5.2.1.7.6 Každý kus, který odpovídá konstrukci kusu typu B(U), typu B(M) nebo typu C, musí být označen na vnější straně nejzevnější nádoby odolné vůči ohni a vodě vyrytím, vyražením nebo jiným způsobem odolným vůči ohni a vodě trojlistkovým symbolem uvedeným na obrázku níže.

² Rozlišovací značka pro motorová vozidla v mezinárodním provozu předepsaná Úmluvou o silničním provozu (Viedeň, 1968).

Základní symbol trojlístku s rozměry vycházejícími ze střední kružnice o poloměru X .
Nejmenší dovolený rozměr X musí být 4 mm.



- 5.2.1.7.7** Jestliže jsou látky LSA-I nebo SCO-I obsaženy v nádobách nebo obalových materiálech a jsou přepravovány za výlučného použití dovoleného podle 4.1.9.2.3, vnější povrch těchto nádob nebo obalových materiálů smí být opatřen označením "RADIOAKTIVNÍ LSA-I" nebo "RADIOAKTIVNÍ SCO-I".
- 5.2.1.7.8** Ve všech případech mezinárodní přepravy kusů vyžadující schválení konstrukčního vzoru kusu nebo povolení odeslání příslušným orgánem, pro které se užívají různé typy schválení nebo povolení v různých zemích, jichž se přeprava týká, musí být označení v souladu s osvědčením země původu konstrukčního vzoru kusu.
- 5.2.1.8 Ustanovení o zvláštním označení pro látky ohrožující životní prostředí**
- 5.2.1.8.1** Kusy obsahující látky ohrožující životní prostředí splňující kritéria uvedená v 2.2.9.1.10 musí být trvanlivě označeny značkou pro látky ohrožující životní prostředí vyobrazenou v 5.2.1.8.3, s výjimkou samostatných obalů a skupinových obalů, pokud takové samostatné obaly nebo vnitřní obaly takových skupinových obalů mají:
- množství nejvýše 5 litrů pro kapaliny, nebo
 - čistou hmotnost nejvýše 5 kg pro tuhé látky.
- 5.2.1.8.2** Značka pro látky ohrožující životní prostředí musí být umístěna v bezprostřední blízkosti označení vyžadovaného podle 5.2.1.1. Požadavky uvedené v 5.2.1.2 a 5.2.1.4 musí být splněny.
- 5.2.1.8.3** Značka pro látky ohrožující životní prostředí musí odpovídat dále uvedenému obrázku. Její rozměry musí být 100 mm x 100 mm, kromě případu, kdy kusy jsou takových rozměrů, že mohou být opatřeny jen menšími značkami.



Symbol (ryba a strom): černý na bílém nebo vhodném kontrastním podkladu

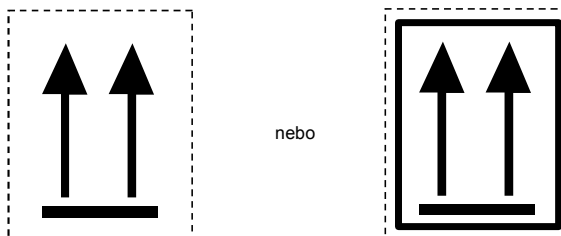
POZNÁMKA: Ustanovení o označování bezpečnostními značkami v 5.2.2 platí dodatečně k jakémukoli požadavku na označení kusů značkou pro látky ohrožující životní prostředí.

5.2.1.9 Orientační šipky

5.2.1.9.1 S výjimkou ustanovení v 5.2.1.9.2:

- skupinové obaly s vnitřními obaly obsahujícími kapaliny;
- samostatné obaly opatřené odvětrávacími otvory; a
- kryogenní nádoby určené k přepravě hluboce zchladených zkapalněných plynů,

musí být zřetelně označeny orientačními šípkami, které jsou podobné vyobrazením uvedeným níže nebo které odpovídají specifikacím v normě ISO 780:1997. Orientační šipky musí být umístěny na dvou protilehlých svislých stranách kusu se šípkami směřujícími správně směrem nahoru. Musí být pravouhlé a velikosti, která je zřetelně viditelná s ohledem na velikost kusu. Vyznačení pravouhlého orámování kolem šipek je nepovinné.



(č. 11)

Dvě černé nebo červené šipky na bílém nebo vhodném kontrastním podkladě. Pravouhlé orámování není povinné

5.2.1.9.2 Orientační šipky se nevyžadují:

- (a) na vnějších obalech obsahujících tlakové nádoby, s výjimkou kryogenních nádob;
- (b) na vnějších obalech obsahujících nebezpečné věci ve vnitřních obalech, z nichž každý obsahuje nejvýše 120 ml, s dostatečným množstvím absorpčního materiálu mezi vnitřními a vnějšími obaly, aby zcela pohltil kapalný obsah;
- (c) na vnějších obalech obsahujících infekční látky třídy 6.2 v primárních nádobách, z nichž každá obsahuje nejvýše 50 ml;
- (d) na kusech typu IP-2, IP-3, Typu A, Typu B(U), Typu B(M) nebo Typu C obsahujících radioaktivní látky třídy 7;
- (e) na vnějších obalech obsahujících předměty, které jsou těsně v každé poloze (např. alkohol nebo rtuť v teploměrech, aerosoly atd.); nebo
- (f) na vnějších obalech obsahujících nebezpečné věci v hermeticky uzavřených vnitřních obalech, z nichž každý obsahuje nejvýše 500 ml.

5.2.1.9.3 Orientační šipky pro jiné účely než pro udání správné orientace kusu nesmějí být na kuse označeném podle tohoto pododdílu použity.

5.2.2 Označování kusů

5.2.2.1 Ustanovení o označování bezpečnostními značkami

5.2.2.1.1 Pro každý předmět nebo látku uvedené v tabulce A kapitoly 3.2 musí být pro označení použity bezpečnostní značky uvedené ve sloupci (5), pokud není stanoveno jinak zvláštním ustanovením uvedeným ve sloupci (6).

5.2.2.1.2 Místo bezpečnostních značek mohou být použita nesmazatelná označení nebezpečí odpovídající přesně předepsaným vzorům bezpečnostních značek.

5.2.2.1.3 až

5.2.2.1.5 (Vyhrazeno)

5.2.2.1.6 S výhradou ustanovení uvedených v 5.2.2.1.2, musí být všechny bezpečnostní značky:

- (a) umístěny na tentýž povrch kusu, pokud to dovolují rozměry kusu; u kusů třídy 1 nebo 7 musí být v blízkosti oficiálního pojmenování pro přepravu;
- (b) umístěny na kusu tak, aby je nezakrývala nebo nezastiňovala jiná část nebo příslušenství obalu nebo jiná bezpečnostní značka nebo nápis;
- (c) umístěny přímo jedna vedle druhé, pokud se vyžaduje více než jedna bezpečnostní značka.

Jestliže je kus nepravidelného tvaru nebo je malých rozměrů, takže bezpečnostní značka nemůže být umístěna uspokojivým způsobem, může být bezpečnostní značka bezpečně připevněna např. provázkem nebo jiným vhodným prostředkem.

5.2.2.1.7 Velké nádoby pro volně ložené látky (IBC) s vnitřním objemem větším než 450 litrů a velké obaly musí být opatřeny bezpečnostními značkami na dvou protilehlých stranách.

5.2.2.1.8 (Vyhrazeno)

5.2.2.1.9 *Zvláštní ustanovení pro označování samovolně se rozkládajících látek a organických peroxidů bezpečnostními značkami*

- (a) Bezpečnostní značka podle vzoru č. 4.1 také ukazuje, že produkt může být hořlavý a proto se nevyžaduje žádná bezpečnostní značka podle vzoru č. 3. Kromě toho musí být použita bezpečnostní značka podle vzoru č. 1 pro samovolně se rozkládající látky typu B, ledaže příslušný orgán povolil nepoužití této bezpečnostní značky vzhledem ke zvláštnímu obalu, protože zkušební výsledky prokázaly, že samovolně se rozkládající látka v takovém obalu nevykazuje výbušnou vlastnost.
- (b) Bezpečnostní značka podle vzoru č. 5.2 ukazuje také, že produkt může být hořlavý a proto se nevyžaduje žádná bezpečnostní značka podle vzoru č. 3. Kromě toho se musí použít následující bezpečnostní značky:
 - (i) Bezpečnostní značka podle vzoru č. 1 pro organické peroxidy typu B, ledaže příslušný orgán povolil nepoužití této bezpečnostní značky vzhledem ke zvláštnímu obalu, protože zkušební výsledky prokázaly, že organický peroxid v takovém obalu nevykazuje výbušnou vlastnost.
 - (ii) Bezpečnostní značka podle vzoru č. 8 se vyžaduje, pokud jsou splněna kritéria pro obalovou skupinu I nebo II třídy 8.

Bezpečnostní značky, které musí být použity pro jmenovitě uvedené samovolně se rozkládající látky a organické peroxidy, jsou uvedeny v seznamu v pododdílu 2.2.41.4, popřípadě 2.2.52.4.

5.2.2.1.10 *Zvláštní ustanovení pro označování kusů obsahujících infekční látky bezpečnostními značkami*

Kromě bezpečnostní značky podle vzoru č. 6.2 musí být kusy obsahující infekční látky označeny jakoukoli jinou požadovanou bezpečnostní značkou podle povahy jejich obsahu.

- 5.2.2.1.11** *Zvláštní ustanovení pro označování kusů obsahujících radioaktivní látky bezpečnostními značkami*
- 5.2.2.1.11.1 S výjimkou případů, kdy jsou použity zvětšené bezpečnostní značky podle 5.3.1.1.3, každý kus, přepravní obalový soubor a kontejner obsahující radioaktivní látku musí být opatřen nejméně dvěma bezpečnostními značkami odpovídajícími vzorům č. 7A, 7B a 7C podle kategorie (viz 2.2.7.8.4) kusu, přepravního obalového souboru nebo kontejneru. Bezpečnostní značky musí být umístěny vně na dvě protilehlé strany kusu nebo na všechny čtyři strany kontejneru. Každý přepravní obalový soubor obsahující radioaktivní látku musí být opatřen nejméně dvěma bezpečnostními značkami na protilehlých vnějších stranách přepravního obalového souboru. Kromě toho každý kus, přepravní obalový soubor a kontejner obsahující štěpnou látku, jinou než štěpnou látku vyřatou v pododdílu 6.4.11.2, musí být opatřeny navíc bezpečnostními značkami podle vzoru č. 7E; pokud je potřebné, musí být tyto bezpečnostní značky umístěny bezprostředně vedle bezpečnostních značek pro radioaktivní látky. Bezpečnostní značky nesmějí zakrývat označení uvedená v oddílu 5.2.1. Všechny bezpečnostní značky, které se nevztahují k obsahu, se musí odstranit nebo zakrýt.
- 5.2.2.1.11.2 Každá bezpečnostní značka podle vzorů č. 7A, 7B a 7C musí být doplněna následujícími údaji:
- (a) *Obsah:*
- (i) Kromě látek LSA-I oficiální pojmenování radionuklidu(ů) převzatých z tabulky 2.2.7.2.2.1 s použitím symbolů v ní předepsaných. Pro směsi radionuklidů musí být uvedeny nuklidy s nejomezenější hodnotou, pokud to dovoluje místo v řádku. Za oficiálním pojmenováním radionuklidu(ů) musí být uvedena skupina LSA nebo SCO. Pro tento účel se musí použít označení "LSA-II", "LSA-III", "SCO-I" a "SCO-II".
- (ii) Pro látky LSA-I je nezbytné jen označení "LSA-I"; oficiální pojmenování radionuklidu není nutné.
- (b) *Aktivita:* Maximální aktivita radioaktivního obsahu během přepravy vyjádřená v becquerelech (Bq) s příslušným symbolem SI předpony (viz 1.2.2.1). U štěpných látek může být udána místo aktivity hmotnost štěpných látek (nebo hmotnost každého štěpného nuklidu pro směs, je-li to náležité) v gramech (g) nebo jejich násobcích.
- (c) U přepravních obalových souborů a kontejnerů musí být údaje "Obsah" a "Aktivita" požadované v odstavcích (a) a (b) výše uvedeny na bezpečnostní značce, přičemž celkový obsah přepravního obalového souboru nebo kontejneru se sčítá, výjimkou jsou bezpečnostní značky pro přepravní obalové soubory a kontejnery obsahující smíšené náklady kusů s různými radionuklidy, jejichž údaje mohou znít "Viz přepravní doklady".
- (d) *Přepravní index:* viz číslo určené podle 5.1.5.3.1 a 5.1.5.3.2 (pro kategorii I-BÍLÁ se nevyžaduje žádný přepravní index).
- 5.2.2.1.11.3 Každá bezpečnostní značka podle vzoru č. 7E musí být doplněna kritickým bezpečnostním indexem (CSI), jak je uvedeno v osvědčení o schválení pro zvláštní ujednání nebo v osvědčení o schválení konstrukce kusu vydaného příslušným orgánem.
- 5.2.2.1.11.4 U přepravního obalového souboru a kontejneru musí být na bezpečnostní značce uveden kritický bezpečnostní index (CSI) požadovaný v 5.2.2.1.11.3 sečtený pro celkový štěpný obsah přepravního obalového souboru nebo kontejneru.
- 5.2.2.1.11.5 Ve všech případech mezinárodní přepravy kusů vyžadující schválení konstrukčního vzoru kusu nebo povolení odeslání příslušným orgánem, pro které se užívají různé typy schválení nebo povolení v různých zemích, jichž se přeprava týká, musí být označení bezpečnostními značkami v souladu s osvědčením země původu konstrukčního vzoru kusu.

5.2.2.2 *Ustanovení o bezpečnostních značkách*

- 5.2.2.2.1** Bezpečnostní značky musí splňovat dále uvedená ustanovení a odpovídat barvami, symboly a tvarem vzorům uvedeným v 5.2.2.2.2. Odpovídající vzory vyžadované pro jiné druhy dopravy, s menšími modifikacemi, které neovlivňují zřejmý význam bezpečnostní značky, jsou také dovoleny.

POZNAMKA: V určitých případech jsou bezpečnostní značky v odstavci 5.2.2.2.2 znázorněny s vytečkovaným vnějším orámováním dle odstavce 5.2.2.2.1.1. Toto se nevyžaduje, je-li bezpečnostní značka umístěna na podkladu v kontrastní barvě.

- 5.2.2.2.1.1 Bezpečnostní značky musí mít tvar čtverce postaveného na vrchol pod úhlem 45° s nejmenšími rozměry 100 mm × 100 mm. Bezpečnostní značky musí mít uvnitř po celé délce svého obvodu rovnoběžnou čáru ve vzdálenosti 5 mm od svého okraje. V horní polovině bezpečnostní značky musí mít čára stejnou barvu jako symbol a v dolní polovině musí mít stejnou barvu jako číslice v dolním rohu. Bezpečnostní značky musí být umístěny na podkladu v kontrastní barvě, nebo musí být orámovány buď vytečkovanou, nebo plnou čarou. Jestliže to velikost kusu vyžaduje, smí mít bezpečnostní značky menší rozměry, pokud zůstanou zřetelně viditelné.
- 5.2.2.2.1.2 Láhve pro třídu 2 mohou být vzhledem ke svému tvaru, pozici a fixačním systémům pro přepravu, opatřeny bezpečnostními značkami představujícími smysl bezpečnostních značek uvedených v tomto oddílu a značkami pro látky ohrožující životní prostředí, je-li to vhodné, jejichž rozměry byly zmenšeny podle rozměrů uvedených v mezinárodní normě ISO 7225:2005 "Gas cylinders - *Precautionary labels*" (Plynové lahve - Výstražné bezpečnostní značky), aby mohly být umístěny na necylindrickou část takových lahví (hrdla).
- Nehledě na ustanovení v 5.2.2.1.6 se bezpečnostní značky a značka pro látky ohrožující životní prostředí (viz 5.2.1.8.3) mohou překrývat v rozsahu stanoveném normou ISO 7225:2005. Avšak ve všech případech bezpečnostní značka hlavního nebezpečí a číslice uvedené na jakékoli bezpečnostní značce musí zůstat plně viditelné a symboly rozeznatelné.
- Prázdné nevyčištěné tlakové nádoby pro plyny třídy 2 mohou být přepravovány se zastaralými nebo poškozenými bezpečnostními značkami za účelem nového naplnění, popřípadě prohlídky a umístění nové bezpečnostní značky v souladu s platnými předpisy, nebo likvidace tlakové nádoby.
- 5.2.2.2.1.3 S výjimkou bezpečnostních značek pro podtřídy 1.4, 1.5 a 1.6 třídy 1 musí horní polovina bezpečnostní značky obsahovat obrazový symbol a dolní polovina musí obsahovat:
- (a) pro třídy 1, 2, 3, 5.1, 5.2, 7, 8 a 9 číslo třídy;
 - (b) pro třídy 4.1, 4.2 a 4.3 číslici „4“;
 - (c) pro třídy 6.1 a 6.2 číslici „6“.
- Bezpečnostní značky smí obsahovat text, jako je UN číslo nebo slova popisující nebezpečí (např. „flammable“) podle 5.2.2.2.1.5, pokud tento text nezakrývá nebo nesnižuje význam jiných informací, které musí být na bezpečnostní značce.
- 5.2.2.2.1.4 Kromě toho musí být na bezpečnostních značkách pro třídu 1, s výjimkou podtříd 1.4, 1.5 a 1.6, uvedeno v jejich dolní polovině, nad číslem třídy, číslo podtřídy a písmeno skupiny snášenlivosti pro látku nebo předmět. Na bezpečnostních značkách pro podtřídy 1.4, 1.5 a 1.6 musí být v jejich horní polovině uvedeno číslo podtřídy a v dolní polovině číslo třídy a písmeno skupiny snášenlivosti.
- 5.2.2.2.1.5 Na bezpečnostních značkách, s výjimkou bezpečnostních značek pro třídu 7, uvedení jakéhokoli případného textu (jiného než číslo třídy) v prostoru pod symbolem musí být omezeno na údaje o povaze nebezpečí a o bezpečnostních opatřeních při manipulaci.
- 5.2.2.2.1.6 Symboly, text a čísla musí být dobře čitelné a nesmazatelné a na všech bezpečnostních značkách musí být uvedeny v černé barvě kromě:
- (a) bezpečnostní značky třídy 8, na které jsou eventuální text a číslo uvedeny v barvě bílé;
 - (b) bezpečnostních značek se zeleným, červeným nebo modrým podkladem, na kterých symboly, text a čísla mohou být uvedeny v barvě bílé.
 - (c) bezpečnostní značky třídy 5.2, na které smí být symbol v bílé barvě; a
 - (d) bezpečnostní značky podle vzoru č. 2.1 umístěné na lahve a malé nádoby obsahující plyny UN čísel 1011, 1075, 1965 a 1978, kde mohou být uvedeny na podkladové barvě nádoby, jestliže je zajištěn jejich dostatečný kontrast.
- 5.2.2.2.1.7 Všechny bezpečnostní značky musí být schopné odolat povětrnostním účinkům bez podstatného snížení jejich čitelnosti.

5.2.2.2.2 Vzory bezpečnostních značek

NEBEZPEČÍ TŘÍDY 1**Výbušné látky a předměty**

(č. 1)

Podtřídy 1.1, 1.2 a 1.3

Symbol (vychující puma): černý;
podklad: oranžový; číslice "1" v dolním rohu

(č. 1.4)

Podtřída 1.4

Podklad: oranžový; číslice: černé; výška číslic musí být asi 30 mm a tloušťka čáry asi 5 mm
(u bezpečnostní značky o rozměrech 100 mm x 100 mm); číslice "1" v dolním rohu

(č. 1.5)

Podtřída 1.5



(č. 1.6)

Podtřída 1.6

** Údaj podtřídy – neudává se, je-li výbušnost vedlejším nebezpečím

* Údaj skupiny snášenlivosti – neudává se, je-li výbušnost vedlejším nebezpečím

NEBEZPEČÍ TŘÍDY 2**Plyny**

(č. 2.1)

Hořlavé plyny

Symbol (plamen): černý nebo bílý;
(kromě provedení podle 5.2.2.1.6(d))
podklad: červený; číslice "2" v dolním rohu

(č. 2.2)

Nehořlavé, netoxické plyny

Symbol (plynová lahev): černý nebo bílý;
podklad: zelený; číslice "2" v dolním rohu**NEBEZPEČÍ TŘÍDY 3****Hořlavé kapaliny**

(č. 2.3)

Toxické plyny

Symbol (lebka na zkřížených kostech): černý;
podklad: bílý; číslice "2" v dolním rohu

(č. 3)

Symbol (plamen): černý nebo bílý;
podklad: červený; číslice "3" v dolním rohu

NEBEZPEČÍ TŘÍDY 4.1
Hořlavé tuhé látky, samovolně
se rozkládající látky a
znetlivěně tuhé výbušné látky



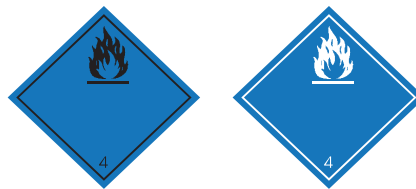
(č. 4.1)
Symbol (plamen): černý;
podklad: bílý se sedmi svislými
červenými pruhy;
číslice "4" v dolním rohu

NEBEZPEČÍ TŘÍDY 4.2
Samozápalné látky



(č. 4.2)
Symbol (plamen): černý;
podklad: horní polovina bílá a dolní
polovina červená;
číslice "4" v dolním rohu

NEBEZPEČÍ TŘÍDY 4.3
Látky, které ve styku s vodou vyvíjejí
hořlavé plyny



(č. 4.3)
Symbol (plamen): černý nebo bílý;
podklad: modrý;
číslice "4" v dolním rohu

NEBEZPEČÍ TŘÍDY 5.1
Látky podporující hoření



(č. 5.1)
Symbol (plamen nad kruhem): černý;
podklad: žlutý
číslice "5.1" v dolním rohu

NEBEZPEČÍ TŘÍDY 5.2
Organické peroxidy



(č. 5.2)
Symbol (plamen): černý nebo bílý;
podklad: horní polovina červená; dolní polovina žlutá;
číslice "5.2" v dolním rohu

NEBEZPEČÍ TŘÍDY 6.1
Toxické látky



(č. 6.1)
Symbol (lebka na zkřížených kostech): černý;
podklad: bílý; číslice "6" v dolním rohu

NEBEZPEČÍ TŘÍDY 6.2
Infekční látky



(č. 6.2)
V dolní polovině bezpečnostní značky mohou být uvedeny nápisy: "INFEKČNÍ LÁTKA"
a "Při poškození nebo úniku uvědomte neprodleně veřejné zdravotnické orgány";
Symbol (kruh, který je překryt třemi srpky měsíce) a údaje: černé;
podklad: bílý; číslice "6" v dolním rohu

NEBEZPEČÍ TŘÍDY 7 Radioaktivní látky



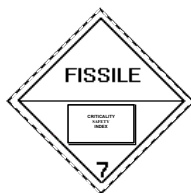
(č. 7A)
Kategorie I – BÍLÁ
Symbol záření (trojlístek): černý;
podklad: bílý;
text (předepsaný) : černý v dolní polovině
bezpečnostní značky:
"RADIOACTIVE"
"CONTENTS ..."
"ACTIVITY ...";
za výrazem "RADIOACTIVE" následuje
svislý červený pruh;
číslice "7" v dolním rohu



(č. 7B)
Kategorie II – ŽLUTÁ
Symbol záření (trojlístek): černý;
podklad: horní polovina žlutá s bílým okrajem, dolní polovina bílá;
text (předepsaný): černý v dolní polovině bezpečnostní značky:
"RADIOACTIVE"
"CONTENTS ..."
"ACTIVITY ...";
v černě orámovaném poli: "TRANSPORT INDEX"
za výrazem "RADIOACTIVE" následují
dva svislé červené pruhy; tři svislé červené pruhy;
číslice "7" v dolním rohu



(č. 7C)
Kategorie III - ŽLUTÁ



(č. 7E)
Štěpné látky třídy 7
Podklad bílý;
text (předepsaný) : černá v horní polovině bezpečnostní značky: "FISSILE";
v černě orámovaném poli v doní polovině bezpečnostní značky:
"CRITICALITY SAFETY INDEX";
číslice «7» v dolním rohu

NEBEZPEČÍ TŘÍDY 8 Žiravé látky



(č. 8)
Symbol (kapky padající z jedné zkumavky na kov a z druhé zkumavky na ruku): černý;
Podklad: horní polovina: bílá; dolní polovina: černá s bílým okrajem;
číslice "8" v dolním rohu

NEBEZPEČÍ TŘÍDY 9 Jiné nebezpečné látky a předměty



(č. 9)
Symbol (sedm svislých pruhů v horní polovině):
černý; podklad: bílý;
podtržená číslice "9" v dolním rohu

KAPITOLA 5.3

OZNAČOVÁNÍ KONTEJNERŮ, MEGC, MEMU, CISTERNOVÝCH KONTEJNERŮ, PŘEMÍSTITELNÝCH CISTEREN A VOZIDEL VELKÝMI BEZPEČNOSTNÍMI ZNAČKAMI, ORANŽOVÝMI TABULKAMI A NÁPISY

POZNÁMKA: *K označování kontejnerů MEGC, cisternových kontejnerů a přemístitelných cisteren nápisy a velkými bezpečnostními značkami pro přepravu v přepravním řetězci zahrnujícím námořní dopravu viz též 1.1.4.2.1. Jestliže se použijí ustanovení 1.1.4.2.1 (c), smí se použít pouze ustanovení 5.3.1.3 a 5.3.2.1.1 této kapitoly.*

5.3.1 Označování velkými bezpečnostními značkami

5.3.1.1 Všeobecná ustanovení

5.3.1.1.1 Pokud to vyžadují ustanovení tohoto oddílu, musí být velké bezpečnostní značky umístěny na vnější povrch kontejnerů, MEGC, MEMU, cisternových kontejnerů, přemístitelných cisteren a vozidel. Velké bezpečnostní značky musí odpovídat bezpečnostním značkám požadovaným ve sloupci (5) a popřípadě sloupci (6) tabulky A kapitoly 3.2 pro nebezpečné věci obsažené v kontejneru, MEGC, MEMU, cisternovém kontejneru, přemístitelné cisterně nebo vozidle a současně odpovídat specifikacím uvedeným v pododdílu 5.3.1.7. Velké bezpečnostní značky musí být umístěny na podkladu v kontrastní barvě, nebo musí být ohraničeny buď vytečkovanou, nebo plnou čarou.

5.3.1.1.2 Pro třídu 1 nemusí být na velkých bezpečnostních značkách uvedeny skupiny snášenlivosti, pokud vozidlo, kontejner nebo zvláštní komory MEMU přepravují látky nebo předměty spadající do dvou nebo více skupin snášenlivosti. Vozidla, kontejnery nebo zvláštní komory MEMU přepravující látky nebo předměty různých podtříd musí být označeny pouze velkými bezpečnostními značkami odpovídajícími vzoru nejnebezpečnější podtřídy v tomto pořadí:

1.1 (nejnebezpečnější), 1.5, 1.2, 1.3, 1.6, 1.4 (nejméně nebezpečné).

Jsou-li látky klasifikačního kódu 1.5 D přepravovány s látkami nebo předměty podtřídy 1.2, musí být dopravní jednotka nebo kontejner označeny velkou bezpečnostní značkou pro podtřídu 1.1.

Velké bezpečnostní značky se nevyžadují pro přepravu výbušných látek a předmětů podtřídy 1.4, skupiny snášenlivosti S.

5.3.1.1.3 Pro třídu 7 musí velká bezpečnostní značka pro hlavní nebezpečí odpovídat vzoru č. 7 D popsanému v 5.3.1.7.2. Tato velká bezpečnostní značka se nevyžaduje pro vozidla nebo kontejnery přepravující vyjmuté kusy a pro malé kontejnery.

Pokud je předepsáno pro třídu 7 umístění jak bezpečnostních značek, tak také velkých bezpečnostních značek na vozidla, kontejnery, MEGC, cisternové kontejnery nebo přemístitelné cisterny, mohou být označeny zvětšenou bezpečnostní značkou odpovídající požadované bezpečnostní značce namísto velké bezpečnostní značky podle vzoru č. 7D, aby se splnily oba účely.

5.3.1.1.4 Kontejnery, MEGC, MEMU, cisternové kontejnery, přemístitelné cisterny nebo vozidla, které přepravují věci více tříd, nemusí být opatřeny velkou bezpečnostní značkou pro vedlejší nebezpečí, jestliže nebezpečí označené touto velkou bezpečnostní značkou je již uvedeno velkou bezpečnostní značkou pro hlavní nebo vedlejší nebezpečí.

5.3.1.1.5 Velké bezpečnostní značky, která se nevztahují na přepravované nebezpečné věci nebo jejich zbytky, musí být odstraněny nebo zakryty.

5.3.1.1.6 Jsou-li velké bezpečnostní značky připevněny na sklopných panelech, musí být konstruovány a zajištěny tak, aby se nemohly rozevřít nebo se uvolnit z držáku během přepravy (zejména jako výsledek rázů nebo neúmyslných činností).

5.3.1.2 **Umístění velkých bezpečnostních značek na kontejnery, MEGC, cisternové kontejnery a přemístitelné cisterny**

POZNÁMKA: Tento pododdíl se nevztahuje na výměnné nástavby, kromě cisternových výměnných nástaveb nebo výměnných nástaveb přepravovaných v kombinované železniční/silniční dopravě.

Velké bezpečnostní značky se umísťují na obě podélné strany a na každý konec kontejneru, MEGC, cisternového kontejneru nebo přemístitelné cisterny.

Vícekomorový cisternový kontejner nebo vícekomorová přemístitelná cisterna, kterými se přepravují dvě nebo více nebezpečných látek, musí být opatřeny příslušnými velkými bezpečnostními značkami na obou bočních stranách příslušných komor a na obou koncích velkou bezpečnostní značkou každého vzoru, jímž jsou opatřeny jednotlivé komory na bocích.

5.3.1.3 **Umístění velkých bezpečnostních značek na vozidla přepravující kontejnery, MEGC, cisternové kontejnery a přemístitelné cisterny**

POZNÁMKA: Tento pododdíl se nevztahuje na umístění velkých bezpečnostních značek na vozidla přepravující výměnné nástavby, jiné než cisternové výměnné nástavby nebo výměnné nástavby přepravované v kombinované železniční/silniční dopravě; pro taková vozidla viz 5.3.1.5.

Pokud velké bezpečnostní značky umístěné na kontejnerech, MEGC, cisternových kontejnerech nebo na přemístitelných cisternách nejsou viditelné zvenjšku je přepravujících vozidel, tytéž velké bezpečnostní značky musí být umístěny na obou bočních stranách a na zadní straně vozidla. Jinak nemusí být na nosném vozidle žádná velká bezpečnostní značka.

5.3.1.4 **Umístění velkých bezpečnostních značek na vozidla pro přepravu ve volně loženém stavu, na cisternová vozidla, bateriová vozidla, MEMU a vozidla se snímatelnými cisternami**

5.3.1.4.1

Velké bezpečnostní značky musí být umístěny na obou bočních stranách a na zadní straně vozidla.

Vícekomorové cisternové vozidlo nebo vícekomorová snímatelná cisterna přepravovaná na vozidle, kterými se přepravují dvě nebo více nebezpečných látek, musí být opatřeny příslušnými velkými bezpečnostními značkami na každé straně příslušné komory a na zadní straně velkou bezpečnostní značkou každého vzoru, jímž jsou opatřeny jednotlivé komory na bocích. Avšak v případě, že všechny komory musí být označeny stejnými velkými bezpečnostními značkami, tyto velké bezpečnostní značky mohou být umístěny pouze po jedné na každé boční straně a na zadní straně vozidla.

Pokud je požadováno více než jedna velká bezpečnostní značka na jednu a tutéž komoru, musí být tyto velké bezpečnostní značky umístěny bezprostředně vedle sebe.

POZNÁMKA: Pokud je v průběhu přepravy podléhající ADR nebo po jejím ukončení cisternový návěs odpojen od svého tahače pro naložení na námořní nebo říční plavidlo, velké bezpečnostní značky musí být umístěny též na přední straně návěsu.

5.3.1.4.2

MEMU s cisternami a kontejnery pro volně ložené látky musí být opatřeny velkými bezpečnostními značkami podle 5.3.1.4.1 pro látky, které obsahují. Pro cisterny o vnitřním objemu menším než 1 000 litrů smějí být velké bezpečnostní značky nahrazeny bezpečnostními značkami podle 5.2.2.2.

5.3.1.4.3

Na MEMU přepravujících kusy obsahující látky nebo předměty třídy 1 (kromě podtřídy 1.4, skupiny snášenlivosti S) musí být velké bezpečnostní značky umístěny na obou bočních stranách a na zadní straně MEMU.

Zvláštní komory pro výbušniny musí být označeny velkými bezpečnostními značkami podle ustanovení v 5.3.1.1.2. Poslední věta v 5.3.1.1.2 se nepoužije.

5.3.1.5 Umístění velkých bezpečnostních značek na vozidla přepravující pouze kusy

POZNÁMKA: Tento pododdíl se vztahuje též na vozidla přepravující výměnné nástavby obsahující kusy, s výjimkou kombinované dopravy železnice/silnice; ke kombinované dopravě železnice/silnice viz 5.3.1.2 a 5.3.1.3.

5.3.1.5.1 Na vozidlech přepravujících kusy obsahující látky nebo předměty třídy 1 (jiné než látky nebo předměty podtřídy 1.4, skupiny snášenlivosti S) musí být velké bezpečnostní značky umístěny na obou bočních stranách a na zadní straně vozidla.

5.3.1.5.2 Na vozidlech přepravujících radioaktivní látky třídy 7 v kusech nebo IBC (kromě vyjmutých kusů) musí být velké bezpečnostní značky umístěny na obou bočních stranách a na zadní straně vozidla.

5.3.1.6 Umístění velkých bezpečnostních značek na prázdná cisternová vozidla, bateriová vozidla, MEGC, MEMU, cisternové kontejnery, přemístitelné cisterny a prázdná vozidla a kontejnery pro přepravu ve volně loženém stavu

5.3.1.6.1 Cisternová vozidla, vozidla se snímatelnými cisternami, bateriová vozidla, MEGC, MEMU, cisternové kontejnery a přemístitelné cisterny, vesměs prázdné, nevyčištěné a neodplyněné, jakož i vozidla a kontejnery pro přepravu ve volně loženém stavu, prázdné a nevyčištěné, musí být označena(y) velkými bezpečnostními značkami vyžadovanými pro předchozí náklad.

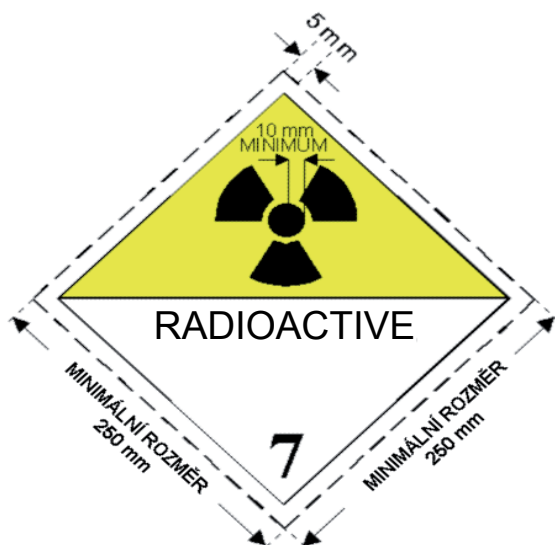
5.3.1.7 Specifikace velkých bezpečnostních značek

5.3.1.7.1 Kromě velké bezpečnostní značky pro třídu 7 specifikované v 5.3.1.7.2 velká bezpečnostní značka musí:

- (a) mít velikost nejméně 250 mm x 250 mm a musí mít uvnitř po celé délce svého obvodu rovnoběžnou čáru ve vzdálenosti 12,5 mm od svého okraje. V horní polovině musí mít čára stejnou barvu jako symbol a v dolní polovině musí mít stejnou barvu jako číslice v dolním rohu;
- (b) odpovídat bezpečnostní značce předepsané pro dané nebezpečné věci z hlediska barvy a symbolu (viz 5.2.2.2); a
- (c) obsahovat čísla (a pro věci třídy 1 písmeno skupiny snášenlivosti) předepsaná pro dané nebezpečné věci v pododdílu 5.2.2.2 pro odpovídající bezpečnostní značku s výškou písma nejméně 25 mm.

5.3.1.7.2 Velká bezpečnostní značka pro třídu 7 nesmí být menší než 250 mm x 250 mm a černá čára, která probíhá paralelně s okraji uvnitř, musí být od okraje ve vzdálenosti 5 mm; jinak musí velká bezpečnostní značka odpovídat níže uvedenému vyobrazení (vzor č. 7D). Číslice „7“ musí mít výšku nejméně 25 mm. Podkladová barva horní poloviny velké bezpečnostní značky musí být žlutá a spodní poloviny bílá, barva trojlístku a nápisu musí být černá. Použití výrazu „RADIOACTIVE“ ve spodní polovině je dobrovolné, aby bylo možno použít toto místo k uvedení příslušného UN čísla zásilky.

Velká bezpečnostní značka pro radioaktivní látky třídy 7



(Vzor 7 D)

Symbol (trojlístek): černý; podklad: horní polovina žlutá s bílým okrajem,
spodní polovina bílá;

Ve spodní polovině musí být uvedeno slovo „RADIOACTIVE“ nebo alternativně,
příslušné UN číslo,
a číslice „7“ v dolním rohu.

- 5.3.1.7.3** Pro cisterny s vnitřním objemem nejvýše 3 m³ a malé kontejnery mohou být velké bezpečnostní značky nahrazeny bezpečnostními značkami odpovídajícími pododdílu 5.2.2.2. Nejsou-li tyto bezpečnostní značky zvnějšku nosného vozidla viditelné, musí být na obou bočních stranách a na zadní straně vozidla umístěny také velké bezpečnostní značky podle 5.3.1.7.1.
- 5.3.1.7.4** Pro třídy 1 a 7, jestliže rozměry a konstrukce vozidla jsou takové, že disponibilní plocha povrchu je nedostačující pro umístění předepsaných velkých bezpečnostních značek, jejich rozměry mohou být zmenšeny až na 100 mm na každé straně.

5.3.2 Označování oranžovými tabulkami

5.3.2.1 Všeobecná ustanovení pro označování oranžovými tabulkami

5.3.2.1.1 Dopravní jednotky přepravující nebezpečné věci musí být opatřeny dvěma pravouhlymi oranžovými tabulkami podle 5.3.2.2.1, umístěnými ve svislé rovině. Musí být umístěny jedna na přední a druhá na zadní straně dopravní jednotky, obě kolmo k podélné ose dopravní jednotky. Musí být zřetelně viditelné.

Je-li přípojné vozidlo obsahující nebezpečné věci během přepravy odpojeno od svého motorového vozidla, musí oranžová tabulka zůstat umístěna na zadní straně přípojného vozidla.

5.3.2.1.2 Pokud je ve sloupci (20) tabulky A kapitoly 3.2 uvedeno identifikační číslo nebezpečnosti, cisternová vozidla, bateriová vozidla nebo dopravní jednotky s jednou nebo více cisternami přepravující nebezpečné věci musí být kromě toho opatřeny na obou bočních stranách každé cisterny nebo každé komory cisterny nebo každého článku bateriových vozidel zřetelně viditelnými a rovnoběžně s podélnou osou vozidla umístěnými oranžovými tabulkami předepsanými v 5.3.2.1.1. Na těchto oranžových tabulkách musí být uvedeno identifikační číslo nebezpečnosti a UN číslo předepsané ve sloupci (20), popřípadě (1) tabulky A kapitoly 3.2 pro každou z látek přepravovaných v cisterně, v komoře cisterny nebo v článku bateriového vozidla. Pro MEMU se tyto požadavky vztahují jen na cisterny o vnitřním objemu 1 000 litrů nebo větším a na kontejnery pro volně ložené látky.

5.3.2.1.3 Na cisternových vozidlech nebo dopravních jednotkách s jednou nebo více cisternami přepravujících látku UN čísel 1202, 1203 nebo 1223 nebo letecké palivo zařazené pod UN 1268 nebo 1863, ale ne jinou nebezpečnou látku, oranžové tabulky předepsané v 5.3.2.1.2 nemusí být umístěny, jestliže je na tabulkách umístěných vpředu a vzadu podle 5.3.2.1.1 uvedeno identifikační čísla nebezpečnosti a UN číslo předepsaná pro nejnebezpečnější přepravovanou látku, tj. látku s nejnižším bodem vzplanutí.

5.3.2.1.4 Pokud je ve sloupci (20) tabulky A kapitoly 3.2 uvedeno identifikační číslo nebezpečnosti, dopravní jednotky a kontejnery přepravující nebalené tuhé látky nebo předměty nebo balenou radioaktivní látku s jediným UN číslem vyžadujícím přepravu za výlučného použití a žádné jiné nebezpečné věci, musí být kromě toho opatřeny na obou bočních stranách každé dopravní jednotky nebo kontejneru zřetelně viditelnými a rovnoběžně s podélnou osou vozidla umístěnými oranžovými tabulkami předepsanými v 5.3.2.1.1. Na těchto oranžových tabulkách musí být uvedeno identifikační číslo nebezpečnosti a UN číslo předepsané ve sloupcích (20), popřípadě (1) tabulky A kapitoly 3.2 pro každou z látek ve volně loženém stavu nebo pro balenou radioaktivní látku, vyžaduje-li přepravu za výlučného použití, přepravovaných v dopravní jednotce nebo v kontejneru.

5.3.2.1.5 Pokud oranžové tabulky předepsané v 5.3.2.1.2 a 5.3.2.1.4, umístěné na kontejnerech, cisternových kontejnerech, MEGC nebo na přemístitelných cisternách nejsou dobře viditelné zvnějšku přepravujícího vozidla, musí být tytéž tabulky umístěny na obou bočních stranách vozidla.

POZNÁMKA: Tento odstavec se nemusí použít pro označování oranžovými tabulkami, jde-li o uzavřená vozidla nebo vozidla s plachtou přepravující cisterny o nejvyšším vnitřním objemu 3000 litrů.

5.3.2.1.6 Pro dopravní jednotky přepravující pouze jednu nebezpečnou látku a žádnou látku, která není nebezpečná, nejsou oranžové tabulky podle 5.3.2.1.2, 5.3.2.1.4 a 5.3.2.1.5 nezbytné, pokud je na oranžových tabulkách umístěných vpředu a vzadu podle 5.3.2.1.1 uvedeno identifikační číslo nebezpečnosti a UN číslo pro tuto látku předepsané ve sloupcích (20), popřípadě (1) tabulky A kapitoly 3.2.

5.3.2.1.7 Požadavky uvedené v 5.3.2.1.1 až 5.3.2.1.5 se vztahují také na nesnímatelné nebo snímatelné cisterny, bateriová vozidla, cisternové kontejnery, přemístitelné cisterny a MEGC, vesměs prázdné, nevyčištěné, neodplyněné nebo nedekontaminované, MEMU, nevyčištěné jakož i na vozidla a kontejnery pro přepravu volně ložených látek, vesměs prázdné, nevyčištěné nebo nedekontaminované.

5.3.2.1.8 Oranžové označení, které se nevztahuje na přepravované nebezpečné věci nebo jejich zbytky, musí být odstraněno nebo zakryto. Pokud jsou oranžové tabulky zakryty, jejich kryty musí být celistvé a musí zůstat účinné po 15 minutách přímého působení ohně.

5.3.2.2 Specifikace oranžových tabulek

5.3.2.2.1

Oranžové tabulky musí být reflexivní a musí být 40 cm široké a 30 cm vysoké. Tyto tabulky musí mít černý okraj 15 mm široký. Použitý materiál musí být odolný proti povětrnosti a musí zaručovat trvanlivé označení. Tabulka se nesmí uvolnit ze svého držáku po 15 minutách přímého působení ohně. Musí zůstat upevněna bez ohledu na orientaci vozidla. Tyto oranžové tabulky mohou být ve středu rozděleny vodorovnou černou čarou o tloušťce 15 mm.

Jestliže rozměry a konstrukce vozidla jsou takové, že disponibilní povrch je nedostačující pro umístění těchto tabulek, jejich rozměry mohou být zmenšeny na šířku 300 mm, výšku 120 mm a šířku černého okraje 10 mm. V tomto případě se pro balenou radioaktivní látku přepravovanou za vylučného použití vyžaduje jen UN číslo a velikost číslic předepsaných v 5.3.2.2.2 smí být zmenšena na 65 mm výšky a 10 mm tloušťky čáry.

Na kontejnerech přepravujících nebezpečné tuhé látky ve volně loženém stavu a na cisternových kontejnerech, MEGC a přemístitelných cisternách mohou být oranžové tabulky předepsané v 5.3.2.1.2, 5.3.2.1.4 a 5.3.2.1.5 nahrazeny samolepicí fólií, barevným nátěrem nebo jakýmkoli jiným rovnocenným způsobem. Toto alternativní označení musí odpovídat specifikacím uvedeným v tomto pododdílu, s výjimkou ustanovení týkajících se odolnosti proti ohni uvedených v 5.3.2.2.1 a 5.3.2.2.2.

POZNÁMKA: Barva oranžových tabulek v podmínkách normálního užívání musí mít souřadnice barevnosti ležící uvnitř plochy diagramu barevnosti vytvořeného spojením následujících souřadnic:

Souřadnice barevnosti bodů v rozích plochy diagramu barevnosti				
X	0,52	0,52	0,578	0,618
Y	0,38	0,40	0,422	0,38

Koeficient jasu odrážející barvy: $\beta > 0,12$.

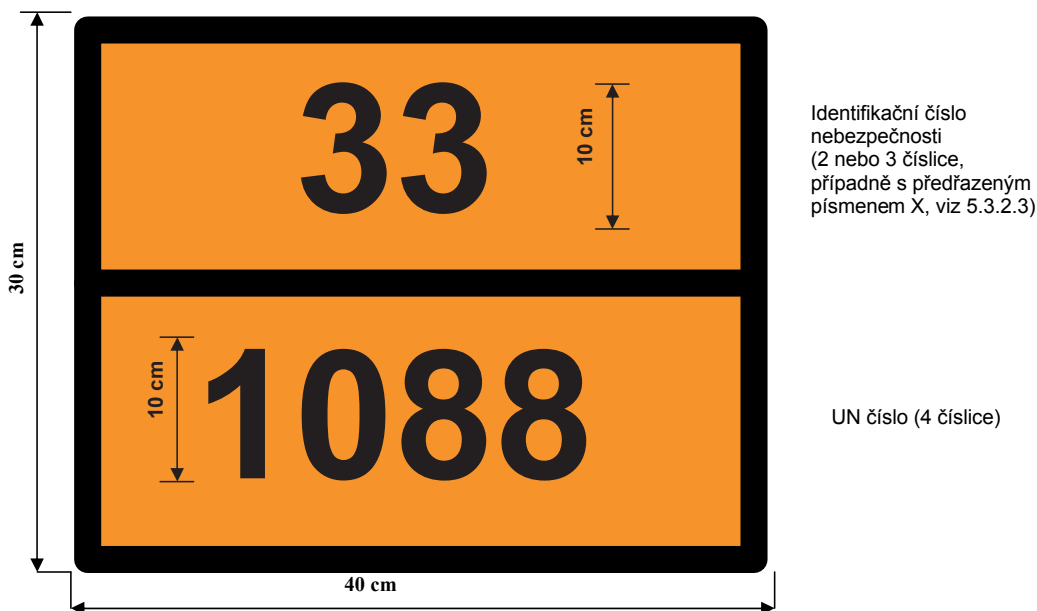
Vztažný střed E, standardní světelný zdroj C, normální dopad 45° pod zorným úhlem 0°.

Koeficient odrazové svítivosti při úhlu osvětlení 5° pod zorným úhlem 0,2°: nejméně 20 candel na lux a m².

5.3.2.2.2

Identifikační číslo nebezpečnosti a UN číslo sestává z černých číslic o výšce 100 mm a tloušťce čáry 15 mm. Identifikační číslo nebezpečnosti musí být uvedeno v horní části tabulky a UN číslo v dolní části; obě čísla musí být od sebe oddělena vodorovnou černou čarou o tloušťce 15 mm, vedenou v polovině výšky tabulky od jednoho jejího okraje k druhému (viz 5.3.2.2.3). Identifikační číslo nebezpečnosti a UN číslo musí být nesmazatelná a musí zůstat čitelná po 15 minutách přímého působení ohně. Vyměnitelná čísla a písmena na tabulkách představující identifikační číslo nebezpečnosti a UN číslo musí zůstat na svém místě během přepravy a bez ohledu na orientaci vozidla.

5.3.2.2.3 Příklad oranžové tabulky s identifikačním číslem nebezpečnosti a UN číslem



Podklad oranžový.
Okraj, vodorovná čára a číslice černé, tloušťka 15 mm.

5.3.2.2.4 Dovolené tolerance pro rozměry stanovené v tomto pododdílu jsou $\pm 10\%$.

5.3.2.2.5 Jsou-li oranžové tabulky připevněny na sklopných panelech, musí být konstruovány a zajištěny tak, aby se nemohly rozevřít nebo se uvolnit z držáku během přepravy (zejména jako výsledek rázů nebo neúmyslných činností).

5.3.2.3 Význam identifikačních čísel nebezpečnosti

5.3.2.3.1 Identifikační číslo nebezpečnosti sestává ze dvou nebo třech číslic. Obecně označují číslice tato nebezpečí:

- | | |
|---|---|
| 2 | Únik plynu tlakem nebo chemickou reakcí |
| 3 | Hořlavost kapalin (par) a plynů nebo kapalin schopných samoohřevu |
| 4 | Hořlavost tuhých látek nebo tuhých látek schopných samoohřevu |
| 5 | Podpora hoření |
| 6 | Toxicita nebo nebezpečí infekce |
| 7 | Radioaktivita |
| 8 | Žiravost |
| 9 | Nebezpečí prudké samovolné reakce |

POZNÁMKA: Nebezpečí prudké samovolné reakce ve významu číslice 9 zahrnuje z povahy látky vyplývající možnost nebezpečí výbuchu, rozpadu nebo polymerační reakce za uvolňování značného tepla nebo hořlavých a/nebo toxických plynů.

Zdvojení číslice označuje zvýšení příslušného nebezpečí.

Postačuje-li k označení nebezpečnosti látky jediná číslice, doplní se tato číslice na druhém místě nulou.

Následující kombinace číslic však mají zvláštní význam: 22, 323, 333, 362, 382, 423, 44, 446, 462, 482, 539, 606, 623, 642, 823, 842, 90 a 99 (viz 5.3.2.3.2).

Pokud je před identifikačním číslem nebezpečnosti uvedeno písmeno „X“, znamená to, že látka reaguje nebezpečně s vodou. Pro takové látky smí být použita voda pouze po schválení znalci.

Pro látky třídy 1 se jako identifikační číslo nebezpečnosti použije klasifikační kód podle sloupce (3b) tabulky A kapitoly 3.2. Klasifikační kód sestává z:

- čísla podtřídy podle 2.2.1.1.5; a
- písmene skupiny snášenlivosti podle 2.2.1.1.6.

5.3.2.3.2 Identifikační čísla nebezpečnosti uvedená ve sloupci (20) tabulky A kapitoly 3.2 mají tento význam:

- | | |
|------|--|
| 20 | dusivý plyn nebo plyn bez vedlejšího nebezpečí |
| 22 | hluboce zchlazený zkapalněný plyn; dusivý |
| 223 | hluboce zchlazený zkapalněný plyn, hořlavý |
| 225 | hluboce zchlazený zkapalněný plyn, podporující hoření |
| 23 | hořlavý plyn |
| 238 | hořlavý plyn, žíravý |
| 239 | hořlavý plyn, který může vyvolat samovolně prudkou reakci |
| 25 | plyn podporující hoření |
| 26 | toxický plyn |
| 263 | toxický plyn, hořlavý |
| 265 | toxický plyn, podporující hoření |
| 28 | žíravý plyn |
| 268 | toxický plyn, žíravý |
| 30 | hořlavá kapalina (bod vzplanutí od 23 °C do 60 °C včetně) nebo hořlavá kapalina nebo tuhá látka v roztaveném stavu s bodem vzplanutí vyšším než 60 °C ohřátá na teplotu rovnou nebo vyšší než její bod vzplanutí, nebo kapalina schopná samoohřevu |
| 323 | hořlavá kapalina reagující s vodou a vyvíjející hořlavé plyny |
| X323 | hořlavá kapalina reagující nebezpečně s vodou a vyvíjející hořlavé plyny ¹ |
| 33 | velmi hořlavá kapalina (bod vzplanutí pod 23 °C) |
| 333 | pyroforní kapalina |
| X333 | pyroforní kapalina reagující nebezpečně s vodou ¹ |
| 336 | velmi hořlavá kapalina, toxická |
| 338 | velmi hořlavá kapalina, žíravá |
| X338 | velmi hořlavá kapalina, žíravá, reagující nebezpečně s vodou ¹ |
| 339 | velmi hořlavá kapalina, která může vyvolat samovolně prudkou reakci |
| 36 | hořlavá kapalina (bod vzplanutí od 23 °C do 60 °C včetně), slabě toxická nebo kapalina schopná samoohřevu, toxická |
| 362 | hořlavá kapalina, toxická, reagující s vodou, vyvíjející hořlavé plyny |
| X362 | hořlavá kapalina, toxická, reagující nebezpečně s vodou, vyvíjející hořlavé plyny ¹ |

¹ Voda nesmí být použita bez schválení znalci.

- 368 hořlavá kapalina, toxická, žíravá
- 38 hořlavá kapalina (bod vzplanutí od 23 °C do 60 °C včetně), slabě žíravá, nebo kapalina schopná samoohřevu, žíravá
- 382 hořlavá kapalina, žíravá, reagující s vodou, vyvíjející hořlavé plyny
- X382 hořlavá kapalina, žíravá, reagující nebezpečně s vodou, vyvíjející hořlavé plyny¹
- 39 hořlavá kapalina, která může vyvolat samovolně prudkou reakci
- 40 hořlavá tuhá látka nebo samovolně se rozkládající látka nebo látka schopná samoohřevu
- 423 tuhá látka, reagující s vodou, vyvíjející hořlavé plyny nebo hořlavá tuhá látka, reagující s vodou, vyvíjející hořlavé plyny nebo tuhá látka schopná samoohřevu, reagující s vodou, vyvíjející hořlavé plyny
- X423 tuhá látka, reagující nebezpečně s vodou, vyvíjející hořlavé plyny nebo hořlavá tuhá látka, reagující nebezpečně s vodou, vyvíjející hořlavé plyny nebo tuhá látka schopná samoohřevu, reagující nebezpečně s vodou, vyvíjející hořlavé plyny¹.
- 43 samozápalná (pyroforní) tuhá látka
- X432 samozápalná (pyroforní) tuhá látka, reagující nebezpečně s vodou, vyvíjející hořlavé plyny¹
- 44 hořlavá tuhá látka, která je při zvýšené teplotě v roztaveném stavu
- 446 hořlavá tuhá látka, toxická, která je při zvýšené teplotě v roztaveném stavu
- 46 hořlavá tuhá látka nebo tuhá látka schopná samoohřevu, toxická
- 462 toxická tuhá látka, reagující s vodou, vyvíjející hořlavé plyny
- X462 tuhá látka, nebezpečně reagující s vodou, vyvíjející toxické plyny¹
- 48 hořlavá tuhá látka nebo tuhá látka schopná samoohřevu, žíravá
- 482 žíravá tuhá látka, reagující s vodou, vyvíjející hořlavé plyny
- X482 tuhá látka, nebezpečně reagující s vodou, vyvíjející žíravé plyny¹
- 50 látka podporující hoření
- 539 hořlavý organický peroxid
- 55 látka silně podporující hoření
- 556 látka silně podporující hoření, toxická
- 558 látka silně podporující hoření, žíravá
- 559 látka silně podporující hoření, která může vyvolat samovolně prudkou reakci
- 56 látka podporující hoření, toxická
- 568 látka podporující hoření, toxická, žíravá
- 58 látka podporující hoření, žíravá
- 59 látka podporující hoření, která může vyvolat samovolně prudkou reakci
- 60 toxická nebo slabě toxická látka
- 606 infekční látka

¹ Voda nesmí být použita bez schválení znalci.

- 623 toxická kapalina, reagující s vodou, vyvíjející hořlavé plyny
- 63 toxická látka, hořlavá (bod vzplanutí od 23 °C do 60 °C včetně)
- 638 toxická látka, hořlavá (bod vzplanutí od 23 °C do 60 °C včetně), žíravá
- 639 toxická látka, hořlavá (s bodem vzplanutí nejvýše 60 °C), která může vyvolat samovolně prudkou reakci
- 64 toxická tuhá látka, hořlavá nebo schopná samoohřevu
- 642 toxická tuhá látka, reagující s vodou, vyvíjející hořlavé plyny
- 65 toxická látka, podporující hoření
- 66 velmi toxická látka
- 663 velmi toxická látka, hořlavá (s bodem vzplanutí nejvýše 60 °C)
- 664 velmi toxická tuhá látka, hořlavá nebo schopná samoohřevu
- 665 velmi toxická látka, podporující hoření
- 668 velmi toxická látka, žíravá
- X668 velmi toxická látka, žíravá, která reaguje nebezpečně s vodou¹
- 669 velmi toxická látka, která může vyvolat samovolně prudkou reakci
- 68 toxická látka, žíravá
- 69 toxická nebo slabě toxická látka, která může vyvolat samovolně prudkou reakci
- 70 radioaktivní látka
- 78 radioaktivní látka, žíravá
- 80 žíravá nebo slabě žíravá látka
- X80 žíravá nebo slabě žíravá látka, která nebezpečně reaguje s vodou¹
- 823 žíravá kapalina, reagující s vodou, vyvíjející hořlavé plyny
- 83 žíravá nebo slabě žíravá látka, hořlavá (bod vzplanutí od 23 °C do 60 °C včetně)
- X83 žíravá nebo slabě žíravá látka, hořlavá (bod vzplanutí od 23 °C do 60 °C včetně), nebezpečně reagující s vodou¹
- 839 žíravá nebo slabě žíravá látka, hořlavá (bod vzplanutí od 23 °C do 60 °C včetně), která může vyvolat samovolně prudkou reakci
- X839 žíravá nebo slabě žíravá látka, hořlavá (bod vzplanutí od 23 °C do 60 °C včetně), která může vyvolat samovolně prudkou reakci a nebezpečně reagující s vodou¹
- 84 žíravá tuhá látka, hořlavá nebo schopná samoohřevu
- 842 žíravá tuhá látka, která reaguje s vodou, vyvíjející hořlavé plyny
- 85 žíravá nebo slabě žíravá látka, podporující hoření
- 856 žíravá nebo slabě žíravá látka, podporující hoření a toxická
- 86 žíravá nebo slabě žíravá látka, toxická
- 88 silně žíravá látka
- X88 silně žíravá látka, která nebezpečně reaguje s vodou¹
- 883 silně žíravá látka, hořlavá (bod vzplanutí od 23 °C do 60 °C včetně)

¹ Voda nesmí být použita bez schválení znalci.

- 884 silně žíravá tuhá látka, hořlavá nebo schopná samoohřevu
- 885 silně žíravá látka, podporující hoření
- 886 silně žíravá látka, toxická
- X886 silně žíravá látka, toxická, nebezpečně reagující s vodou ¹
- 89 žíravá nebo slabě žíravá látka, která může vyvolat samovolně prudkou reakci
- 90 látka ohrožující životní prostředí; jiné nebezpečné látky
- 99 jiné nebezpečné látky přepravované v zahřátém stavu.

5.3.3 Značka pro zahřáté látky

Cisternová vozidla, cisternové kontejnery, přemístitelné cisterny, speciální vozidla nebo kontejnery nebo speciálně vybavená vozidla nebo kontejnery, pro které je vyžadována značka pro zahřáté látky zvláštním ustanovením 580 uvedeným ve sloupci (6) tabulky A kapitoly 3.2 musí být opatřeny na obou bočních stranách a na zadní straně vozidel a na obou bočních stranách a na obou koncích kontejnerů, cisternových kontejnerů a přemístitelných cisteren značkou tvaru rovnostranného trojúhelníka o straně nejméně 250 mm v červené barvě, jak je uvedena níže.



5.3.4 (Vyhrazeno)

5.3.5 (Vyhrazeno)

5.3.6 Značka pro látky ohrožující životní prostředí

Je-li podle ustanovení oddílu 5.3.1 vyžadováno umístění velké bezpečnostní značky, musí být kontejnery, MEGC, cisternové kontejnery, přemístitelné cisterny a vozidla obsahující látky ohrožující životní prostředí splňující kritéria uvedená v 2.2.9.1.10 označeny značkou pro látky ohrožující životní prostředí vyobrazenou v 5.2.1.8.3. Ustanovení oddílu 5.3.1 týkající se velkých bezpečnostních značek se vztahují s patřičnými změnami na tuto značku.

¹ Voda nesmí být použita bez schválení znalci.

KAPITOLA 5.4

PRŮVODNÍ DOKLADY

5.4.0 Všeobecně

5.4.0.1 Pokud není stanoveno jinak, musí být každá přeprava věcí podléhajících ADR doprovázena doklady předepsanými v této kapitole, jak je to nutné.

POZNÁMKA: Seznam dokladů, které musí být při přepravě v dopravních jednotkách, viz 8.1.2.

5.4.0.2 Použití technik elektronického zpracování dat (EDP) nebo elektronické výměny dat (EDI) jako pomůcky nebo místo papírových dokladů je dovoleno, pokud tyto postupy používané pro sběr, uchování a zpracování elektronických dat splňují legislativní požadavky z hlediska průkaznosti a přístupnosti dat během přepravy způsobem nejméně rovnocenným s papírovými doklady.

5.4.0.3 Jsou-li informace o nebezpečných věcech poskytovány dopravci technikami EDP nebo EDI, musí být odesílatel schopen dodat tyto informace dopravci v papírové formě s údaji uvedenými v pořadí vyžadovaném touto kapitolou.

5.4.1 Přepravní doklad pro nebezpečné věci a předepsané údaje

5.4.1.1 Všeobecné údaje předepsané pro přepravní doklad

5.4.1.1.1 Přepravní doklad(y) musí obsahovat dále uvedené údaje pro každou nebezpečnou látku, materiál nebo předmět podaný k přepravě:

- (a) UN číslo s předřazenými písmeny „UN“;
- (b) oficiální pojmenování pro přepravu případně doplněné (viz 3.1.2.8.1) technickým názvem v závorkách (viz 3.1.2.8.1.1), jak je uvedeno v oddílu 3.1.2;
- (c) - pro látky a předměty třídy 1: klasifikační kód uvedený ve sloupci (3 b) tabulky A v kapitole 3.2;

Pokud jsou ve sloupci (5) tabulky A v kapitole 3.2 uvedena čísla vzorů bezpečnostních značek jiná než 1, 1.4, 1.5 a 1.6, musí být tato čísla vzorů bezpečnostních značek uvedena v závorkách za klasifikačním kódem;

- pro radioaktivní látky třídy 7: číslo třídy „7“;

POZNÁMKA: K radioaktivním látkám s vedlejším nebezpečím viz též zvláštní ustanovení 172 v kapitole 3.3.

- pro látky a předměty jiných tříd: čísla vzorů bezpečnostních značek uvedená ve sloupci (5) nebo vyžadovaná podle zvláštního ustanovení uvedeného ve sloupci (6) tabulky A v kapitole 3.2. Pokud je uvedeno více čísel vzorů bezpečnostních značek, čísla následující za prvním číslem musí být uvedena v závorkách. Pro látky a předměty, pro které nejsou ve sloupci (5) tabulky A kapitoly 3.2 uvedeny žádné vzory bezpečnostních značek, musí být místo nich uvedena jejich třída podle sloupce (3a).

- (d) kde je to stanoveno, obalová skupina pro látku, které mohou předcházet písmena „OS“ (např. „OS II“) nebo počáteční písmena odpovídající slovům „Obalová skupina“ v jazycích používaných podle 5.4.1.4.1;

POZNÁMKA: Pro radioaktivní látky třídy 7 s vedlejším nebezpečím, viz zvláštní ustanovení 172 (b) v kapitole 3.3.

- (e) počet a popis kusů pokud je to aplikovatelné. UN kódy obalů smějí být použity pouze k doplnění popisu druhu kusu (např. jedna bedna (4G));

POZNÁMKA: Počet, druh a vnitřní objem každého vnitřního obalu ve vnějším obalu skupinového obalu není nutno uvádět.

- (f) celkové množství každé položky nebezpečných věcí označené různým UN číslem, oficiálním pojmenováním pro přepravu nebo případně obalovou skupinou [jako objem nebo celková (brutto) hmotnost, nebo případně jako čistá (netto) hmotnost];

POZNÁMKA 1: V případě předpokládaného vynětí z platnosti podle pododdílu 1.1.3.6 musí být celkové množství nebezpečných věcí pro každou přepravní kategorii uvedeno v přepravním dokladu podle 1.1.3.6.3.

POZNÁMKA 2: Pro nebezpečné věci ve strojích nebo zařízeních specifikovaných v této příloze musí být uvedené množství celkové množství nebezpečných věcí, které jsou v nich obsaženy, v kilogramech nebo litrech, jak je to náležité.

- (g) jméno a adresa odesilatele;
- (h) jméno a adresa příjemce(ů). Jsou-li nebezpečné věci přepravovány k dodání více příjemcům, kteří nemohou být identifikováni na počátku přepravy, mohou být se souhlasem příslušných orgánů zemí dotčených přepravou alternativně uvedena slova „Rozvoz – prodej“;
- (i) prohlášení vyžadované podmínkami případné zvláštní dohody.
- (j) (Vyhrazeno)
- (k) kde je to stanoveno, kód omezení pro tunely udaný ve sloupci (15) tabulky A kapitoly 3.2 velkými písmeny v závorkách. Kód omezení pro tunely nemusí být v přepravním dokladu uveden, pokud je předem známo, že přeprava nebude spojena s průjezdem tunelem, v němž platí omezení pro přepravu nebezpečných věcí.

Umístění a pořadí předepsaných údajů v přepravním dokladu je libovolné, kromě údajů uvedených výše pod písmeny (a), (b), (c) a (d) a (k), které musí být uvedeny v pořadí uvedeném výše (tj. (a), (b), (c),(d), (k)) s žádnými vloženými údaji, kromě dovolených podle ADR. Příklady takových dovolených zápisů nebezpečných věcí jsou:

„UN 1098 ALLYLALKOHOL, 6.1 (3), I, (C/D)“ nebo
 „UN 1098, ALLYLALKOHOL, 6.1 (3), OS I, (C/D)“

5.4.1.1.2

Údaje uvedené v přepravním dokladu musí být čitelné. Ačkoli jsou velká písmena používána v kapitole 3.1 a v tabulce A kapitoly 3.2 pro uvedení údajů, které musí být součástí oficiálního pojmenování pro přepravu, a ačkoli jsou velká a malá písmena používána v této kapitole pro uvedení údajů požadovaných v přepravním dokladu s výjimkou ustanovení v 5.4.1.1.1 (k), je použití velkých a malých písmen pro uvedení údajů v přepravním dokladu libovolné.

5.4.1.1.3

Zvláštní ustanovení pro odpady

Jsou-li přepravovány odpady obsahující nebezpečné látky (kromě radioaktivních odpadů), musí být před oficiálním pojmenováním pro přepravu uvedeno slovo „ODPAD“, pokud toto slovo není již částí oficiálního pojmenování pro přepravu, např.

„UN 1230 ODPAD METHANOL, 3 (6.1), II, (D/E)“, nebo

„UN 1230 ODPAD METHANOL, 3 (6.1), OS II, (D/E)“ nebo

„UN 1993 ODPAD LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (toluen a ethylalkohol), 3, II, (D/E)“, nebo

„UN 1993 ODPAD LÁTKA HOŘLAVÁ, KAPALNÁ, J.N. (toluen a ethylalkohol), 3, OS II, (D/E)“.

Je-li použito ustanovení pro odpady uvedené v 2.1.3.5.5, musí se za oficiální pojmenování pro přepravu doplnit:

„ODPAD PODLE 2.1.3.5.5“ (např. „UN 3264 LÁTKA ŽÍRAVÁ, KAPALNÁ, KYSELÁ, ANORGANICKÁ, J.N., 8, II, (E) ODPAD PODLE 2.1.3.5.5“).

Technický název, jak je předepsán v kapitole 3.3 zvláštním ustanovením 274, nemusí být doplněn.

- 5.4.1.1.4** (Vypuštěno)
- 5.4.1.1.5** *Zvláštní ustanovení pro záchranné obaly a záchranné tlakové nádoby*
- Jsou-li nebezpečné věci přepravovány v záchranném obalu nebo v záchranné tlakové nádobě, musí být v přepravním dokladu za popisem věcí uvedena slova „**ZÁCHRANNÝ OBAL**“ nebo „**ZÁCHRANNÁ TLAKOVÁ NÁDOBA**“.
- 5.4.1.1.6** *Zvláštní ustanovení pro prázdné nevyčištěné obalové, přepravní a dopravní prostředky*
- 5.4.1.1.6.1** Pro prázdné nevyčištěné obalové, přepravní a dopravní prostředky, které obsahují zbytky nebezpečných věcí jiných tříd než třídy 7, musí mít před nebo za popisem nebezpečných věcí stanoveným v 5.4.1.1.1 (a) až (d) a (k), uvedena slova „PRÁZDNÝ, NEVYČIŠTĚNÝ“ nebo „ZBYTEK, POSLEDNÍ OBSAH“. Kromě toho 5.4.1.1.1 (f) neplatí.
- 5.4.1.1.6.2** Zvláštní ustanovení 5.4.1.1.6.1 může být nahrazeno ustanoveními v 5.4.1.1.6.2.1, 5.4.1.1.6.2.2 nebo popřípadě 5.4.1.1.6.2.3.
- 5.4.1.1.6.2.1** Pro prázdné nevyčištěné obaly, které obsahují zbytky nebezpečných věcí jiných tříd než třídy 7, včetně prázdných nevyčištěných nádob na plyny s vnitřním objemem nejvýše 1000 litrů, jsou údaje podle odstavce 5.4.1.1.1 (a), (b), (c), (d), (e) a (f) nahrazeny zápisem „PRÁZDNÁ NÁDOBA“, „PRÁZDNÁ IBC“ nebo popřípadě „PRÁZDNÝ VELKÝ OBAL“, následovaným údajem o posledně naložených nebezpečných věcech, jak je předepsáno v 5.4.1.1.1 (c).
- Viz například: „PRÁZDNÝ OBAL, 6.1 (3)“.
- Kromě toho mohou být, v případě, že jsou posledními naloženými věcmi věci třídy 2, informace předepsané v odstavci 5.4.1.1.1 (c) nahrazeny číslem třídy „2“.
- 5.4.1.1.6.2.2** Pro prázdné nevyčištěné přepravní a dopravní prostředky jiné než obaly, které obsahují zbytky nebezpečných věcí jiných tříd než třídy 7, a pro prázdné nevyčištěné nádoby na plyny s vnitřním objemem větším než 1000 litrů je před údaje podle 5.4.1.1.1 (a) až (d) a (k) předřazen zápis „PRÁZDNÉ CISTERNOVÉ VOZIDLO“, „PRÁZDNÁ SNÍMATELNÁ CISTERNA“, „PRÁZDNÝ CISTERNOVÝ KONTEJNER“, „PRÁZDNÁ PŘEMÍSTITELNÁ CISTERNA“, „PRÁZDNÉ BATERIOVÉ VOZIDLO“, „PRÁZDNÝ MEGC“, „PRÁZDNÁ MEMU“, „PRÁZDNÉ VOZIDLO“, „PRÁZDNÝ KONTEJNER“ nebo popřípadě „PRÁZDNÁ NÁDOBA“, následovaný slovy „POSLEDNÍ NÁKLAD“. Kromě toho 5.4.1.1.1 (f) neplatí.
- Viz například:
- „PRÁZDNÉ CISTERNOVÉ VOZIDLO, POSLEDNÍ NÁKLAD: UN 1098 ALLYLALKOHOL, 6.1 (3), I, (C/D)“ nebo
- „PRÁZDNÉ CISTERNOVÉ VOZIDLO, POSLEDNÍ NÁKLAD: UN 1098 ALLYLALKOHOL, 6.1 (3), OS I, (C/D)“.
- 5.4.1.1.6.2.3** Jestliže se prázdné nevyčištěné obaly, přepravní nebo dopravní prostředky, které obsahují zbytky nebezpečných věcí jiných tříd než třídy 7, vracejí odesilateli, mohou se použít také přepravní doklady vystavené pro přepravu s nákladem těchto nebezpečných věcí. V takových případech je třeba údaj o množství odstranit (jeho vymazáním, škrtnutím nebo jiným způsobem) a nahradit jej slovy „PRÁZDNÝ, NEVYČIŠTĚNÝ ZPĚT“.
- 5.4.1.1.6.3** (a) Jsou-li prázdné nevyčištěné cisterny, bateriová vozidla a MEGC přepravovány do nejbližšího místa, kde může být provedeno vyčištění nebo oprava podle ustanovení uvedených v 4.3.2.4.3, musí být v přepravním dokladu uveden tento dodatečný zápis: „**Přeprava podle 4.3.2.4.3**“.
- (b) Jsou-li prázdná nevyčištěná vozidla a kontejnery přepravovány do nejbližšího místa, kde může být provedeno vyčištění nebo oprava podle ustanovení uvedených v 7.5.8.1, musí být v přepravním dokladu uveden tento dodatečný zápis: „**Přeprava podle 7.5.8.1**“.
- 5.4.1.1.6.4** Pro přepravu nesnímatelných cisteren (cisternových vozidel), snímatelných cisteren, bateriových vozidel, cisternových kontejnerů a MEGC za podmínek uvedených v 4.3.2.4.4, musí být v přepravním dokladu uveden tento zápis: „Přeprava podle 4.3.2.4.4“.

- 5.4.1.1.7** *Zvláštní ustanovení pro přepravu v přepravním řetězci s námořní nebo leteckou dopravou*
Při přepravě podle 1.1.4.2.1 musí být v přepravním dokladu uveden tento zápis: „**Přeprava podle 1.1.4.2.1**“.
- 5.4.1.1.8** *(Vyhrazeno)*
- 5.4.1.1.9** *(Vyhrazeno)*
- 5.4.1.1.10** *(Vypuštěno)*
- 5.4.1.1.11** *Zvláštní ustanovení pro přepravu IBC nebo přemístitelných cisteren po uplynutí data platnosti poslední periodické zkoušky nebo inspekce*
Pro přepravu podle 4.1.2.2 (b), 6.7.2.19.6 (b), 6.7.3.15.6 (b) nebo 6.7.4.14.6 (b) musí být v tomto smyslu uveden v přepravním dokladu tento zápis: „**Přeprava podle 4.1.2.2 (b)**“, „**Přeprava podle 6.7.2.19.6 (b)**“, „**Přeprava podle 6.7.3.15.6 (b)**“ nebo „**Přeprava podle 6.7.4.14.6 (b)**“, jak je to náležité.
- 5.4.1.1.12** *(Vyhrazeno)*
- 5.4.1.1.13** *Zvláštní ustanovení pro přepravu ve vícekomorových cisternových vozidlech nebo dopravních jednotkách s více než jednou cisternou*
Pokud jsou odchylkou od 5.3.2.1.2 vícekomorová cisternová vozidla nebo dopravní jednotky s více než jednou cisternou označeny podle 5.3.2.1.3, musí být látky obsažené v každé cisterně nebo v každé komoře cisterny uvedeny v přepravním dokladu.
- 5.4.1.1.14** *Zvláštní ustanovení pro přepravu zahřátých látek*
Pokud oficiální pojmenování pro přepravu látky, která je přepravována nebo předávána k přepravě v kapalném stavu při teplotě rovné nebo vyšší než 100°C, nebo v tuhém stavu při teplotě rovné nebo vyšší než 240°C, neobsahuje podmínku zvýšené teploty (např. použitím termínu „ROZTAVENÁ“ nebo „V ZAHŘÁTÉM STAVU“ jako součásti oficiálního pojmenování pro přepravu), musí být slovo „ZAHŘÁTÁ“ uvedeno před oficiálním pojmenováním pro přepravu.
- 5.4.1.1.15** *Zvláštní ustanovení pro přepravu látek stabilizovaných řízením teploty*
Pokud slovo „STABILIZOVANÁ“ je součástí oficiálního pojmenování pro přepravu (viz 3.1.2.6), je-li stabilizace dosažena řízením teploty, řízená teplota a kritická teplota (viz 2.2.41.1.17) musí být uvedeny v přepravním dokladu takto:
„Řízená teplota: °C Kritická teplota: °C
- 5.4.1.1.16** *Informace vyžadované podle zvláštního ustanovení 640 v kapitole 3.3*
Pokud je to vyžadováno zvláštním ustanovením 640 kapitoly 3.3, musí být v přepravním dokladu uveden zápis „**Zvláštní ustanovení 640X**“, kde „X“ je velké písmeno uvedené za příslušným odkazem na zvláštní ustanovení 640 ve sloupci (6) tabulky A kapitoly 3.2.
- 5.4.1.1.17** *Zvláštní ustanovení pro přepravu tuhých látek v kontejnerech pro volně ložené látky odpovídajících oddílu 6.11.4*
Jestliže jsou tuhé látky přepravovány v kontejnerech pro volně ložené látky odpovídajících oddílu 6.11.4, musí být v přepravním dokladu uveden tento zápis (viz POZNÁMKA na začátku oddílu 6.11.4):
“Kontejner pro volně ložené látky BK(x) schválený příslušným orgánem”
- 5.4.1.1.18** *Zvláštní ustanovení pro přepravu látek ohrožujících životní prostředí (vodní prostředí)*
Jestliže látka spadající do jedné ze tříd 1 až 9 splňuje kritéria uvedená v 2.2.9.1.10, musí být v přepravním dokladu uveden doplňkový zápis „OHROŽUJÍCÍ ŽIVOTNÍ PROSTŘEDÍ“ nebo „LÁTKA ZNEČIŠŤUJÍCÍ MOŘE/OHROŽUJÍCÍ ŽIVOTNÍ PROSTŘEDÍ“. Tento dodatečný požadavek se nevztahuje na UN čísla 3077 a 3082 a na výjimky uvedené v 5.2.1.8.1.

Zápis „MARINE POLLUTANT“ („LÁTKA ZNEČIŠŤUJÍCÍ MOŘE“) (podle 5.4.1.4.3 IMDG Codu) je dovolen pro přepravu v přepravním řetězci zahrnujícím námořní dopravu.

5.4.1.2 **Dodatečné nebo zvláštní údaje pro určité třídy**

5.4.1.2.1 *Zvláštní ustanovení pro třídu 1*

- (a) V přepravním dokladu musí být, dodatečně k požadavkům uvedeným v 5.4.1.1.1 (f), uvedeno:
- celková čistá hmotnost výbušného obsahu¹ pro každou látku nebo předmět označené různým UN číslem, v kg;
 - celková čistá hmotnost výbušného obsahu¹ všech látek a předmětů uvedených v přepravním dokladu v kg.
- (b) Pro společné balení dvou různých věcí musí popis věcí v přepravním dokladu obsahovat UN čísla a oficiální pojmenování vytištěná velkými písmeny ve sloupcích (1) a (2) tabulky A kapitoly 3.2 obou látek nebo předmětů. Jestliže jsou obsaženy v jednom kusu více než dvě různé věci v souladu s zvláštními ustanoveními MP1, MP2 a MP20 až MP24 uvedenými v ustanoveních o společném balení v oddílu 4.1.10 musí být v přepravním dokladu uvedena v popise věcí UN čísla všech látek a předmětů obsažených v kusu touto formou „**Věci UN čísel ...**“;
- (c) Při přepravě látek a předmětů přiřazených k j.n. položce. nebo k položce „0190 VZORKY, VÝBUŠNÉ“ nebo balených podle pokynu pro balení P101 uvedeného v pododdílu 4.1.4.1 musí být připojena k přepravnímu dokladu kopie schválení příslušného orgánu s podmínkami pro přepravu. Musí to být v úředním jazyce odesílající země a též, jestliže tento jazyk není angličtina, francouzština nebo němčina, v angličtině, francouzštině nebo němčině, pokud případné dohody uzavřené mezi státy zainteresovanými na přepravě nestanoví jinak;
- (d) Pokud kusy obsahující látky a předměty skupin snášenlivosti B a D jsou naloženy společně do jednoho vozidla podle požadavků uvedených v pododdílu 7.5.2.2, kopie osvědčení příslušného orgánu o schválení ochranné komory nebo kontejmentového systému podle pododdílu 7.5.2.2 poznámky^a pod tabulkou musí být připojeno k přepravnímu dokladu. Musí být vystaveno v úředním jazyce odesílající země a též, pokud tímto jazykem není angličtina, francouzština nebo němčina, v angličtině, francouzštině nebo němčině, pokud případné dohody uzavřené mezi zeměmi dotčenými přepravou nestanoví jinak.;
- (e) Pokud jsou výbušné látky nebo předměty přepravovány v obalech podle pokynu pro balení P101, v přepravním dokladu musí být uveden zápis „**Obal schválen příslušným orgánem...**“ (viz 4.1.4.1, pokyn pro balení P101).
- (f) *(Vyhrazeno)*
- (g) Pokud jsou přepravovány výrobky zábavné pyrotechniky UN čísel 0333, 0334, 0335, 0336 a 0337, v přepravním dokladu musí být uveden zápis:

„Klasifikace zábavné pyrotechniky příslušným orgánem XX s osvědčením zábavné pyrotechniky XX/YYZZZ“.

Osvědčení o schválení klasifikace nemusí doprovázet zápis, ale odesílatel musí být schopen je poskytnout dopravci nebo příslušnému orgánu ke kontrolním účelům. Osvědčení o schválení klasifikace nebo jeho kopie musí být v oficiálním jazyce země odeslání a, pokud tímto jazykem není němčina, angličtina nebo francouzština, též v němčině, angličtině nebo francouzštině.

POZNÁMKA 1: V přepravním dokladu může být uveden obchodní nebo technický název věcí dodatečně k oficiálnímu pojmenování pro přepravu.

POZNÁMKA 2: Číslo osvědčení o klasifikaci musí sestávat ze smluvní strany ADR, v níž byl schválen klasifikační kód podle zvláštního ustanovení 645 oddílu 3.3.1,

¹ Pro předměty se pojmem „výbušný obsah“ rozumí výbušná látka obsažená v předmětu.

uvedené rozlišovací značkou pro motorová vozidla v mezinárodním provozu (XX)², z identifikace příslušného orgánu (YY) a z jediného sériového čísla jedinciho (ZZZZ). Příklady takových čísel osvědčení o klasifikaci jsou:
GB/HSE123456
D/BAM1234“.

5.4.1.2.2 *Dodatečná ustanovení pro třídu 2*

- (a) Při přepravě směsí (viz 2.2.2.1.1) v cisternách (snímatelných cisternách, nesnímatelných cisternách, přemístitelných cisternách, cisternových kontejnerech nebo člancích bateriových vozidel nebo MEGC), musí být uvedeno složení směsi v % objemu nebo % hmotnosti. Složky o obsahu nižším než 1 % nemusí být uváděny (viz též 3.1.2.8.1.2). Složení směsi nemusí být uvedeno, jsou-li použity jako doplněk k oficiálnímu pojmenování pro přepravu technické názvy dovolené podle zvláštních ustanovení 581, 582 nebo 583;
- (b) Při přepravě lahví, trubkových nádob, tlakových sudů, kryogenních nádob a svazků lahví podle podmínek uvedených v pododdílu 4.1.6.10, musí být v přepravním dokladu uveden tento zápis: „**Přeprava podle 4.1.6.10**“.

5.4.1.2.3 *Dodatečná ustanovení pro samovolně se rozkládající látky třídy 4.1 a organické peroxidy třídy 5.2*

- 5.4.1.2.3.1 Při přepravě samovolně se rozkládajících látek třídy 4.1 a organických peroxidů třídy 5.2, které vyžadují řízení teploty během přepravy (pro samovolně se rozkládající látky viz 2.2.41.1.17; pro organické peroxidy viz 2.2.52.1.15 až 2.2.52.1.17), v přepravním dokladu musí být uvedeny řízená teplota a kritická teplota takto:

„**Řízená teplota: °C**“ „**Kritická teplota:°C**“.

- 5.4.1.2.3.2 Pokud pro určité samovolně se rozkládající látky třídy 4.1 a určité organické peroxidy třídy 5.2, příslušný orgán povolil, aby nebyla použita bezpečnostní značka podle vzoru č. 1 pro zvláštní obal (viz 5.2.2.1.9) v přepravním dokladu musí být o tom uvedena poznámka takto: „**Bezpečnostní značka podle vzoru č. 1 není vyžadována**“.

- 5.4.1.2.3.3 Pokud jsou organické peroxidy a samovolně se rozkládající látky přepravovány za podmínek kdy se vyžaduje schválení (pro organické peroxidy viz 2.2.52.1.8, 4.1.7.2.2 a zvláštní ustanovení TA2 uvedené v oddílu 6.8.4; pro samovolně se rozkládající látky viz 2.2.41.1.13 a 4.1.7.2.2) v přepravním dokladu musí být o tom uvedena poznámka, např. „**Přeprava podle 2.2.52.1.8**“.

K přepravnímu dokladu musí být připojena jedna kopie schválení příslušného orgánu s podmínkami pro přepravu. Schválení musí být vystaveno v úředním jazyce odesílající země a též, pokud tímto jazykem není angličtina, francouzština, italština nebo němčina, v angličtině, francouzštině, italštině nebo němčině, pokud případné dohody uzavřené mezi státy dotčenými přepravou nestanoví něco jiného.

- 5.4.1.2.3.4 Pokud je přepravován vzorek organického peroxidu (viz 2.2.52.1.9) nebo samovolně se rozkládající látky (viz 2.2.41.1.15), v přepravním dokladu o tom musí být uvedena poznámka, např. „**Přeprava podle 2.2.52.1.9**“.

- 5.4.1.2.3.5 Pokud jsou přepravovány samovolně se rozkládající látky typu G (viz Příručka zkoušek a kritérií, část II, odst. 20.4.2 (g)), v přepravním dokladu musí být o tom uvedena poznámka: „**Není látkou samovolně se rozkládající třídy 4.1**“.

Pokud jsou přepravovány organické peroxidy typu G (viz Příručka zkoušek a kritérií, část II, odst. 20.4.2 (g)), v přepravním dokladu musí být o tom uvedena poznámka: „**Není látkou třídy 5.2**“.

5.4.1.2.4 *Dodatečná ustanovení pro třídu 6.2*

Kromě údajů o příjemci (viz 5.4.1.1.1 (h)) musí být uvedeno jméno a číslo telefonu odpovědné osoby.

² Rozlišovací značka pro motorová vozidla v mezinárodním provozu předepsaná Úmluvou o silničním provozu (Videň, 1968).

5.4.1.2.5 *Dodatečná ustanovení pro třídu 7*

5.4.1.2.5.1 V přepravním dokladu musí být pro každou zásilku látek třídy 7 uvedeny, pokud je to vhodné, v uvedeném pořadí a bezprostředně po údajích předepsaných v 5. 4. 1.1.1 (a) až (c) a (k) tyto údaje:

- (a) název nebo symbol každého radionuklidu nebo, pro směsi radionuklidů, vhodný všeobecný popis nebo seznam nejvíce omezujících nuklidů;
- (b) popis fyzikálního a chemického stavu látky, nebo údaj o tom, že látka je zvláštní formou radioaktivní látky nebo málo rozpustitelnou radioaktivní látkou. Druhový chemický popis se přípouští pro chemický stav. Pro radioaktivní látky s vedlejším nebezpečím viz poslední větu zvláštního ustanovení 172 kapitoly 3.3.
- (c) nejvyšší aktivita radioaktivního obsahu během přepravy vyjádřená v becquerelech (Bq) s příslušným symbolem předpony SI (viz 1.2.2.1). U štěpných látek smí být místo aktivity udána hmotnost štěpných látek (nebo hmotnost každého štěpného nuklidu pro směsi, pokud je to náležité) v gramech (g) nebo jejich vhodném násobku;
- (d) kategorie kusu, tj. I-BÍLÁ, II-ŽLUTÁ, III-ŽLUTÁ;
- (e) přepravní index (pouze kategorie II-ŽLUTÁ a III-ŽLUTÁ);
- (f) pro zásilky obsahující štěpnou látku, kromě zásilek vyjmutých podle pododdílu 6.4.11.2, kritický bezpečnostní index;
- (g) identifikační značka každého schvalovacího osvědčení příslušného orgánu (zvláštní forma radioaktivní látky, málo rozpustitelná radioaktivní látka, zvláštní ujednání, konstrukce kusu nebo odeslání) vztahující se na zásilku;
- (h) pro zásilky více než jednoho kusu údaje požadované v 5.4.1.1.1 a ve výše uvedených bodech (a) až (g) musí být uvedeny pro každý kus. Pro kusy v přepravním obalovém souboru, v kontejneru nebo ve vozidle musí zahrnovat podrobný popis obsahu každého kusu uvnitř přepravního obalového souboru, kontejneru nebo vozidla a, pokud je to vhodné, každého přepravního obalového souboru, kontejneru nebo vozidla. Jestliže kusy mají být vyjmuty z přepravního obalového souboru, z kontejneru nebo z vozidla v místě jejich překládky, musí být k dispozici příslušný přepravní doklad;
- (i) pokud se vyžaduje, aby zásilka byla odeslána za výlučného použití, poznámka „ODESLÁNÍ ZA VÝLUČNÉHO POUŽITÍ“; a
- (j) pro látky LSA-II a LSA-III, SCO-I a SCO-II celková aktivita zásilky jako násobek A_2 . Pro radioaktivní látky, pro něž je hodnota A_2 neomezena, musí být násobek A_2 nula.

5.4.1.2.5.2 Odesílatel musí uvést v přepravních dokladech prohlášení týkající se případných činností, které jsou požadovány od dopravce. Prohlášení musí být v jazycích považovaných dopravcem nebo zainteresovanými orgány za nezbytné, a musí obsahovat nejméně následující údaje:

- (a) dodatečné požadavky na nakládku, uložení, přepravu, manipulaci a vykládku kusu, přepravního obalového souboru nebo kontejneru včetně ustanovení o zvláštním uložení pro bezpečný odvod tepla (viz zvláštní ustanovení CV33 (3.2) uvedené v 7.5.11) nebo prohlášení, že takové požadavky nejsou nezbytné;
- (b) omezení s hlediska způsobu přepravy nebo vozidla a všechny nezbytné údaje o dopravní cestě;
- (c) nouzová opatření vhodná pro zásilku.

5.4.1.2.5.3 Ve všech případech mezinárodní přepravy kusů vyžadujících schválení konstrukčního vzoru kusu nebo odeslání příslušným orgánem, pro něž se používají v různých zemích, jichž se přeprava týká, různé druhy schválení, musí být UN číslo a oficiální pojmenování pro přepravu, vyžadované v 5.4.1.1.1, v souladu s osvědčením země původu konstrukčního vzoru kusu.

5.4.1.2.5.4 Příslušná osvědčení příslušného orgánu nemusí doprovázet zásilku. Odesílatel je musí dát k dispozici dopravci(ům) před nakládkou a vykládkou.

5.4.1.3 *(Vyhrazeno)*

5.4.1.4 *Formát a jazyk*

5.4.1.4.1 Doklad obsahující údaje uvedené v pododdílech 5.4.1.1 a 5.4.1.2 může být takový, jaký je již vyžadován jinými platnými předpisy pro přepravu jiným druhem dopravy. V případě více příjemců jméno a adresa příjemců a dodávaná množství umožňující kdykoli vyhodnotit povahu a přepravované množství, mohou být uvedeny v jiných dokladech, které jsou používány nebo

v jiných povinných dokladech předepsaných jinými zvláštními předpisy a které musí být během přepravy ve vozidle.

Údaje uvedené v dokladu musí být v úředním jazyce odesílající země a též, pokud tímto jazykem není angličtina, francouzština nebo němčina, v angličtině, francouzštině nebo němčině pokud případné tarify pro mezinárodní silniční dopravu nebo dohody uzavřené mezi zeměmi zainteresovanými na přepravě nestanoví jinak.

5.4.1.4.2 Jestliže z důvodu rozměru nákladu celá zásilka nemůže být naložena do jedné dopravní jednotky, musí být vyhotoveno nejméně tolik oddělených přepravních dokladů nebo kopií jednoho přepravního dokladu, kolik je naložených dopravních jednotek. Kromě toho ve všech případech musí být vyhotoveny přepravní doklady pro zásilky nebo části zásilek, které nemohou být naloženy společně do jednoho vozidla z důvodů zákazů uvedených v oddílu 7.5.2.

Údaje týkající se rizik přepravovaných věcí (jak je uvedeno v pododdílu 5.4.1.1) mohou být zapsány nebo kombinovány s údaji v existujícím přepravním nebo nákladním dokladu. Uvedení údajů v dokladu (nebo pokyn pro přenos odpovídajících dat systémem elektronického zpracování dat (EDP) nebo systémem elektronické výměny dat) musí být provedeno podle 5.4.1.1.1.

Pokud existující přepravní doklad nebo nákladní doklad nemůže být použit jako doklad o nebezpečných věcech pro multimodální dopravu, je považováno za vhodné použití dokladů odpovídajících příkladu uvedenému v oddílu 5.4.5³.

5.4.1.5 Věci nepovažované za nebezpečné

Pokud věci uvedené jmenovitě v tabulce A kapitoly 3.2 nepodléhají ADR, protože nejsou považovány za nebezpečné podle části 2, odesílatel může uvést v přepravním dokladu zápis v tomto smyslu např. „**Věci nespádající do třídy ...**“.

POZNÁMKA: Toto ustanovení může být použito zejména tehdy, jestliže odesílatel usoudí, že vzhledem k chemické povaze přepravovaných věcí (např. roztoky nebo směsi) nebo vzhledem ke skutečnosti, že takové věci jsou považovány za nebezpečné podle jiných předpisů, by zásilka mohla být podrobena kontrole během přepravy.

5.4.2 Osvědčení o naložení velkého kontejneru nebo vozidla

Jestliže přeprava nebezpečných věcí ve velkém kontejneru předchází přepravě po moři, musí být přepravní doklad⁵ doprovázen osvědčením o naložení kontejneru odpovídajícím oddílu 5.4.2 IMDG Code⁴.

³ Pokud je tento způsob použit, je možno získat informace z příslušných doporučení Střediska OSN pro zjednodušení formalit v mezinárodním obchodu (UN/CEFACT), zejména Doporučení č.1 (United Nations Layout Key for Trade Documents - Dispoziční klíč pro obchodní dokumenty Spojených národů) (ECE/TRADE/137, vydání 81.3), UN Layout Key for Trade Documents – Guidelines for Applications (Dispoziční klíč pro obchodní dokumenty Spojených národů – Směrnice pro aplikaci) (ECE/TRADE 270, vydání 2002), Doporučení č. 11 (Documentary Aspects of the International Transport of Dangerous Goods - Aspekty dokumentace mezinárodní přepravy nebezpečných věcí) (ECE/TRADE/204, vydání 96.1- nyní v revizi) a Doporučení č. 22 (Layout Key for Standard Consignment Instructions - Dispoziční klíč pro standardní pokyny pro zásilky) (ECE/TRADE/168, vydání 1989). Viz též UN/CEFACT Summary of Trade Facilitation Recommendations (Přehled doporučení pro usnadnění obchodu) (ECE/TRADE/346, vydání 2006) a United Nations Trade Data Elements Directory (UNTDED) (Seznam prvků obchodních údajů) (ECE/TRADE/362, vydání 2005).

⁴ Pokyny pro použití v praxi a při školení o nakládání věcí do dopravních jednotek byly zpracovány též Mezinárodní námořní organizací (IMO), Mezinárodní organizací práce (ILO) a Evropskou hospodářskou komisí Organizace spojených národů (UN/ECE) a byly uveřejněny IMO („IMO/ILO/UN-ECE Pokyny pro nakládání nákladních dopravních jednotek (CTU)“).

⁵ Oddíl 5.4.2 IMDG Code vyžaduje následující „5.4.2 Osvědčení o naložení kontejneru/vozidla“

5.4.2.1 Jestliže jsou nebezpečné věci baleny nebo naloženy do kontejneru nebo vozidla, osoby odpovědné za naložení kontejneru nebo vozidla musí vystavit „osvědčení o naložení kontejneru/vozidla“ uvádějící identifikační číslo(a) kontejneru/vozidla a osvědčující, že operace byly provedeny podle následujících podmínek:

- 1 Kontejner/vozidlo bylo čisté, suché a prokazatelně připraveno pro uložení věcí;
- 2 Kusy, které je třeba oddělit podle příslušných požadavků na oddělené uložení, nesmějí být společně naloženy na nebo do jednoho kontejneru/vozidla [pokud to není schváleno příslušným orgánem podle 7.2.2.3 (IMDG Code)];
- 3 Všechny kusy byly zvnějšku prohlédnuty na poškození a byly naloženy pouze nepoškozené kusy;
- 4 Sudy byly uloženy nastojato, ledaže by jinak bylo schváleno příslušným orgánem, a všechny věci byly správně naloženy a, pokud je to nezbytné, přiměřeně fixovány zajišťujícím materiálem vyhovujícím druhu(ům) dopravy po přepravní trase; Faksimile podpisů jsou přípustné, pokud příslušné právní předpisy uznávají legální platnost faksimilí podpisů
- 5 Věci naložené jako volně ložené látky musí být rovnoměrně rozloženy v kontejneru/vozidle;

Formuláře přepravního dokladu požadovaného v oddílu 5.4.1 a osvědčení o naložení kontejneru mohou být spojeny do jednoho dokladu; pokud tomu tak není, musí být tyto doklady připojeny jeden k druhému. Jestliže jsou tyto formuláře spojeny do jednoho dokladu, vložení poznámky, že naložení kontejneru bylo provedeno podle příslušných modálních předpisů s uvedením osoby odpovědné za osvědčení o naložení kontejneru, musí být dostatečné.

POZNÁMKA: Osvědčení o naložení kontejneru se nepožaduje pro přemístitelné cisterny, cisternové kontejnery a MEGC.

5.4.3 Písemné pokyny

5.4.3.1 Jako pomoc během nehodové nouzové situace, k níž může dojít nebo která může vzniknout během přepravy, musí být písemné pokyny ve formě stanovené v 5.4.3.4 při přepravě v kabině řidiče vozidla a musí být snadno přístupné:

5.4.3.2 Tyto pokyny musí poskytnout dopravce osádce vozidla před započítím jízdy v jazyce (jazycích), ve kterém (kterých) je každý člen osádky schopen je přečíst a porozumět jim. Dopravce musí zajistit, aby každý dotčený člen osádky vozidla pokynům porozuměl a byl schopen podle nich správně postupovat.

5.4.3.3 Před započítím jízdy se musí členové osádky vozidla sami informovat o naložených nebezpečných věcech a nahlédnout do písemných pokynů ke zjištění podrobností k činnostem, které je nutno provést v případě nehody nebo nouzové situace.

5.4.3.4 Písemné pokyny musí odpovídat následujícímu čtyřstránkovému vzoru, jak pokud jde o jejich formu, tak i obsah.

6 Pro zásilky obsahující věci třídy 1, kromě podtřídy 1.4 je kontejner/vozidlo konstrukčně provozuschopné v souladu s 7.4.6 (IMDG Code);

7 Kontejner/vozidlo a kusy byly správně popsány, označeny bezpečnostními značkami a popřípadě velkými bezpečnostními značkami;

8 Pokud je použit pro chladič účely tuhý oxid uhličitý (CO₂ - suchý led), kontejner/vozidlo je zvnějšku označeno nebo opatřeno bezpečnostní značkou na viditelném místě, takovém jako na zadních dveřích slovy: NEBEZPEČNÝ PLYN CO₂ (SUCHÝ LED) UVNITŘ. VĚTRAT DOKONALE PŘED VSTUPEM; a

9 Přepravní doklad pro nebezpečné věci, požadovaný v 5.4.1 (IMDG Code), byl obdržen pro každou zásilku nebezpečných věcí naložených v kontejneru/vozidle.

POZNÁMKA: Osvědčení o naložení kontejneru/vozidla se nepožaduje pro cisterny.

5.4.2.2 Údaje požadované v přepravním dokladu pro nebezpečné věci a v osvědčení o naložení kontejneru/vozidla mohou být spojeny do jednoho dokladu; pokud tomu tak není, musí být tyto doklady připojeny jeden k druhému. Jestliže tyto údaje jsou spojeny do jednoho dokladu, doklad musí obsahovat podepsané prohlášení takové jako „Prohlašuje se, že naložení věci do kontejneru/vozidla bylo provedeno podle příslušných ustanovení“. V dokladu musí být uvedeno datum a identifikace osoby, která prohlášení podepsala“.










5.4.2.3 Je-li osvědčení o naložení kontejneru/vozidla předáváno dopravci pomocí techniky přenosu dat v systému EDP nebo EDI, smí (smějí) být podpis(y) nahrazen(y) jménem (jmény) (velkými písmeny) osob(y) oprávněné (oprávněných) k podpisu.





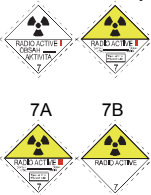



5.4.2.4 Je-li osvědčení o naložení kontejneru/vozidla předáváno dopravci pomocí techniky přenosu dat v systému EDP nebo EDI a následně jsou nebezpečné věci předány dopravci, který požaduje přepravní doklad k nebezpečným věcem v papírové formě, musí tento dopravce zajistit, aby papírový doklad obsahoval zápis „Originál obdržen elektronicky“ a jméno podpisu bylo uvedeno velkými písmeny.

PÍSEMNÉ POKYNY PODLE ADRČinnosti v případě nehody nebo nouzové situace

V případě nehody nebo nouzové situace, k níž může dojít nebo která může vzniknout během přepravy, musí členové osádky vozidla učinit následující opatření, kde je to bezpečné a proveditelné:



- Použít brzdový systém, zastavit chod motoru a odpojit akumulátor použitím odpojovače akumulátoru, pokud je jím vozidlo vybaveno;
- Vyloučit zápalné zdroje, zejména nekouřit a nezapínat žádné elektrické zařízení;
- Informovat příslušné zásahové jednotky a poskytnout jim co možno nejvíce informací o události nebo nehodě a o dotčených látkách;
- Obléci si fluoreskující výstražnou vestu a umístit stojací výstražné prostředky, jak je to vhodné;
- Uchovávat průvodní doklady snadno přístupné pro zásahové jednotky při jejich příjezdu;
- Nevstupovat do vyteklých nebo vysypaných látek, ani se jich nedotýkat, a vyhnout se vdechnutí výparů, kouře, prachu a par zdržováním se na návětrné straně;
- Kde je to vhodné a bezpečné, použít hasicí přístroje k uhašení malých/začínajících požárů pneumatik, brzd a motorových prostorů;
- Požáry v ložných prostorech nesmějí členové osádky vozidla hasit;
- Kde je to vhodné a bezpečné, použít výbavu vozidla k zamezení úniků do vodního prostředí nebo do kanalizačního systému a k sebrání vyteklých nebo vysypaných látek;
- Vzdálit se z blízkosti místa nehody nebo nouzové situace, upozornit jiné osoby, aby se vzdálily, a řídit se pokyny zásahových jednotek;
- Odložit všechno kontaminované oblečení a použitou kontaminovanou ochrannou výbavu a bezpečně je zlikvidovat.

Dodatečná opatření pro členy osádky vozidla o nebezpečných vlastnostech nebezpečných věcí podle tříd a o činnostech za obvyklých okolností		
Bezpečnostní značky a velké bezpečnostní značky	Charakteristiky nebezpečí	Dodatečná opatření
(1)	(2)	(3)
<p>Výbušné látky a předměty</p>  <p>1 1.5 1.6</p>	<p>Mohou mít řadu vlastností a účinků, jako jsou hromadný výbuch; rozlet úlomků; intenzivní oheň/tepelné záření; vytváření jasného světla, hlasitého hluku nebo kouře. Citlivé na otřesy a/nebo nárazy a/nebo teplo.</p>	<p>Chránit se, ale držet se co nejdále od oken.</p>
<p>Výbušné látky a předměty</p>  <p>1.4</p>	<p>Malé nebezpečí výbuchu a ohně.</p>	<p>Chránit se.</p>
<p>Hořlavé plyny</p>  <p>2.1</p>	<p>Nebezpečí ohně. Nebezpečí výbuchu. Mohou být pod tlakem. Nebezpečí udušení. Mohou způsobit popáleniny a/nebo omrzliny. Obsah může při zahřátí vybuchnout.</p>	<p>Chránit se. Vyhýbat se nízkopoloženým místům.</p>
<p>Nehořlavé, netoxické plyny</p>  <p>2.2</p>	<p>Nebezpečí udušení. Mohou být pod tlakem. Mohou způsobit omrzliny. Obsah může při zahřátí vybuchnout.</p>	<p>Chránit se. Vyhýbat se nízkopoloženým místům.</p>
<p>Toxické plyny</p>  <p>2.3</p>	<p>Nebezpečí otravy. Mohou být pod tlakem. Mohou způsobit popáleniny a/nebo omrzliny. Obsah může při zahřátí vybuchnout.</p>	<p>Použít nouzovou únikovou masku. Chránit se. Vyhýbat se nízkopoloženým místům.</p>
<p>Hořlavé kapaliny</p>  <p>3</p>	<p>Nebezpečí ohně. Nebezpečí výbuchu. Obsah může při zahřátí vybuchnout.</p>	<p>Chránit se. Vyhýbat se nízkopoloženým místům.</p>
<p>Hořlavé tuhé látky, samovolně se rozkládající látky a znečistitelné tuhé výbušné látky</p>  <p>4.1</p>	<p>Nebezpečí ohně. Hořlavé nebo zápalné, mohou být zapáleny teplem, jiskrami nebo plameny. Mohou obsahovat samovolně se rozkládající látky, které jsou náchylné k exotermickému rozkladu v případě přívodu tepla, styku s jinými látkami (jako jsou kyseliny, sloučeniny těžkých kovů nebo aminy), tření nebo otřesu. Toto může vést k vyvíjení škodlivých a hořlavých plynů nebo par nebo samovznícení. Obsah může při zahřátí vybuchnout. Nebezpečí výbuchu znečistitelných výbušných látek po ztrátě flegmatizátoru.</p>	
<p>Samozápalné látky</p>  <p>4.2</p>	<p>Nebezpečí ohně samovznícením, jsou-li kusy poškozeny, nebo jejich obsah vyteče nebo se vysype. Mohou prudce reagovat s vodou.</p>	
<p>Látky, které ve styku s vodou vyvíjejí hořlavé plyny</p>  <p>4.3</p>	<p>Nebezpečí ohně a výbuchu ve styku s vodou.</p>	<p>Uniklé látky musí být udržovány v suchém stavu zakrytím.</p>

Bezpečnostní značky a velké bezpečnostní značky	Charakteristiky nebezpečí	Dodatečná opatření
(1)	(2)	(3)
Látky podporující hoření  5.1	Nebezpečí prudké reakce, vznícení a výbuchu ve styku se zápalnými nebo hořlavými látkami	Vyvarovat se smíchání s hořlavými nebo zápalnými látkami (např. pilinami).
Organické peroxidy  5.2	Nebezpečí exotermického rozkladu při zvýšených teplotách, styku s jinými látkami (jako jsou kyseliny, sloučeniny těžkých kovů nebo aminy), tření nebo otřesu. Toto může vést k vyvíjení škodlivých a hořlavých plynů nebo par nebo samovznícení.	Vyvarovat se smíchání s hořlavými nebo zápalnými látkami (např. pilinami).
Toxické látky  6.1	Nebezpečí otravy vdechnutím, dotykem s pokožkou nebo požitím. Nebezpečí pro vodní prostředí nebo kanalizační systém.	Použít nouzovou únikovou masku.
Infekční látky  6.2	Nebezpečí infekce. Mohou způsobit vážnou nemoc u lidí nebo zvířat. Nebezpečí pro vodní prostředí a kanalizační systém.	
Radioaktivní látky  7A 7B 7C 7D	Nebezpečí absorpce a vnějšího ozáření.	Omezit dobu expozice.
Štěpné látky  7E	Nebezpečí jaderné řetězové reakce.	
Žíravé látky  8	Nebezpečí popálenin poleptáním. Mohou prudce reagovat spolu vzájemně, s vodou a s jinými látkami. Rozlité nebo rozsypaná látka může vyvíjet žíravé páry. Nebezpečí pro vodní prostředí nebo kanalizační systém.	
Jiné nebezpečné látky a předměty  9	Nebezpečí popálenin. Nebezpečí ohně. Nebezpečí výbuchu. Nebezpečí pro vodní prostředí nebo kanalizační systém.	

POZNÁMKA 1: Pro nebezpečné věci s více nebezpečnými vlastnostmi a pro smíšené náklady se musí dodržet všechna odpovídající opatření.

POZNÁMKA 2: Dodatečná opatření uvedená výše smějí být přizpůsobena tak, aby odrážela třídy nebezpečných věcí, které se mají přepravovat a jejich dopravní prostředky.

Dodatečné poučení pro členy osádky vozidla o nebezpečných vlastnostech nebezpečných věcí, naznačených značkami, a o činnostech za obvyklých okolností		
Značka (1)	Charakteristiky nebezpečí (2)	Dodatečná opatření (3)
Látky ohrožující životní prostředí 	Nebezpečí pro vodní prostředí nebo kanalizační systém.	
Zahřáté látky 	Nebezpečí popálenin horkem.	Vyvarovat se kontaktu s horkými částmi dopravní jednotky a s rozlitou nebo rozsypanou látkou.

Výbava pro osobní a obecnou ochranu k provádění všeobecných činností a specifických nouzových činností s ohledem na nebezpečí, která musí být při přepravě ve vozidle podle oddílu 8.1.5 ADR

Následující výbava musí být při přepravě v dopravní jednotce:

- pro každé vozidlo zakládací klín, jehož velikost odpovídá maximální hmotnosti vozidla a průměru kola;
- dva stojací výstražné prostředky;
- kapalina pro výplach očí^a; a

pro každého člena osádky vozidla

- fluoreskující výstražná vesta (např. jak je popsána v normě EN 471);
- přenosná svítidla;
- pár ochranných rukavic; a
- ochrana očí (např. ochranné brýle).

Dodatečná výbava vyžadovaná pro určité třídy:

- nouzová úniková maska ^b pro každého člena osádky vozidla musí být při přepravě ve vozidle pro čísla bezpečnostních značek 2.3 nebo 6.1;
- lopata^c;
- ucpávka kanalizační vpusti^c;
- sběrná nádoba^c.

^a Nevyžaduje se pro čísla bezpečnostních značek 1, 1.4, 1.5, 1.6, 2.1, 2.2 a 2.3.

^b Například nouzová úniková maska s kombinovaným plynovým/prachovým filtrem typu A1B1E1K1-P1 nebo A2B2E2K2-P2, která je podobná masce popsané v normě EN 141.

^c Vyžaduje se jen pro tuhé látky a kapaliny s čísly bezpečnostních značek 3, 4.1, 4.3, 8 nebo 9.

5.4.4 Uchovávání informací o přepravě nebezpečných věcí

5.4.4.1 Odesílatel a dopravce musí uchovávat kopii přepravního dokladu k nebezpečným věcem a dodatečné informace a dokumentaci, jak je uvedena v ADR, po dobu nejméně tří měsíců.

5.4.4.2 Jsou-li dokumenty uchovávány v elektronické formě nebo v počítačovém systému, odesílatel a dopravce musí být schopni je reprodukovat v tištěné formě.

5.4.5. Příklad formuláře pro multimodální přepravu nebezpečných věcí

Příklad vzorového formuláře, který může být použit zároveň jako deklarace nebezpečných věcí a zároveň jako osvědčení o naložení kontejneru pro multimodální přepravu nebezpečných věcí.

TISKOPIS PRO MULTIMODÁLNÍ PŘEPRAVU NEBEZPEČNÝCH VĚCÍ (pravý okraj černě šrafovaný)

1. Odesílatel		2. Číslo přepravního dokladu		
		3. Strana 1 z stran	4. Referenční číslo odesílatele	
			5. Referenční číslo zasílatele	
6. Příjemce		7. Dopravce (vyplněno dopravcem)		
		PROHLÁŠENÍ ODESÍLATELE Tímto prohlašuji, že obsah zásilky je úplně a přesně popsán níže uvedeným oficiálním pojmenováním a že je správně klasifikován, zabalen, označen, polepen a opatřen nápisy a bezpečnostními značkami (velkými bezpečnostními značkami) a jsou v každém ohledu splněny všechny příslušné mezinárodní a národní předpisy a věci se nacházejí ve stavu způsobilém pro přepravu		
8. Tato zásilka odpovídá předepsaným mezním hodnotám pro (nehodící se škrtnout)		9. Dodatečná informace pro manipulaci		
OSOBNÍ A NÁKLADNÍ LETADLO		JEN NÁKLADNÍ LETADLO		
10. Loď / číslo letu a datum	11. Přístav / Místo nakládky			
12. Přístav / místo vykládky	13. Místo určení			
14. Označení pro přepravu * Počet a druh kusů, popis věci Hmotnost brutto (kg) Hmotnost netto Objemový prostor (m ³)				
* PRO NEBEZPEČNÉ VĚCI: Uvádá se: UN číslo, oficiální pojmenování pro přepravu, třída nebezpečnosti, obalová skupina (pokud je určena) a všechny ostatní informace, které jsou předepsány platnými národními nebo mezinárodními předpisy.				
15. Identifikační číslo kontejneru/registrační číslo vozidla		16. Číslo(o) plomb(y)	17. Rozměry a typ kontejneru/vozidla	18. Tara (kg)
				19. Celková brutto hmotnost (včetně tary) (kg)
OBALOVY CERTIFIKÁT KONTEJNERU/VOZIDLA Tímto prohlašuji, že výše popsané věci do výše uvedeného kontejneru/do výše uvedeného vozidla byly naloženy podle platných předpisů **. MUSÍ BYT VYPLNĚN A PODEPSÁN PRO KAŽDÝ NÁKLAD V KONTEJNERU (VOZIDLE) OSOBOU ODPOVĚDNOU ZA NAKLÁDKU		21. POTVRZENÍ PŘÍJMU Výše uvedený počet kusů /kontejnerů/ přívěsů je přijat ve zřejmě dobrém stavu, s výjimkou:		
20. Jméno firmy	Jméno dopravce		22. Jméno firmy (ODESÍLATELE, KTERÝ TENTO DOKUMENT PŘIPRAVUJE)	
Jméno a funkce deklaranta	Registrační značka vozidla		Jméno a funkce deklaranta	
Místo a datum	Podpis a datum		Místo a datum	
Podpis deklaranta	PODPIS ŘIDIČE VOZIDLA		Podpis deklaranta	

** Viz oddíl 5.4.2

TISKOPIS PRO MULTIMODÁLNÍ PŘEPRAVU NEBEZPEČNÝCH VĚCÍ
(pravý okraj černě šrafovaný)

Pokračování

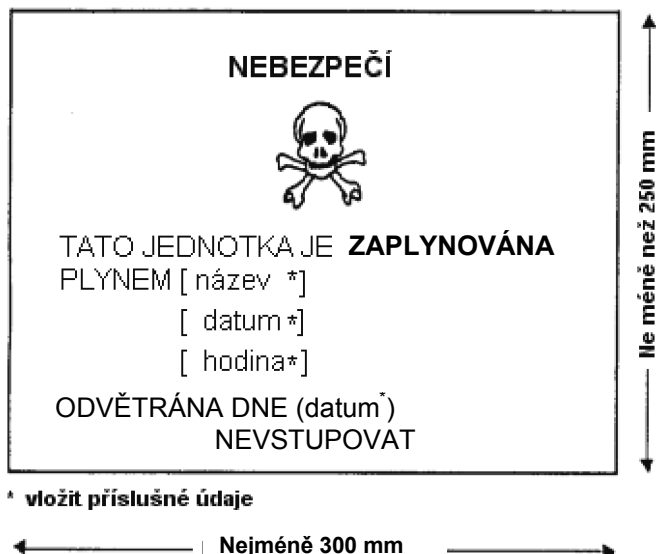
1. Odesílatel	2. Číslo přepravního dokladu	
	3. Strana 2 z stran	4. Referenční číslo odesílatele
		5. Referenční číslo zasílatele
14. Označení pro přepravu * Počet a druh kusů, popis věcí Hmotnost brutto (kg) Hmotnost netto Objemový prostor (m ³)		
PRO NEBEZPEČNÉ VĚCI: Udává se: UN číslo, oficiální pojmenování pro přepravu, třída nebezpečnosti, obalová skupina (pokud je určena) a všechny ostatní informace, které jsou předepsány platnými národními nebo mezinárodními předpisy.		

KAPITOLA 5.5

ZVLÁŠTNÍ USTANOVENÍ

- 5.5.1** (Vypuštěno)
- 5.5.2** **Zvláštní ustanovení pro zaplňované nákladní dopravní (přepravní) jednotky (UN 3359)**
- 5.5.2.1** **Všeobecně**
- 5.5.2.1.1** Zaplňované nákladní dopravní (přepravní) jednotky (UN 3359), které neobsahují žádné jiné nebezpečné věci, nepodléhají žádným jiným ustanovením ADR, než jsou ustanovení tohoto oddílu.
- „POZNÁMKA: Pro účely této kapitoly se pod pojmem nákladní dopravní (přepravní) jednotka rozumí vozidlo, kontejner, cisternový kontejner, přemístitelná cisterna nebo MEGC.*
- 5.5.2.1.2** Jsou-li zaplňované nákladní dopravní (přepravní) jednotky naloženy nebezpečnými věcmi, navíc k zaplňovacímu prostředku, použijí se všechna ustanovení ADR týkající se těchto věcí (včetně označování velkými bezpečnostními značkami, značení a dokumentace) navíc k ustanovením tohoto oddílu.
- 5.5.2.1.3** Pro přepravu nákladu pod zaplňováním se musí použít pouze nákladní dopravní (přepravní) jednotky, které mohou být uzavřeny takovým způsobem, že je únik plynu omezen na minimum.
- 5.5.2.2** **Školení**
- Osoby zabývající se manipulací se zaplňovanými nákladními dopravními (přepravními) jednotkami musí být vyškoleny přiměřeně ke svým odpovědnostem.
- 5.5.2.3** **Označování**
- 5.5.2.3.1** Zaplňovaná nákladní dopravní (přepravní) jednotka musí být označena výstražnou značkou, uvedenou v 5.5.2.3.2, na každém přístupovém místě tam, kde bude snadno viditelná osobami otevírajícími nákladní dopravní (přepravní) jednotku nebo do ní vstupujícími. Tato značka musí zůstat na nákladní dopravní (přepravní) jednotce, dokud nebyla provedena následující opatření:
- (a) zaplňovaná nákladní dopravní (přepravní) jednotka byla odvětrána, aby se odstranily škodlivé koncentrace zaplňovacího plynu; a
 - (b) zaplňované věci nebo materiály byly vyloženy.
- 5.5.2.3.2** Výstražná značka pro zaplňovanou jednotku musí být pravoúhlá a musí být nejméně 300 mm široká a nejméně 250 mm vysoká. Nápis musí být černé barvy na bílém podkladě s písmeny nejméně 25 mm vysokými. Tato značka je znázorněna na dále uvedeném obrázku.

Výstražná značka pro zaplynovanou jednotku



5.5.2.3.3 Jestliže byla zaplynovaná nákladní dopravní (přepravní) jednotka úplně vyvětrána buď otevřením dveří jednotky, nebo mechanickou ventilací po zaplynování, musí být datum odvětrání vyznačeno na výstražné značce pro zaplynovanou jednotku.

5.5.2.3.4 Jestliže byla zaplynovaná nákladní dopravní (přepravní) jednotka vyvětrána a vyložena, musí být výstražná značka pro zaplynovanou jednotku odstraněna.

5.5.2.3.5 Na zaplynovanou nákladní dopravní (přepravní) jednotku se nemusí umístit velké bezpečnostní značky podle vzoru č. 9 (viz 5.2.2.2.2), pokud nejsou vyžadovány pro jiné látky nebo předměty třídy 9, které jsou v této jednotce naloženy.

5.5.2.4 *Dokumentace*

5.5.2.4.1 Doklady spojené s přepravou nákladních dopravních (přepravních) jednotek, které byly zaplynovány a nebyly úplně vyvětrány před přepravou, musí obsahovat následující informace:

- „UN 3359, zaplynovaná nákladní dopravní (přepravní) jednotka, 9“, nebo „UN 3359, zaplynovaná nákladní dopravní (přepravní) jednotka, třída 9“;

- datum a čas zaplynování; a

- druh a množství použitého zaplynovacího prostředku.

Tyto údaje musí být napsány v oficiálním jazyce země odeslání a, pokud tímto jazykem není angličtina, francouzština nebo němčina, též v angličtině, francouzštině nebo němčině, pokud případné dohody uzavřené mezi zeměmi, jichž se přeprava týká, nestanoví jinak.

5.5.2.4.2 Doklady směřj být v jakékoli formě za podmínky, že obsahují informace vyžadované v 5.5.2.4.1. Tyto informace musí být snadno identifikovatelné, čitelné a trvalé.

5.5.2.4.3 Musí být vypracovány pokyny pro likvidaci jakéhokoli zbytkového zaplynovacího prostředku včetně zaplynovacích zařízení (pokud jsou používána).

5.5.2.4.4 Doklad se nevyžaduje, jestliže byla zaplynovaná nákladní dopravní (přepravní) jednotka úplně vyvětrána a datum odvětrání bylo vyznačeno na výstražné značce (viz 5.5.2.3.3 a 5.5.2.3.4).

5.5.3 Zvláštní ustanovení platná pro kusy a vozidla a kontejnery obsahující látky představující riziko udušení, jsou-li používány pro účely chlazení nebo kondicionování (jako jsou suchý led (UN 1845), nebo dusík, hluboce zchlazený, kapalný (UN 1977) nebo argon, hluboce zchlazený, kapalný (UN 1951))

5.5.3.1 Rozsah platnosti

5.5.3.1.1 Tento oddíl se nevztahuje na látky, které mohou být používány pro účely chlazení nebo kondicionování, jsou-li přepravovány jako zásilka nebezpečných věcí. Jsou-li přepravovány jako zásilka, musí být tyto látky přepravovány pod příslušnou položkou tabulky A kapitoly 3.2 podle s ní spojených podmínek přepravy.

5.5.3.1.2 Tento oddíl se nevztahuje na plyny v chladicích okruzích.

5.5.3.1.3 Nebezpečné věci používané pro chlazení nebo kondicionování cisteren nebo MEGC během přepravy nepodléhají ustanovením tohoto oddílu.

5.5.3.2 Všeobecně

5.5.3.2.1 Vozidla a kontejnery obsahující látky používané pro účely chlazení nebo kondicionování (jiné než zaplynování) během přepravy nepodléhají žádným jiným ustanovením ADR, než jsou ustanovení tohoto oddílu.

5.5.3.2.2 Jsou-li nebezpečné věci naloženy v chlazených nebo kondicionovaných vozidlech a kontejnerech, použijí se všechna ostatní ustanovení ADR vztahující se na tyto nebezpečné věci, navíc k ustanovením tohoto oddílu.

5.5.3.2.3 *(Vyhrazeno)*

5.5.3.2.4 Osoby zabývající se manipulací nebo přepravou chlazených nebo kondicionovaných vozidel a kontejnerů musí být vyškoleny přiměřeně ke svým odpovědnostem.

5.5.3.3 Kusy obsahující chladivo nebo kondicionér

5.5.3.3.1 Balené nebezpečné věci vyžadující chlazení nebo kondicionování, přiřazené k pokynům pro balení P203, P620, P650, P800, P901 nebo P904 pododdílu 4.1.4.1, musí splňovat příslušné požadavky tohoto pokynu pro balení.

5.5.3.3.2 Pro balené nebezpečné věci vyžadující chlazení nebo kondicionování, přiřazené k jiným pokynům pro balení, musí být kusy schopny snášet velmi nízké teploty a nesmějí být poškozovány ani významně zeslabovány chladivem nebo kondicionérem. Kusy musí být konstruovány a vyrobeny tak, aby dovolovaly uvolnění plynu k zamezení nárůstu tlaku, který by mohl protrhnout obal. Nebezpečné věci musí být zabaleny takovým způsobem, aby se zamezilo pohybu po rozptýlení chladiva nebo kondicionéru.

5.5.3.3.3 Kusy obsahující chladivo nebo kondicionér musí být přepravovány v době větraných vozidlech a kontejnerech.

5.5.3.4 Označování kusů obsahujících chladivo nebo kondicionér

5.5.3.4.1 Kusy obsahující nebezpečné věci používané pro chlazení nebo kondicionování musí být označeny pojmenováním těchto věcí uvedeným ve sloupci (2) tabulky A kapitoly 3.2, následovaným slovy „JAKO CHLADIVO“ nebo „JAKO KONDICIONÉR“, jak je to náležité, v úředním jazyce země původu a též, pokud tímto jazykem není angličtina, francouzština nebo němčina, v angličtině, francouzštině nebo němčině, pokud dohody uzavřené mezi zeměmi zainteresovanými na přepravě nestanoví jinak.

5.5.3.4.2 Označení musí být trvanlivé, čitelné a umístěné na takovém místě a takové velikosti v poměru ke kusu, aby bylo snadno viditelné.

5.5.3.5 Vozidla a kontejnery obsahující nebalený suchý led

5.5.3.5.1 Je-li suchý led použit v nebalené formě, nesmí přijít do přímého styku s kovovou konstrukcí vozidla nebo kontejneru, aby se zamezilo zkrhnutí kovu. Musí být učiněna opatření k zajištění přiměřené izolace mezi suchým ledem a vozidlem nebo kontejnerem jejich oddělením mezerou o šířce nejméně 30 mm (např. použitím vhodných materiálů s nízkou tepelnou vodivostí, jako jsou dřevěná prkna, palety atd.).

5.5.3.5.2 Pokud je suchý uložen okolo kusů, musí být učiněna opatření k zajištění toho, že kusy zůstanou během přepravy v původní poloze poté, co se suchý led rozptýlí.

5.5.3.6 Označování vozidel a kontejnerů

5.5.3.6.1 Vozidla a kontejnery obsahující nebezpečné věci používané pro chlazení nebo kondicionování musí být označeny výstražnou značkou, uvedenou v 5.5.3.6.2, umístěnou na každém přístupovém místě tam, kde bude snadno viditelná osobami otevírajícími vozidlo nebo kontejner nebo do nich vstupujícími. Tato značka musí zůstat na vozidle nebo kontejneru, dokud nebyla provedena následující opatření:

(a) Vozidlo nebo kontejner byl(o) odvětrán(o), aby se odstranily škodlivé koncentrace chladiva nebo kondicionéru; a

(b) Chlazené nebo kondicionované věci byly vyloženy.

5.5.3.6.2 Výstražná značka musí být pravoúhlá a musí být nejméně 150 mm široká a nejméně 250 mm vysoká. Výstražná značka musí zahrnovat:

(a) Slovo „POZOR“ v červené nebo bílé barvě s písmeny o výšce nejméně 25 mm v úředním jazyce země původu a též, pokud tímto jazykem není angličtina, francouzština nebo němčina, v angličtině, francouzštině nebo němčině, pokud dohody uzavřené mezi zeměmi zainteresovanými na přepravě nestanoví jinak; a

(b) Pojmenování uvedené ve sloupci (2) tabulky A kapitoly 3.2, následované slovy „JAKO CHLADIVO“ nebo „JAKO KONDICIONÉR“, jak je to náležité, uvedené pod obrázkem černými písmeny na bílém podkladu, s písmeny o výšce nejméně 25 mm v úředním jazyce země původu a též, pokud tímto jazykem není angličtina, francouzština nebo němčina, v angličtině, francouzštině nebo němčině, pokud dohody uzavřené mezi zeměmi zainteresovanými na přepravě nestanoví jinak.

Například: OXID UHLIČITÝ, TUHÝ, JAKO CHLADIVO.

Vyobrazení této značky je uvedeno dále.



* Vložit pojmenování uvedené ve sloupci (2) tabulky A kapitoly 3.2, následované slovy „JAKO CHLADIVO“ nebo „JAKO KONDICIONÉR“, jak je to náležité.

5.5.3.7 **Dokumentace**

5.5.3.7.1 Doklady (jako konosament, nákladový list nebo nákladní list CMR/CIM) spojené s přepravou vozidel nebo kontejnerů, které byly chlazeny nebo kondicionovány a nebyly úplně vyvětrány před přepravou, musí obsahovat následující informace:

a) „UN číslo s předřazenými písmeny „UN“; a

b) pojmenování uvedené ve sloupci (2) tabulky A kapitoly 3.2, následované slovy „JAKO CHLADIVO“ nebo „JAKO KONDICIONÉR“, jak je to vhodné, v úředním jazyce země původu a též, pokud tímto jazykem není angličtina, francouzština nebo němčina, v angličtině, francouzštině nebo němčině, pokud dohody uzavřené mezi zeměmi zainteresovanými na přepravě nestanoví jinak.

Například: UN 1845 OXID UHLIČITÝ, TUHÝ, JAKO CHLADIVO.

5.5.3.7.2 Přepravní doklad smí být v jakékoli formě za podmínky, že obsahuje informace vyžadované v 5.5.3.7.1. Tyto informace musí být snadno identifikovatelné, čitelné a trvalé.

ČÁST 6

**POŽADAVKY NA KONSTRUKCI A ZKOUŠENÍ OBALŮ,
VELKÝCH NÁDOB PRO VOLNĚ LOŽENÉ LÁTKY (IBC),
VELKÝCH OBALŮ A CISTEREN**

KAPITOLA 6.1

POŽADAVKY NA KONSTRUKCI A ZKOUŠENÍ OBALŮ

6.1.1 Všeobecně

6.1.1.1 *Požadavky této kapitoly se nevztahují na:*

- (a) Obaly obsahující radioaktivní materiál třídy 7, pokud není stanoveno jinak (viz 4.1.9.);
- (b) Obaly obsahující infekční látky třídy 6.2, pokud není stanoveno jinak (viz kapitola 6.3, Poznámka a pokyn pro balení P621 uvedené v 4.1.4.1);
- (c) Nádoby obsahující plyny třídy 2;
- (d) Obaly, u nichž hmotnost náplně (netto) přesahuje 400kg;
- (e) Obaly s vnitřním objemem přesahujícím 450 litrů.

6.1.1.2 Požadavky na obaly uvedené v 6.1.4 jsou založeny na obalech běžně používaných. S ohledem na vědecký a technický pokrok, nejsou námitky proti používání obalů s odlišnou specifikací od uvedených v 6.1.4, pokud jsou stejně účinné, přijatelné pro příslušný orgán a schopné úspěšně vyhovět zkouškám popsaným v 6.1.1.3 a v 6.1.5. Jiné metody zkoušení než popsané v této kapitole jsou přípustné, pokud jsou rovnocenné a jsou uznány příslušným orgánem.

6.1.1.3 Každý obal určený pro kapaliny musí být podroben úspěšně zkoušce těsnosti a musí být schopen splnit přiměřenou úroveň zkoušek uvedenou v 6.1.5.4.3:

- (a) před prvním použitím pro přepravu;
- (b) po rekonstrukci nebo obnovení, před jeho opětovným použitím pro přepravu;

Pro tuto zkoušku nemusí být obaly vybaveny vlastními uzávěry.

Vnitřní nádoba kompozitních obalů může být zkoušena bez vnějšího obalu, pokud tím nejsou ovlivněny výsledky zkoušky.

Tato zkouška se nevyžaduje pro:

- vnitřní obaly skupinových obalů;
- vnitřní nádoby kompozitních obalů (sklo, porcelán nebo kamenina) označené znakem "RID/ADR" podle pododdílu 6.1.3.1 (a) (ii);
- obaly z jemného plechu označené znakem "RID/ADR" podle pododdílu 6.1.3.1 (a) (ii);

6.1.1.4 Obaly musí být vyrobeny, obnoveny a odzkoušeny podle programu zajištění kvality, přijatelný pro příslušný orgán, aby bylo zajištěno, že každý vyrobený obal splňuje požadavky této kapitoly.

POZNÁMKA: Norma ISO 16106:2006 "Obaly - Přepravní obaly pro nebezpečné věci - Obaly pro nebezpečné věci, velké nádoby pro volně ložené látky (IBC) a velké obaly - Návody pro aplikaci normy ISO 9001" - poskytuje přijatelný návod pro předepsané postupy.

6.1.1.5 Výrobci a následní distributoři obalů musí uživatelům poskytnout informace týkající se postupů, které je nutno dodržovat a popis typů a rozměrů uzávěrů (zahrnujíc v to i požadovaná těsnění) a jakékoliv další komponenty potřebné pro zabezpečení toho, aby obaly připravené k přepravě byly schopny projít jakýmkoliv aplikovatelnými zkouškami odolnosti uvedenými v této kapitole.

6.1.2 Kódování konstrukčních typů obalů

6.1.2.1

Kód sestává z:

- (a) arabské číslice označující druh obalu, např. sud, kanystr atd., následované;
- (b) jedním nebo několika velkými latinskými písmeny označujícími druh materiálu, např. ocel, dřevo atd., následované v případě nutnosti;
- (c) arabskou číslicí označující kategorii obalu v rámci konstrukčního typu obalu.

6.1.2.2

Pro kompozitní obaly se použijí dvě velká latinská písmena na druhém místě kódu. První písmeno označuje materiál vnitřní nádoby a druhé písmeno označuje materiál vnějšího obalu.

6.1.2.3

U skupinových obalů včetně obalů pro látky třídy 6.2 se musí použít pouze kódové číslo pro vnější obal.

6.1.2.4

Písmena "T", "V" nebo "W" mohou být uvedena za kódem obalu. Písmeno "T" označuje záchranný obal odpovídající požadavkům uvedeným v 6.1.5.1.11. Písmeno "V" označuje zvláštní obal odpovídající požadavkům uvedeným v 6.1.5.1.7. Písmeno "W" označuje, že obal, ačkoli je téhož typu uvedeného v kódu, je vyroben podle specifikací odlišných od specifikací uvedených v 6.1.4 a je považován za ekvivalentní požadavkům uvedeným v 6.1.1.2.

6.1.2.5

Následující číslice se musí použít pro druhy obalů:

1. Sud
2. (Vyhrazeno)
3. Kanystr
4. Bedna
5. Pytel
6. Kompozitní obal
7. (Vyhrazeno)
0. Obaly z jemného plechu

6.1.2.6

Následující velká písmena se použijí pro druhy materiálu:

- A. Ocel (všechny druhy a povrchové úpravy);
- B. Hliník
- C. Dřevo přírodní
- D. Překližka
- F. Rekonstituované dřevo (jako dřevovláknité či dřevotřískové materiály)
- G. Lepenka
- H. Plast
- L. Textilní tkanina
- M. Papír vícevrstvý
- N. Kov (jiný než ocel nebo hliník)
- P. Sklo, porcelán nebo kamenina

POZNÁMKA: *Plastové materiály zahrnují také jiné polymerní materiály, jako je guma.*

6.1.2.7

V následující tabulce jsou uvedeny kódy používané pro značení typu obalů v závislosti na druhu obalů, materiálu použitém pro jejich výrobu a jejich kategorii; současně se v ní odkazuje na pododdíly, kde jsou uvedeny příslušné požadavky:

Druh obalu	Materiál	Kategorie obalu	Kód	Pod-oddíl
1. Sudy	A Ocel	neodnímatelné víko	1A1	6.1.4.1
		odnímatelné víko	1A2	
	B. Hliník	neodnímatelné víko	1B1	6.1.4.2
		odnímatelné víko	1B2	
	D. Překližka		1D	6.1.4.5
	G. Lepenka		1G	6.1.4.7
	H. Plast	neodnímatelné víko	1H1	6.1.4.8
		odnímatelné víko	1H2	
	N. Kov, jiný než ocel nebo hliník	neodnímatelné víko	1N1	6.1.4.3
		odnímatelné víko	1N2	
2. (Vyhrazeno)				
3. Kanistry	A. Ocel	neodnímatelné víko	3A1	6.1.4.4
		odnímatelné víko	3A2	
	B. Hliník	neodnímatelné víko	3B1	6.1.4.4
		odnímatelné víko	3B2	
	H. Plast	neodnímatelné víko	3H1	6.1.4.8
		odnímatelné víko	3H2	
4. Bedny	A. Ocel		4A	6.1.4.14
	B. Hliník		4B	6.1.4.14
	C. Dřevo přírodní	Běžné	4C1	6.1.4.9
		s prachotěsnými stěnami	4C2	
	D. Překližka		4D	6.1.4.10
	F. Rekonstituované dřevo		4F	6.1.4.11
	G. Lepenka		4G	6.1.4.12
	H. Plast	pěnový (lehčený)	4H1	6.1.4.13
		tuhý plast	4H2	
		N. Kov, kromě oceli a hliníku		4N
5. Pytle	H. Plastová tkanina Tkanina	Bez vnitřní vložky nebo povlaku	5H1	6.1.4.16
		prachotěsné	5H2	
		vodovzdorné	5H3	
	H. Plastová folie		5H4	6.1.4.17
	L. Textilní tkanina	Bez vnitřní vložky nebo povlaku	5L1	6.1.4.15
		Prachotěsné	5L2	
		vodovzdorné	5L3	
	M. Papír	vícevrstvé	5M1	6.1.4.18
		vícevrstvé, vodovzdorné	5M2	

Druh obalu	Materiál	Kategorie obalu	Kód	Pod-oddíl
6. Kompozitní obaly	H. Plastová Nádoba	s vnějším ocelovým sudem	6HA1	6.1.4.19
		s vnějším ocel. košem neb bednou	6HA2	6.1.4.19
		s vnějším hliníkovým sudem	6HB1	6.1.4.19
		s vnějším hliníkovým košem nebo bednou	6HB2	6.1.4.19
		s vnější dřevěnou bednou	6HC	6.1.4.19
		s vnějším překližkovým sudem	6HD1	6.1.4.19
		s vnější překližkovou bednou	6HD2	6.1.4.19
		s vnějším lepenkovým sudem	6HG1	6.1.4.19
		s vnější lepenkovou bednou	6HG2	6.1.4.19
		s vnějším plastovým sudem	6HH1	6.1.4.19
	s vnější bednou z tuhého plastu	6HH2	6.1.4.19	
	P. Porcelánová, skleněná, nebo kameninová nádoba	s vnějším ocelovým sudem	6PA1	6.1.4.20
		s vnějším ocel. košem neb bednou	6PA2	6.1.4.20
		s vnějším hliníkovým sudem	6PB1	6.1.4.20
		s vnějším hliníkovým košem nebo bednou	6PB2	6.1.4.20
		s vnější dřevěnou bednou	6PC	6.1.4.20
		s vnějším překližkovým sudem	6PD1	6.1.4.20
		s vnějším proutěným košem	6PD2	6.1.4.20
		s vnějším lepenkovým sudem	6PG1	6.1.4.20
		s vnější lepenkovou bednou	6PG2	6.1.4.20
s vnějším obalem z pěnového plastu		6PH1	6.1.4.20	
s vnějším obalem z tuhého plastu	6PH2	6.1.4.20		
7. (Vyhrazeno)				
0. Obaly z jemného plechu	A. Ocel	neodnímatelné víko	0A1	6.1.4.22
		odnímatelné víko	0A2	

6.1.3 Značení

POZNÁMKA 1: Označení UN kódem uvádí, že obal, který je jím opatřen, odpovídá plně odzkoušenému konstrukčnímu typu a že splňuje ustanovení této kapitoly, která se vztahují na jeho výrobu, nikoli však na jeho používání. Proto značka nezbytně nepotvrzuje, že obal smí být použit pro jakoukoli látku. Obecně druh obalu (např. ocelový sud), jeho nejvyšší vnitřní objem a /nebo nejvyšší hmotnost a další zvláštní požadavky jsou stanoveny pro každou látku v tabulce A kapitoly 3.2.

POZNÁMKA 2: Značení UN kódem je určeno jako pomůcka pro výrobce, obnovitele, uživatele obalů, dopravce a příslušné orgány. Originální značení je prostředkem výrobce k identifikaci typu a ukazatelem splnění zkušebních předpisů.

POZNÁMKA 3: UN kód neuvádí vždy úplně podrobnosti o úrovni zkoušek atd., které se mohou zohlednit např. odkazem na zkušební protokol, certifikát, atest nebo na registr úspěšně odzkoušených obalů. Například obal mající značení X nebo Y může být použit pro látku, kterým byla přiřazena obalová skupina pro nižší stupeň nebezpečnosti s nejvyšší dovolenou hodnotou relativní hustoty¹ určenou s přihlédnutím ke koeficientu 1,5, popřípadě 2,25 (jak je to vhodné), uvedenému

¹ Relativní hustota (d) je považována za synonymum specifické hmotnosti a je v tomto textu používána.

v požadavcích pro zkoušky obalů v 6.1.5. Například obal odzkoušený pro látku obalové skupiny I s relativní hustotou 1,2 může být použit pro látku obalové skupiny II s relativní hustotou 1,8 nebo pro látku obalové skupiny III s relativní hustotou 2,7, samozřejmě za podmínky, že mohou být ještě splněna všechna závazná kritéria kladená na obaly pro látky s vyšší relativní hustotou.

6.1.3.1

Každý obal určený pro používání podle ADR musí být označen UN kódem, který je trvanlivý, dobře čitelný a v rozměru přiměřeném velikosti obalu, umístěn tak aby byl dobře viditelný. Kusy o celkové (brutto) hmotnosti větší než 30 kg musí být opatřeny UN kódem nebo jeho duplikátem na vrchní nebo boční straně obalu. Písmena, číslice a znaky musejí být nejméně 12 mm vysoké, kromě obalů s obsahem 30 litrů nebo 30 kg nebo méně, kdy musí být nejméně 6 mm vysoké, a kromě obalů s obsahem 5 litrů nebo 5 kg nebo méně, kdy musí být přiměřeného rozměru.

UN kód musí uvádět:

- (a) (i) Znak Spojených národů pro obaly



Tento znak nesmí být použit pro jiné účely než pro osvědčení, že obal, přemístitelná cisterna nebo MEGC splňuje příslušné požadavky kapitoly 6.1, 6.2, 6.3, 6.5, 6.6 nebo 6.7². Tento znak nesmí být použit pro obaly, které odpovídají jen zjednodušeným podmínkám v 6.1.1.3, 6.1.5.3.1 (e), 6.1.5.3.5 (c), 6.1.5.4, 6.1.5.5.1 a 6.1.5.6 (viz rovněž (ii) níže). Pro kovové obaly značené plastickým (reliéfním) způsobem, mohou být namísto znaku použita velká písmena "UN"; nebo

- (ii) Znak "RID/ADR" pro kompozitní obaly (sklo, porcelán nebo kamenina) a obaly z jemného plechu splňující zjednodušené podmínky (viz 6.1.1.3, 6.1.5.3.1 (e), 6.1.5.3.5 (c), 6.1.5.4, 6.1.5.5.1 a 6.1.5.6)

POZNÁMKA: Obaly označené tímto znakem jsou schváleny pro železniční přepravy, silniční přepravy a přepravy po vnitrozemských vodních cestách, které jsou předmětem předpisů RID, ADR a ADN. Nejsou nutně přijímány pro přepravu jinými druhy dopravy, nebo pro přepravy silniční, železniční nebo vnitrozemskou vodní dopravou, které podléhají jiným předpisům.

- (b) Kód konstrukčního typu obalu podle 6.1.2;

- (c) Dvoudílný kód

- (i) Písmeno označující obalovou(é) skupinu(y), pro kterou(é) byl konstrukční typ s úspěchem odzkoušen;

X pro obalové skupiny I, II a III;
Y pro obalové skupiny II a III;
Z pouze pro obalovou skupinu III;

- (ii) U obalů určených na kapaliny se uvede relativní hustota zaokrouhlená na jedno desetinné místo, pro kterou byl konstrukční typ odzkoušen; od tohoto údaje může být upuštěno, pokud relativní hustota nepřesahuje 1,2. Pro obaly na tuhé látky nebo vnitřní obaly nejvyšší celková (brutto) hmotnost v kilogramech.

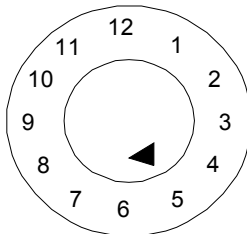
U obalů z jemného plechu označených znakem "RID/ADR" podle pododdílu 6.1.3.1 a), (ii), určených pro kapaliny mající viskozitu při 23°C převyšující 200 mm²/s, se uvádí nejvyšší celková (brutto) hmotnost v kg;

- (d) U obalů pro tuhé látky nebo vnitřních obalů se uvádí písmeno „S“. U obalů na kapaliny (jiných než skupinové obaly) se uvádí hodnota hydraulického zkušebního tlaku v kPa, kterému obal odolal, zaokrouhlená dolů na nejbližších 10 kPa.

² Tento symbol se také používá k potvrzení, že flexibilní objemové vaky schválené pro ostatní druhy dopravy jsou v souladu s požadavky uvedenými v kapitole 6.8 UN Modelového Regulative.

U obalů z jemného plechu označených písmeny "RID/ADR" podle pododdílu 6.1.3.1 (a), (ii), určených pro kapaliny mající viskozitu při 23 °C převyšující 200 mm²/s, se uvede písmeno "S".

- (e) Poslední dvě číslice roku, během něhož byl obal vyroben. Obaly typu 1H a 3H musí být též vhodně označeny měsícem jejich výroby; tato část značení může být umístěna také na jiném místě než ostatní značení. Vhodný způsob je:



- (f) Stát schvalující udělení UN kódu, uvedený rozlišovací značkou pro motorová vozidla v mezinárodním provozu³;
- (g) Jméno výrobce nebo jiná identifikace obalu stanovená příslušným orgánem.

6.1.3.2 K doplnění trvalého označení UN kódem předepsaného v 6.1.3.1, musí být každý nový kovový sud o vnitřním objemu větším než 100 litrů, na dně opatřen značením popsáním v 6.1.3.1 a) až e) s trvanlivým údajem alespoň jmenovitě tloušťky použitého plechu v mm, (na 0,1mm) provedeným např. vyražením. Jestliže jmenovitě tloušťka alespoň jedné ze dvou základů sudu je tenčí než jmenovitě tloušťka jeho pláště, jmenovitě tloušťka vrchní části, pláště a spodní základny musí být vyznačena na dnu v trvalé formě (např. vyražením), např. "1,0 - 1,2 -1,0" nebo "0,9 - 1,0 - 1,0". Jmenovitě tloušťka plechu musí být určena podle příslušné ISO normy, např. ISO 3574:1999 pro ocel. Značení uvedená v pododdílu 6.1.3.1 (f) a (g) se nesmějí použít v trvalé formě kromě případů uvedených v pododdílu 6.1.3.5.

6.1.3.3 Každý obal, kromě obalů uvedených v 6.1.3.2, který může být podroben obnově, při které by mohl být značení na obalu zničeno, musí mít značení uvedené v 6.1.3.1 (a) až (e) v trvalé formě. Značení je trvalé, jestliže je schopné odolat obnovovacímu procesu (provedené např. vyražením). U obalů jiných než kovové sudy o vnitřním objemu větším než 100 litrů může toto trvalé značení nahradit trvanlivé značení předepsané v 6.1.3.1.

6.1.3.4 U rekonstruovaných kovových sudů, jestliže se nejedná o změnu typu obalu nebo náhradu nebo odnětí konstrukčních součástí, požadovaná značení nemusí být trvalá. Každý jiný rekonstruovaný kovový sud musí být opatřen značením uvedeným v 6.1.3.1 (a) až (e) v trvalé formě (např. vyražením) na vrchu nebo na boku.

6.1.3.5 Kovové sudy vyrobené z materiálů (např. nerezové oceli) umožňujících jejich opakované opětovné použití mohou být opatřeny značením uvedeným v 6.1.3.1 (f) a (g) v trvalé formě (např. vyražením).

6.1.3.6 UN kód obalu v souladu s 6.1.3.1 platí jen pro konstrukční typ nebo konstrukční řadu. Různé povrchové úpravy mohou být zahrnuty ve stejném konstrukčním typu.

"Řadou konstrukčních typů" se rozumějí obaly stejné konstrukce, stejné tloušťky stěny, stejného materiálu a stejného průřezu, které se liší od schváleného konstrukčního typu pouze menšími konstrukčními výškami.

Uzávěry nádob musí být identifikovatelné s uzávěry uvedenými v protokole o zkoušce.

³ Rozlišovací značka pro motorová vozidla v mezinárodním provozu předepsaná Úmluvou o silničním provozu (Viedeň, 1968).

6.1.3.7 Prvky UN kódu musí být uvedeny v pořadí odstavců v 6.1.3.1; každý prvek značení požadovaného v těchto odstavcích a tam kde je to vhodné v 6.1.3.8 (h) až (j) musí být jasně oddělen např. lomítkem nebo mezerou tak, aby údaje byly snadno identifikovatelné, viz např. 6.1.3.11.

Každé dodatečné značení schválené příslušným orgánem musí umožnit, aby části UN kódu byly správně identifikovány s odkazem na 6.1.3.1.

6.1.3.8 Po obnovení obalu musí obnovitel umístit na obal trvanlivé značení v tomto pořadí:

- (h) Stát, ve kterém byla obnova provedena, uvedený rozlišovací značkou pro motorová vozidla v mezinárodním provozu³;
- (i) Jméno obnovitele nebo jiná identifikace obalu stanovená příslušným orgánem;
- (j) Rok obnovy; písmeno "R" a u každého obalu, který byl podroben a vyhověl zkoušce těsnosti podle pododdílu 6.1.3.1, dodatečně ještě písmeno "L".

6.1.3.9 Jestliže po obnovení obalu již není značení požadované v 6.1.3.1 (a) až (d) ani na vrchu ani na boku kovového sudu, obnovitel musí toto značení doplnit trvanlivou formou uvedenou v 6.1.3.8 (h), (i) a (j). Tato značení nesmí udávat větší funkční schopnost, než pro kterou byl původní konstrukční typ obalu odzkoušen a označen.

6.1.3.10 Obaly vyrobené s recyklovaných plastů, jak je uvedeno v oddílu 1.2.1, musí být označeny "REC". Toto značení musí být umístěno v blízkosti značení předepsaného v pododdílu 6.1.3.1.

6.1.3.11 **Příklady značení NOVÝCH obalů**



4G/Y145/S/02
NL/VL823

v 6.1.3.1 (a) (i), (b), (c), (d) a (e)
v 6.1.3.1 (f) a (g)

pro novou lepenkovou bednu



1A1/Y1.4/150/98
NL/VL824

v 6.1.3.1 (a) (i), (b), (c), (d) a (e)
v 6.1.3.1 (f) a (g)

pro nový ocelový sud na kapaliny



1A2/Y150/S/01
NL/VL825

v 6.1.3.1 (a) (i), (b), (c), (d) a (e)
v 6.1.3.1 (f) a (g)

pro nový ocelový sud na tuhé látky
nebo pro vnitřní obaly



4HW/Y136/S/98
NL/VL826

v 6.1.3.1 (a) (i), (b), (c), (d) a (e)
v 6.1.3.1 (f) a (g)

pro novou plastovou bednu nebo
rovnocenné specifikace



1A2/Y/100/01
USA/MM5

v 6.1.3.1 (a) (i), (b), (c), (d) a (e)
v 6.1.3.1 (f) a (g)

pro rekonstruovaný ocelový sud na
kapaliny

RID/ADR/0A1/100/83
NL/VL/123

v 6.1.3.1 (a) (ii), (b), (c), (d) a (e)
v 6.1.3.1 (f) a (g)

pro nový obal z jemného plechu
s neodnímatelným víkem

RID/ADR/0A2/Y20/S/83
NL/VL/124

v 6.1.3.1 (a) (ii), (b), (c), (d) a (e)
v 6.1.3.1 (f) a (g)

pro nový obal z jemného plechu
s odnímatelným víkem na tuhé látky
nebo kapaliny s viskozitou při 23 °C
vyšší než 200 mm²/s.

6.1.3.12 **Příklady značení OBNOVENÝCH obalů**



1A1/Y1.4/150/97
NL/RB/01/RL

v 6.1.3.1 (a) (i), (b), (c), (d) a (e)
v 6.1.3.8 (h), (i) a (j)

³ Rozlišovací značka pro motorová vozidla v mezinárodním provozu předepsaná Úmluvou o silničním provozu (Viedeň, 1968).



1A2/Y150/S/99 v 6.1.3.1 (a) (i), (b), (c), (d) a (e)
USA/RB/00 R v 6.1.3.8 (h), (i) a (j)

6.1.3.13 **Příklad značení ZÁCHRANNÝCH obalů**



1A2T/Y/300/S/01 v 6.1.3.1 (a) (i), (b), (c), (d) a (e)
USA/abc v 6.1.3.1 (f) a (g)

POZNÁMKA: Značení, jejichž příklady jsou uvedeny v pododdílech 6.1.3.11, 6.1.3.12 a 6.1.3.13, mohou být uvedena v jedné řádce nebo ve více řádcích, pokud je zachováno správné pořadí.

6.1.3.14 **Certifikace**

Umístěním UN kódu na obalu podle 6.1.3.1 se potvrzuje, že sériově vyráběné obaly odpovídají schválenému konstrukčnímu typu a že jsou splněny požadavky uvedené v dokladu o schválení (atestu).

6.1.4 **Požadavky na obaly**

6.1.4.0 **Všeobecné požadavky**

Jakékoliv propouštění látky obsažené v obale nesmí za normálních podmínek přepravy znamenat nebezpečí.

6.1.4.1 **Ocelové sudy**

1A1 s neodnímatelným víkem;
1A2 s odnímatelným víkem.

6.1.4.1.1 Pláště a základny musí být vyrobeny z ocelového plechu vhodného typu a přiměřené tloušťky ve vztahu k vnitřnímu objemu sudu a jeho očekávanému použití.

POZNÁMKA: v případě sudů z uhlíkaté oceli jsou vhodné oceli uvedené v ISO 3573:1999 "Tabule za tepla válcované uhlíkaté oceli v komerční a tažné kvalitě" a ISO 3574:1999 "Tabule za studena válcované uhlíkaté oceli v komerční a tažné kvalitě". Pro sudy z uhlíkaté oceli pod 100 litrů jsou také, kromě výše uvedených použitelné oceli uvedené v ISO 11949:1995 „Za studena válcované elektrolyticky pocínované plechy“, ISO 11950:1995 „Za studena válcovaná ocel elektrolyticky pochromovaná (potahovaná kyslíčnickem chromu - chromium/chromium oxide) a ISO 11951:1995 „Černý plech za studena válcovaný ve svitcích, pro výrobu pocínovaného, nebo elektrolyticky pochromovaného plechu“.

6.1.4.1.2 Spoje pláště sudů určených k naplnění více než 40 litrů kapalných látek musí být svařované. Spoje pláště sudů určených pro tuhé látky nebo k naplnění nejvýše 40 litrů kapalných látek musí být mechanicky lemované nebo svařované.

6.1.4.1.3 Spoje mezi základnami a pláštěm musí být mechanicky lemované (zdrápkované) nebo svařované. Mohou být použity samostatné zesilovací obruče.

6.1.4.1.4 Těleso sudu s vnitřním objemem větším než 60 litrů musí mít minimálně vytačené valivé obruče pro válení nebo alternativně nejméně dvě oddělené valivé obruče. Má-li sud separátní valivé obruče, musí tyto přiléhat těsně k plášti a být upevněny tak, aby se nemohly posunout. Valivé obruče nesmějí být upevněny bodovými svary.

6.1.4.1.5 Průměr otvorů pro plnění, vyprazdňování a odvětrání v plášti nebo základnách sudů s neodnímatelným víkem (1A1) nesmí být větší než 7 cm. Sudy s většími otvory se považují za sudy s odnímatelným víkem (1A2). Uzávěry pro otevírání v plášti a základnách sudů musí být konstruovány a provedeny tak, aby se za normálních přepravních podmínek neuvolnily a sud zůstal těsný. Příruby uzávěrů mohou být mechanicky lemované (zdrápkované) nebo svařované. Pokud uzávěr není přirozeně těsný musí být opatřen těsněním nebo jinými těsnícími prostředky.

- 6.1.4.1.6** Uzavírací zařízení sudů s odnímatelným víkem (1A2) musí být konstruována a provedena tak, aby se za normálních přepravních podmínek neuvolnila a sud zůstal těsný. Odnímatelná víka musí být opatřena těsněním nebo jinými těsnicími prostředky.
- 6.1.4.1.7** Pokud materiály použité pro pláště, základny, uzávěry a příslušenství nejsou snášelivé s přepravovaným obsahem, musí být použit vhodný vnitřní ochranný povlak nebo úprava. Tyto povlaky nebo úpravy si musí zachovat své ochranné vlastnosti za normálních podmínek přepravy.
- 6.1.4.1.8** Nejvyšší vnitřní objem sudů: 450 litrů.
- 6.1.4.1.9** Nejvyšší čistá (netto) hmotnost: 400 kg.
- 6.1.4.2** ***Hliníkové sudy***
- 1B1 s neodnímatelným víkem;
1B2 s odnímatelným víkem.
- 6.1.4.2.1** Plášť a dna musí být z hliníku se stupněm čistoty nejméně 99 % nebo z vhodné hliníkové slitiny. Použitý materiál musí být vhodného typu a přiměřené tloušťky přizpůsobenými vnitřnímu objemu a účelu použití sudu.
- 6.1.4.2.2** Všechny spoje musejí být svařované. Pokud existují spoje po obvodu základen, musí být opatřeny samostatnými zesilovacími obručemi.
- 6.1.4.2.3** Plášť sudu s vnitřním objemem větším než 60 litrů musí mít obecně vytlačené valivé obruče nebo alternativně nejméně dvě separátní valivé obruče. Má-li sud separátní obruče, musí tyto přiléhat těsně k plášti a být upevněny tak, aby se nemohly posunout. Separátní valivé obruče nesmějí být upevněny bodovými svary.
- 6.1.4.2.4** Průměr otvorů pro plnění, vyprazdňování a odvodu vzduchu v plášti nebo základnách sudů s neodnímatelným víkem (1B1) nesmí být větší než 7 cm. Sudy s většími otvory se považují za sudy s odnímatelným víkem (1B2). Uzávěry otvorů v plášti a základnách sudů musí být konstruovány a provedeny tak, aby zůstaly bezpečné a těsné za normálních přepravních podmínek. Příruby uzávěrů mohou být mechanicky lemované (zdrápkované) nebo svařované. Odnímatelná víka musí být opatřena těsněním nebo jinými těsnicími prostředky, pokud uzávěry nejsou přirozeně těsné.
- 6.1.4.2.5** Uzavírací zařízení sudů s odnímatelným víkem (1B2) musí být konstruována a provedena tak, aby zůstala bezpečná a aby sudy zůstaly za normálních přepravních podmínek těsné. Odnímatelná víka musí být opatřena těsněním nebo jinými těsnicími prostředky.
- 6.1.4.2.6** Nejvyšší vnitřní objem sudů: 450 litrů.
- 6.1.4.2.7** Nejvyšší čistá (netto) hmotnost: 400 kg.
- 6.1.4.3** ***Sudy z kovu jiného než hliník nebo ocel***
- 1N1 s neodnímatelným víkem;
1N2 s odnímatelným víkem.
- 6.1.4.3.1** Plášť a základny musí být vyrobeny z kovu nebo slitiny kovů jiných než ocel nebo hliník. Použitý materiál musí být vhodného typu a přiměřené tloušťky přizpůsobenými vnitřnímu objemu a účelu použití sudu.
- 6.1.4.3.2** Pokud existují spoje po obvodu základen, musí být opatřeny samostatnými zesilovacími obručemi. Všechny švy, pokud jsou, musejí být spojeny (svařeny, spájeny atd.) technickou metodou pro použití kov nebo slitinu kovů.
- 6.1.4.3.3** Plášť sudu s vnitřním objemem větším než 60 litrů musí mít obecně vytlačené valivé obruče nebo alternativně nejméně dvě separátní valivé obruče. Má-li sud separátní obruče, musí tyto přiléhat těsně k plášti a být upevněny tak, aby se nemohly posunout. Separátní valivé obruče nesmějí být upevněny bodovými svary.
- 6.1.4.3.4** Průměr otvorů pro plnění, vyprazdňování a odvodu vzduchu v plášti nebo základnách sudů s neodnímatelným víkem (1N1) nesmí být větší než 7 cm. Sudy s většími otvory se považují za sudy

s odnímatelným víkem (1N2). Uzávěry otvorů v plášti a základnách sudů musí být konstruovány a provedeny tak, aby se za normálních přepravních podmínek zůstaly bezpečné a těsné. Příruby uzávěrů mohou být mechanicky lemované (zdrápkované) nebo svařované. Švové spoje musí být provedeny v souladu s technickým stavem a úrovní znalostí o daném kovu tak aby byly bezpečné a těsné. Víka musí být opatřena těsněním nebo jinými těsnícími prostředky, pokud uzávěry nejsou přirozeně těsné.

6.1.4.3.5 Uzávěry sudů s odnímatelným víkem (1N2) musí být konstruovány a provedeny tak, aby se za normálních přepravních podmínek zůstaly bezpečné a těsné. Odnímatelná víka musí být opatřena těsněním nebo jinými těsnícími prostředky.

6.1.4.3.6 Nejvyšší vnitřní objem sudů: 450 litrů.

6.1.4.3.7 Nejvyšší čistá (netto) hmotnost: 400 kg.

6.1.4.4 Ocelové nebo hliníkové kanystry

3A1 z oceli s neodnímatelným víkem

3A2 z oceli s odnímatelným víkem

3B1 z hliníku s neodnímatelným víkem

3B2 z hliníku s odnímatelným víkem

6.1.4.4.1 Plášť a dna musí být vyrobeny z ocelového plechu, z hliníku nejméně 99 % čistoty základní hliníkové slitiny. Materiál musí být vhodného typu a přiměřeně tloušťky vzhledem k vnitřnímu objemu a účelu použití kanystru.

6.1.4.4.2 Švy všech kanystrů musí být mechanicky lemovány nebo svařeny. Spoje pláště kanystrů určených k naplnění více než 40 litrů kapalných látek musí být svařované. Švy pláště kanystrů určených k naplnění až do 40 litrů kapalných látek musí být mechanicky zalemovány nebo svařeny. U hliníkových kanystrů musí být všechny švy svařované. Pokud na kanystru jsou spojovací švy (plášť se dnem), musí být zesíleny použitím samostatného prstence.

6.1.4.4.3 Průměr otvorů kanystrů (3A1 a 3B1) nesmí být větší než 7 cm. Kanystry s většími otvory se považují za kanystry s odnímatelným víkem (3A2 a 3B2). Uzávěry musí být konstruovány tak, aby zůstaly bezpečné a těsné za normálních podmínek přepravy. Těsnění nebo jiné těsnící prvky musí být použity, pokud samotné uzávěry nejsou přirozeně těsné.

6.1.4.4.4 Pokud materiály použité pro plášť, základny, uzávěry a příslušenství nejsou snášlivé s přepravovaným obsahem, musí být použit vhodný vnitřní ochranný povlak nebo úprava. Tyto povlaky nebo úpravy si musí zachovat své ochranné vlastnosti za normálních podmínek přepravy

6.1.4.4.5 Nejvyšší vnitřní objem kanystru: 60 litrů.

6.1.4.4.6 Nejvyšší čistá (netto) hmotnost: 120 kg.

6.1.4.5 Překližkové sudy

1D

6.1.4.5.1 Použité dřevo musí být přirozeně stárnuté, obchodně obvykle suché a bez vad, které by mohly ovlivnit použitelnost sudu k danému účelu. Pokud se ke zhotovení základen použije jiný materiál než překližka, musí být tento materiál z hlediska kvality překližce rovnocenný.

6.1.4.5.2 Plášť sudu musí být vyroben minimálně z dvouvrstvé překližky a základny z překližky třívrstvé. Vrstvy ložené křížem musí být pevně slepeny vodovzdorným lepidlem.

6.1.4.5.3 Plášť a základny sudu a jeho spoje musí být navrženy s ohledem na jeho vnitřní objem a uvažované použití.

6.1.4.5.4 K zamezení prosypu obsahu se víka potáhnou sulfátovým papírem (kraftovým papírem) nebo jiným rovnocenným materiálem, který se musí k víku bezpečně připevnit a po celém obvodu víka musí přesahovat přes jeho okraj.

- 6.1.4.5.5** Nejvyšší vnitřní objem sudů: 250 litrů;
- 6.1.4.5.6** Nejvyšší čistá (netto) hmotnost: 400 kg.
- 6.1.4.6** *(Vypuštěno)*
- 6.1.4.7** ***Lepenkové sudy***
- 1G
- 6.1.4.7.1** Plášť sudu se musí sestávat z více vrstev sulfátového papíru (kraftový papír) nebo hladké lepenky (nikoliv vlnité), které jsou spolu pevně slepeny nebo laminovány, a může obsahovat jednu nebo více ochranných vrstev bitumenu, voskovaného sulfátového papíru, kovové fólie, plastu atd.
- 6.1.4.7.2** Základny musí být z přírodního dřeva, lepenky, kovu, překližky, plastu nebo jiného vhodného materiálu a mohou být opatřeny jednou nebo více ochrannými vrstvami živice, voskovaného sulfátového papíru (kraftový), kovové fólie, plastu atd.
- 6.1.4.7.3** Konstrukce pláště sudu, dna a jejich spojení musí být přizpůsobeny vnitřnímu objemu sudu a účelu jeho použití.
- 6.1.4.7.4** Kompletní obal musí být dostatečně odolný proti vodě, aby za normálních přepravních podmínek nedošlo k odlepení (odštěpení) vrstev.
- 6.1.4.7.5** Nejvyšší vnitřní objem sudů: 450 litrů.
- 6.1.4.7.6** Nejvyšší čistá (netto) hmotnost: 400 kg.
- 6.1.4.8** ***Plastové sudy a kanystry***
- 1H1 sudy s neodnímatelným víkem
1H2 sudy s odnímatelným víkem
3H1 kanystry s neodnímatelným víkem
3H2 kanystry s odnímatelným víkem
- 6.1.4.8.1** Obal musí být vyroben z vhodného plastu a být přiměřené pevnosti s ohledem na vnitřní objem a účel použití. Kromě recyklovaných plastů, jak je uvedeno v 1.2.1, nesmějí být pro nové obaly použity žádné jiné odpadní materiály než zbytky nebo rozdrčené odpady ze stejného výrobního postupu. Obal musí být přiměřeně odolný proti stárnutí a degradaci způsobenou buď přepravovanou látkou nebo ultrafialovým zářením. Za normálních podmínek přepravy nesmí jakékoli proniknutí látky obsažené v obalu nebo recyklované plasty použité pro výrobu nového obalu být příčinou ohrožení bezpečnosti přepravy.
- 6.1.4.8.2** Je-li nutná ochrana před ultrafialovým zářením, pak musí být tato provedena příměsí sazí nebo jiných vhodných pigmentů nebo inhibitorů. Tyto přísady musí být snášitelné s obsahem a musí zachovat svoji účinnost po přípustnou dobu životnosti obalu. Při použití sazí, pigmentů nebo inhibitorů odlišných od těch, které byly použity při zhotovení schváleného konstrukčního typu, může být od opakování zkoušek upuštěno, nepřekračuje-li jejich podíl u sazí 2 % hmotnostně nebo u pigmentů 3 % hmotnostně; podíl inhibitorů proti ultrafialovému záření není omezen.
- 6.1.4.8.3** Přísady k jiným účelům než k ochraně před ultrafialovým zářením smějí být do plastu přimíseny za předpokladu, že nebudou mít nepříznivý vliv na chemické a fyzikální vlastnosti materiálu obalu. V tomto případě je možno upustit od opakování zkoušky.
- 6.1.4.8.4** Tloušťka stěny na každém místě obalu musí být přizpůsobena vnitřnímu objemu a účelu jeho použití, přičemž musí být vzato v úvahu namáhání jednotlivých míst.
- 6.1.8.4.5** Průměr otvorů pro plnění, vyprazdňování a odvodušňování v plášti nebo základnách sudů s neodnímatelným víkem (1H1) a kanystrů s neodnímatelným víkem (3H1) nesmí být větší než 7 cm. Sudy a kanystry s většími otvory se považují za sudy a kanystry s odnímatelným víkem (1H2,3H2).

Uzávěry otvorů v pláštích a základnách sudů a kanystrů musí být konstruovány a provedeny tak, aby zůstaly bezpečné a těsné za normálních podmínek přepravy. Uzávěry musí být opatřeny těsněním nebo jinými těsnicími prostředky, pokud uzávěry nejsou přirozeně těsné.

6.1.4.8.6 Uzávěry sudů a kanystrů s odnímatelným víkem (1H2 a 3H2) musí být konstruovány tak, aby zůstaly bezpečné a nepropustné za normálních podmínek přepravy. Těsnění musí být použito u všech odnímatelných vík, ledaže by konstrukce sudu nebo kanystru byla taková, že odnímatelná víka jsou skutečně bezpečná a sud nebo kanystr je přirozeně nepropustný.

6.1.4.8.7 Nejvyšší dovolená propustnost pro hořlavé kapaliny činí 0,008 g/l.h při 23 °C (viz 6.1.5.7).

6.1.4.8.8 Pokud je použit recyklovaný materiál pro výrobu nového obalu, specifické vlastnosti recyklovaného materiálu musí být zajištěny a dokumentovány pravidelně jako část programu zajištění kvality uznaného příslušným orgánem. Program zajištění kvality musí zahrnovat zprávu o vlastním předběžném rozřídění a ověření, že každá vsádka recyklovaného plastového materiálu má stejnou rychlost toku taveniny, hustotu a pevnost v tahu stejné jako konstrukční typ vyrobený z takového recyklovaného materiálu. Tato nutnost zahrnuje znalost materiálu obalu, ze kterého byly recyklované plasty odvozeny, jakož i znalost původních obsahů těchto obalů, pokud by tento původní obsah mohl snížit schopnost nového obalu vyrobeného s použitím tohoto materiálu. Kromě toho program zajištění kvality výrobce obalu podle 6.1.1.4 musí zahrnovat provedení mechanického zkoušení konstrukčního typu uvedeného v 6.1.5 na obalech vyrobených z každé dávky recyklovaného plastového materiálu. Při tomto zkoušení může být odolnost vůči stohování ověřena vhodnou dynamickou zkouškou stlačením namísto statické zkoušky zatížením.

POZNÁMKA: ISO 16103:2005 – „Obaly – Přeprava obalů pro nebezpečné látky recyklované plasty“, poskytuje dodatečný návod na postupy, které je nutno dodržovat při schvalování použití recyklovaných plastů.

6.1.4.8.9 Nejvyšší vnitřní objem sudů a kanystrů: 1H1 a 1H2: 450 litrů; 3H1 a 3H2: 60 litrů.

6.1.4.8.10 Nejvyšší čistá (netto) hmotnost- 1H1 a 1H2: 400 kg; 3H1 a 3H2: 120 kg.

6.1.4.9 Bedny z přírodního dřeva

4C1 jednoduché;
4C2 s prachotěsnými stěnami.

6.1.4.9.1 Použité dřevo musí být přírodně vyztřelé, vysušené a bez vad, které by mohly podstatně zmenšit odolnost kterékoliv části bedny. Pevnost použitého materiálu a konstrukce bedny musí být přizpůsobeny vnitřnímu objemu bedny a jejímu použití. Vrch a spodek mohou být z vodovzdorných velkoplošných materiálů z rekonstituovaného dřeva, jako jsou dřevotřískové desky nebo dřevovláknité desky nebo jiný vhodný druh.

6.1.4.9.2 Spoje musí být odolné proti vibracím vznikajícím během normálních přepravních podmínek. Je třeba se vyhnout hřebíkování ve směru vláken dřeva na konci přířezů. Pro spoje, které jsou pravděpodobně nejvíce namáhány, musí být použito zahnutí hřebíků, hřeby nýtovací nebo vrutové (s kruhovým pohybem při zatlačování) nebo jiné rovnocenné spojení.

6.1.4.9.3 Bedny 4C2: Každý díl bedny musí být z jednoho kusu nebo být tomuto rovnocenný. Díly se považují za rovnocenné dílům z jednoho kusu, jsou-li přířezy spojeny jednou z následujících metod: Lindermanovo spojení (spoj typu na rybinu), spojení na pero a drážku, spojení na polodrážku nebo na tupý spoj s nejméně dvěma vlnovitými kovovými upevňovacími prvky pro každý spoj.

6.1.4.9.4 Nejvyšší čistá (netto) hmotnost: 400 kg.

6.1.4.10 Překližkové bedny

4D

6.1.4.10.1 Použitá překližka musí sestávat nejméně ze tří vrstev. Musí být vyrobena z dýhy z přírodního stárnutého dřeva loupané nebo řezané, vyschlé a bez vad, které by mohly snížit pevnost bedny. Pevnost použitého materiálu a konstrukční metoda musejí být přiměřené vnitřnímu objemu a očekávanému účelu použití bedny. Všechny vrstvy překližky musí být navzájem slepeny

vodovzdorným lepidlem. Při konstrukci beden mohou být společně s překližkou použity i ostatní jiné vhodné materiály. Bedny musí být pevně sbity hřebíky, nebo zabezpečeny v rohových a hranových spojích, nebo kompletovány stejně vhodnými prostředky

6.1.4.10.2 Nejvyšší čistá (netto) hmotnost: 400 kg.

6.1.4.11 **Bedny z rekonstituovaného dřeva**

4F

6.1.4.11.1 Stěny beden musí být z vodovzdorných materiálů jako dřevotřískové nebo dřevovláknité desky, nebo z jiných vhodných materiálů. Pevnost materiálů a konstrukce beden musí být přizpůsobeny vnitřnímu objemu a účelu jejich použití.

6.1.4.11.2 Ostatní části beden mohou být zhotoveny z jiného vhodného materiálu.

6.1.4.11.3 Bedny musí být bezpečně spojeny vhodnými prostředky.

6.1.4.11.4 Nejvyšší čistá (netto) hmotnost: 400 kg.

6.1.4.12 **Lepenkové bedny**

4G

6.1.4.12.1 Bedny musí být zhotoveny z pevné hladké lepenky nebo tří a vícevrstvé vlnité lepenky dobré kvality, přizpůsobené vnitřnímu objemu a účelu použití beden. Odolnost vnějšího povrchu proti vodě musí být taková, aby zvýšení hmotnosti během zkoušky absorpce vody po dobu 30 minut metodou Cobb nečinilo více než 155 g/m^2 (podle normy ISO 535:1991). Lepenka musí mít odpovídající kvalitu pevnosti v ohybu. Lepenka musí být formátována bez pořezání - trhlin a rylována tak, že se při kompletaci obalu nesmí v rylování lámat či na povrchu popraskat, nebo nepatříčně ohýbat. Vlny vlnité lepenky musí být pevně slepeny s vnější vrstvou.

6.1.4.12.2 Hrany beden mohou být opatřeny dřevěným rámem nebo mohou být celé ze dřeva nebo z jiného vhodného materiálu. Mohou být použity zesilovací lišty ze dřeva nebo z jiného vhodného materiálu.

6.1.4.12.3 Výrobní spoje pláště bedny musí být lepeny lepicí páskou, přesazeny a slepeny nebo přesazeny a sešity kovovými sponami. Přeplátované spoje musí mít odpovídající přesah.

6.1.4.12.4 Když je uzavření provedeno slepením, nebo přelepením lepicí páskou musí být použito vodovzdorné lepidlo.

6.1.4.12.5 Bedny musí být konstruovány tak, aby dobře vyhovovaly obsahu.

6.1.4.12.6 Nejvyšší čistá (netto) hmotnost: 400 kg.

6.1.4.13 **Plastové bedny**

4H1 Bedny z pěnového plastu

4H2 Bedny z tuhého plastu

6.1.4.13.1 Bedny musí být zhotoveny z vhodných plastů a jejich pevnost musí být v souladu s vnitřním objemem a účelem jejich použití. Bedny musí být přiměřeně odolné vůči stárnutí a proti degradaci způsobené přepravovanou látkou nebo ultrafialovým zářením.

6.1.4.13.2 Bedny z pěnového plastu se musí sestávat ze dvou vytvarovaných dílů, spodního dílu s dutinami pro vnitřní obaly a horního dílu, který dolní díl překrývá a do něho zapadá. Horní a spodní díly musí být konstruovány tak, aby do nich vnitřní obaly těsně zapadaly. Uzávěry vnitřních obalů nesmějí přijít do styku s vnitřním povrchem horního dílu bedny.

6.1.4.13.3 Pro přepravu musí být bedny z pěnového plastu uzavřeny samolepicí páskou, která musí mít dostatečnou pevnost v tahu, aby se zabránilo otevření bedny. Lepicí páska musí být odolná proti

povětrnostním vlivům a lepidlo se musí snášet s lehčeným plastem bedny. Jiné systémy uzavření se mohou použít za předpokladu, že mají nejméně stejnou účinnost.

- 6.1.4.13.4** U beden z tuhého plastu musí být ochrana proti ultrafialovému záření, je-li požadována, provedena přimísením sazí nebo jiných vhodných pigmentů nebo inhibitorů do materiálu. Tyto přísady se musí snášet s obsahem bedny a musí si zachovat svou účinnost po celou dobu životnosti bedny. Při užití sazí, pigmentů nebo inhibitorů odlišných od těch, které byly použity při zhotovení zkoušeného konstrukčního typu, může být upuštěno od opakování zkoušek, pokud podíl sazí nepřekračuje 2 % hm., nebo jestliže podíl pigmentů nepřekračuje 3 % hm., podíl inhibitorů proti ultrafialovému záření není omezen.
- 6.1.4.13.5** Přísady k jiným účelům než k ochraně proti ultrafialovému záření smějí být k plastu pro výrobu beden (4H1 a 4H2) přimíseny za předpokladu, že nepříznivě neovlivní chemické a fyzikální vlastnosti materiálu bedny. V tomto případě je možno upustit od opakování zkoušek.
- 6.1.4.13.6** Bedny z tuhého plastu musí mít uzavírací zařízení z vhodného materiálu dostatečné pevnosti, konstruované tak, aby bylo zabráněno nechtěnému otevření.
- 6.1.4.13.7** Pokud je použit recyklovaný materiál pro výrobu nového obalu, specifické vlastnosti recyklovaného materiálu musí být zajištěny a dokumentovány pravidelně jako část programu zajištění kvality uznávaného příslušným orgánem. Program zajištění kvality musí zahrnovat zprávu o vlastním předběžném rozřídění a ověření, že každá vsádka recyklovaného plastového materiálu má hodnotu rychlosti toku taveniny, hustoty a pevnosti v tahu stejnou jako konstrukční typ vyrobený z téhož recyklovaného materiálu. Tato nutnost zahrnuje znalost materiálu obalu, ze kterého byly recyklované plasty odvozeny, jakož i znalost původních obsahů těchto obalů, pokud by tento původní obsah mohl snížit schopnost nového obalu vyrobeného s použitím tohoto materiálu. Následně, výrobcův program zajištění kvality obalů dle 6.1.1.4 musí zahrnovat provedení mechanického zkoušení konstrukčního typu v 6.1.5 na obalech vyrobených z každé vsádky recyklovaného plastového materiálu. Při této zkoušce může být odolnost vůči stohování ověřena vhodnou dynamickou tlakovou zkouškou namísto statické zkoušky zatížením.
- 6.1.4.13.8** Nejvyšší čistá (netto) hmotnost: 4H1: 60 kg;
4H2: 400 kg.

6.1.4.14 *Ocelové, hliníkové nebo jiné kovové bedny*

4A bedny z oceli
4B bedny z hliníku
4N kovové bedny, jiné než z oceli nebo hliníku

- 6.1.4.14.1** Pevnost kovu a konstrukce bedny musí být přizpůsobeny vnitřnímu objemu a účelu jejího použití.
- 6.1.4.14.2** Bedny musí být, pokud je to požadováno, vyloženy lepenkou nebo plstěnými přířezy, nebo musí být opatřeny vnitřní vložkou nebo povlakem z vhodného materiálu. Použijí-li se dvojitě lemovaná (zdrápkovaná) kovová vložka, musí se učinit opatření k zamezení pronikání látek zvláště výbušných do stykových spár lemů.
- 6.1.4.14.3** Uzávěry mohou být jakéhokoli vhodného typu; musí však za normálních přepravních podmínek zůstat bezpečné.
- 6.1.4.14.4** Nejvyšší čistá (netto) hmotnost: 400 kg.

6.1.4.15 *Textilní pytle*

5L1 bez vnitřní vložky nebo povlaku
5L2 prachotěsné
5L3 vodovzdorné

- 6.1.4.15.1** Použitá tkanina musí být dobré jakosti. Pevnost tkaniny a provedení pytle musí být v souladu s vnitřním objemem pytle a účelu jeho použití.
- 6.1.4.15.2** Pytle prachotěsné 5L2: Pytel musí být vyroben jako prachotěsný, např. pomocí:

- (a) papíru přilepeného na vnitřní stranu pytle vodovzdorným lepidlem, jako je bitumen (dehtový papír); nebo
- (b) fólie z plastu zakotvené na vnitřní stranu pytle; nebo
- (c) jedné nebo více vnitřních papírových nebo plastových vložek

6.1.4.15.3 Pytle vodovzdorné 5L3: k zabránění vstupu vlhkosti musí být pytel vodotěsný, např. použitím:

- (a) samostatných vnitřních vložek z vodovzdorného papíru (např. voskovaného sulfátového "kraft" papíru, dehtového papíru nebo plastem potahovaného sulfátového papíru); nebo
- (b) plastového filmu na vnitřní straně pytle; nebo
- (c) jedné nebo více plastových vnitřních vložek.

6.1.4.15.4 Nejvyšší čistá (netto) hmotnost: 50 kg.

6.1.4.16 *Tkané plastové pytle*

5H1 bez vnitřní vložky nebo bez vnitřního povlaku

5H2 prachotěsné

5H3 vodovzdorné.

6.1.4.16.1 Pytle musí být vyrobeny z tažených pásů nebo tažených jednotlivých vláken z vhodného plastu. Pevnost použitého materiálu a provedení pytle musí být přizpůsobeny vnitřnímu objemu pytle a účelu jeho použití.

6.1.4.16.2 Je-li tkanina tkaná naplocho, musí být pytle zhotoveny sešitím nebo jiným způsobem zajišťujícím uzavření dna a jedné strany. Je-li tkanina vyrobena jako hadice, musí se pytel vytvořit sešitím, tkaním (dna), nebo jiným způsobem s rovnocennou odolností.

6.1.4.16.3 Pytle prachotěsné, 5H2: Pytel musí být vyroben jako prachotěsný, např. pomocí:

- (a) papíru nebo plastového filmu zakotveného na vnitřní straně pytle; nebo
- (b) jedné nebo více samostatných vnitřních vložek z papíru nebo z plastu.

6.1.4.16.4 Pytle vodovzdorné 5H3: k zábraně vniknutí vlhkosti, pytel musí být k vodotěsný upravený např. pomocí:

- (a) samostatných vnitřních vložek z vodovzdorného papíru (např. sulfátový papír "kraft", voskovaný, oboustranně dehtovaný nebo potažený vrstvou plastu); nebo
- (b) plastového filmu zakotveného na vnitřním nebo vnějším povrchu pytle; nebo
- (c) jedné nebo více vnitřních plastových vložek.

6.1.4.16.5 Nejvyšší čistá (netto) hmotnost: 50 kg.

6.1.4.17 *Pytle z plastové fólie*

5H4

6.1.4.17.1 Pytle musí být vyrobeny z vhodného plastu. Pevnost použitého materiálu a provedení pytle musí být přizpůsobeny vnitřnímu objemu pytle a účelu jeho použití. Spoje a uzávěry musí odolávat tlakům a nárazům, které se vyskytují za normálních přepravních podmínek.

6.1.4.17.2 Nejvyšší čistá (netto) hmotnost: 50 kg.

6.1.4.18 Papírové pytle

5M1 vícevrstvé

5M2 vícevrstvé, vodovzdorné

6.1.4.18.1 Pytle musí být vyrobeny z vhodného sulfátového papíru "kraft" nebo z rovnocenného papíru, nejméně ve třech vrstvách, střední vrstva může být spojena s vnější vrstvou přilepením síťové tkaniny. Pevnost papíru a provedení pytlů musí být přizpůsobeny vnitřnímu objemu pytle a účelu jeho použití. Spoje a uzávěry musí být prachotěsné.

6.1.4.18.2 Pytle 5M2: Pro ochranu proti vniknutí vlhkosti musí být pytel ze čtyř nebo více vrstev vodotěsný užitím buď vodovzdorné vrstvy jako jedné ze dvou vnějších vrstev nebo vodovzdornou bariérou z vhodného bariérového materiálu mezi dvěma vnějšími vrstvami; třívrstvý pytel je nutno učinit vodotěsným použitím vodovzdorné vrstvy jako vnější vrstvy. Existuje-li nebezpečí reakce obsahu pytle s vlhkostí nebo je-li obsah pytle balen ve vlhkém stavu, vodovzdorná vrstva nebo vložka, např. z dvojité dehtovaného papíru "kraft", nebo "kraft" papíru s plastovým povlakem na vnitřní straně vnitřní vrstvy - musí být umístěn přímo k látce, stejně tak jeden nebo více vložkových plastových pytlů. Spoje a uzávěry musí být vodotěsné.

6.1.4.18.3 Nejvyšší čistá (netto) hmotnost: 50 kg.

6.1.4.19 Kompozitní obaly (plast)

6HA1 Plastová nádoba s vnějším ocelovým sudem

6HA2 Plastová nádoba s vnějším ocelovým košem nebo bednou

6HB1 Plastová nádoba s vnějším hliníkovým sudem

6HB2 Plastová nádoba s vnějším hliníkovým košem nebo bednou

6HC Plastová nádoba s vnější dřevěnou bednou

6HD1 Plastová nádoba s vnějším překližkovým sudem

6HD2 Plastová nádoba s vnější překližkovou bednou

6HG1 Plastová nádoba s vnějším lepenkovým sudem

6HG2 Plastová nádoba s vnější lepenkovou bednou

6HH1 Plastová nádoba s vnějším plastovým sudem

6HH2 Plastová nádoba s vnější bednou z tuhého plastu

6.1.4.19.1 Vnitřní nádoba

6.1.4.19.1.1 Požadavky uvedené v 6.1.4.8.1 a 6.1.4.8.4 až 6.1.4.8.7 se vztahují i na vnitřní plastové nádoby.

6.1.4.19.1.2 Plastová vnitřní nádoba musí zapadnout těsně do vnější části obalu, který nesmí mít žádné výstupky, které by mohly způsobit odírání plastu.

6.1.4.19.1.3 Nejvyšší objem vnitřní nádoby :

6HA1, 6HB1, 6HD1, 6HG1, 6HH1: 250 litrů;

6HA2, 6HB2, 6HC, 6HD2, 6HG2, 6HH2 : 60 litrů.

6.1.4.19.1.4 Nejvyšší čistá (netto) hmotnost :

6HA1, 6HB1, 6HD1, 6HG1, 6HH1: 400 kg;

6HA2, 6HB2, 6HC, 6HD2, 6HG2, 6HH2 : 75 kg.

6.1.4.19.2 Vnější plášť

6.1.4.19.2.1 Plastová nádoba s vnějším ocelovým nebo hliníkovým sudem 6HA1 nebo 6HB1; příslušné požadavky uvedené v 6.1.4.1 nebo 6.1.4.2, pokud je to vhodné, se vztahují na konstrukci vnějšího obalu

- 6.1.4.19.2.2 Plastová nádoba s vnějším ocelovým nebo z hliníkovým košem nebo bednou 6HA2 nebo 6HB2; příslušné požadavky uvedené v 6.1.4.14 se vztahují na konstrukci vnějšího obalu.
- 6.1.4.19.2.3 Plastová nádoba s vnější dřevěnou bednou 6HC; příslušné požadavky uvedené v 6.1.4.9 se vztahují na konstrukci vnějšího obalu.
- 6.1.4.19.2.4 Plastová nádoba s vnějším překližkovým sudem 6HD1; příslušné požadavky uvedené v 6.1.4.5 se vztahují na konstrukci vnějšího obalu.
- 6.1.4.19.2.5 Plastová nádoba s vnější překližkovou bednou 6HD2; příslušné požadavky uvedené v 6.1.4.10 se vztahují na konstrukci vnějšího obalu.
- 6.1.4.19.2.6 Plastová nádoba s vnějším lepenkovým sudem 6HG1; požadavky uvedené v 6.1.4.7.1 až 6.1.4.7.4 se vztahují na konstrukci vnějšího obalu.
- 6.1.4.19.2.7 Plastová nádoba s vnější lepenkovou bednou 6HG2; příslušné požadavky uvedené v 6.1.4.12 se vztahují na konstrukci vnějšího obalu.
- 6.1.4.19.2.8 Plastová nádoba s vnějším plastovým sudem 6HH1; požadavky uvedené v 6.1.4.8.1 až 6.1.4.8.6 se vztahují na konstrukci vnějšího obalu.
- 6.1.4.19.2.9 Plastová nádoba s vnější bednou z tuhého plastu 6HH2; požadavky uvedené v 6.1.4.13.1 a 6.1.4.13.4 až 6.1.4.13.6 se vztahují na konstrukci vnějšího obalu.

6.1.4.20 Kompozitní obaly (sklo, porcelán nebo kamenina)

- 6PA1 Nádoba s vnějším ocelovým sudem
- 6PA2 Nádoba s vnějším ocelovým košem nebo bednou
- 6PB1 Nádoba s vnějším hliníkovým sudem
- 6PB2 Nádoba s vnějším hliníkovým košem nebo bednou
- 6PC Nádoba s vnější dřevěnou bednou
- 6PD1 Nádoba s vnějším překližkovým sudem
- 6PD2 Nádoba s vnějším proutěným košem
- 6PG1 Nádoba s vnějším lepenkovým sudem
- 6PG2 Nádoba s vnější lepenkovou bednou
- 6PH1 Nádoba s vnějším obalem z pěnového plastu
- 6PH2 Nádoba s vnějším obalem z tuhého plastu

6.1.4.20.1 Vnitřní nádoba

- 6.1.4.20.1.1 Nádoby musí mít vhodný tvar (válcovitý nebo hruškovitý), musí být vyrobeny z materiálu dobré jakosti bez vad, které by mohly snížit jejich odolnost. Stěny musí být na všech místech dostatečně tlusté a bez vnitřních prutů.
- 6.1.4.20.1.2 Jako uzávěrů nádob musí být použito šroubových uzávěrů z plastu, zabroušených skleněných zátek nebo uzávěrů nejméně stejně účinných. Každá část uzávěru, která může přijít do styku s obsahem nádoby, musí být proti němu odolná. Je třeba věnovat pozornost zajištění uzávěrů aby lícovaly (s hrdlem) a byly těsné a byly vhodně zabezpečeny před uvolněním při přepravě. Jsou-li třeba uzávěry s odvětrávacím zařízením, musí vyhovět 4.1.1.8.
- 6.1.4.20.1.3 Nádoba musí být pevně zabezpečena ve vnějším obalu pomocí fixačních a / nebo absorpčních materiálů.
- 6.1.4.20.1.4 Nejvyšší vnitřní objem nádoby: 60 litrů.
- 6.1.4.20.1.5 Nejvyšší čistá (netto) hmotnost: 75 kg.

6.1.4.20.2 *Vnější plášť*

- 6.1.4.20.2.1 Nádoba s vnějším ocelovým sudem, 6PA1: příslušné požadavky uvedené v 6.1.4.1 se vztahují na konstrukci vnějšího obalu. Odnímatelné víko nutné u tohoto druhu obalu však může mít tvar poklopu.
- 6.1.4.20.2.2 Nádoba s vnějším ocelovým košem nebo bednou 6PA2: příslušné požadavky uvedené v 6.1.4.14 se vztahují na konstrukci vnějšího obalu. Jde-li o válcovité nádoby, vnější obal musí ve svislé poloze, převyšovat nádoby a jejich uzávěry. Obklopuje-li vnější koš nádobu hruškovitého tvaru a k této tvarově těsně přiléhá, musí se vnější obal opatřit ochranným krytem (poklopem).
- 6.1.4.20.2.3 Nádoba s vnějším hliníkovým sudem 6PB1: na konstrukci vnějšího obalu se vztahují příslušné požadavky uvedené v pododdílu 6.1.4.2 .
- 6.1.4.20.2.4 Nádoba s vnějším hliníkovým košem nebo bednou 6PB2: na konstrukci vnějšího obalu se vztahují příslušné požadavky uvedené v 6.1.4.14 .
- 6.1.4.20.2.5 Nádoba s vnější dřevěnou bednou 6PC: na konstrukci vnějšího obalu se vztahují příslušné požadavky uvedené v 6.1.4.9 .
- 6.1.4.20.2.6 Nádoba s vnějším s překližkovým sudem 6PD1: na konstrukci vnějšího obalu se vztahují příslušné požadavky uvedené v 6.1.4.5 .
- 6.1.4.20.2.7 Nádoba s vnějším proutěným košem 6PD2: proutěný koš musí být zhotoven z dobrého materiálu a musí být dobré kvality. Musí být opatřen ochranným krytem (poklopem), aby se zamezilo poškození nádob.
- 6.1.4.20.2.8 Nádoba s vnějším lepenkovým sudem 6PG1: na konstrukci vnějšího obalu se vztahují příslušné požadavky uvedené v 6.1.4.7.1 až 6.1.4.7.4
- 6.1.4.20.2.9 Nádoba s vnější lepenkovou bednou 6PG2: na konstrukci vnějšího obalu se vztahují příslušné požadavky uvedené v 6.1.4.12 .
- 6.1.4.20.2.10 Nádoba s vnějším obalem z pěnového nebo tuhého plastu (6PH1 nebo 6PH2): materiály obou těchto vnějších obalů musí splňovat příslušné požadavky uvedené v 6.1.4.13. Vnější obaly z tuhého plastu musí být zhotoveny z vysoko-hustotního polyetylénu, nebo z jiného srovnatelného plastu. Odnímatelné víko pro tento typ obalu však může mít tvar poklopu.

6.1.4.21 Skupinové obaly

Platí odpovídající požadavky pro vnější obaly podle 6.1.4.

POZNÁMKA: Pro vnitřní a vnější obaly se použijí příslušné pokyny pro balení uvedené v kapitole 4.1.

6.1.4.22 Obaly z jemného plechu

OA1 s neodnímatelným víkem

OA2 s odnímatelným víkem

- 6.1.4.22.1 Plech pro plášť a dna musí být z vhodné oceli; jeho tloušťka musí být přizpůsobena vnitřnímu objemu obalů a účelu jejich použití.
- 6.1.4.22.2 Spoje musí být svařované, nejméně dvojité zalemované při lemování (zadrápkování) nebo provedeny jiným způsobem zaručujícím stejný stupeň pevnosti a těsnosti.
- 6.1.4.22.3 Vnitřní povlaky ze zinku, cínu, laku apod. musí být odolné a musí být na celé ploše, včetně uzávěrů, pevně spojeny s ocelí.

- 6.1.4.22.4 Průměr otvorů pro plnění, vyprazdňování a odvodušnění v plástích nebo základnách obalů s neodnímatelným víkem (OA1) nesmí být větší než 7 cm. Obaly s většími otvory se považují za obaly s odnímatelným víkem (OA2).
- 6.1.4.22.5 Uzávěry obalů s neodnímatelným víkem (OA1) musí být buď šroubové nebo být zabezpečitelné šroubovacím zařízením nebo jiným, stejně účinným zařízením. Uzávěry obalů s odnímatelným víkem (OA2) musí být tak konstruovány a zajištěny, aby za normálních přepravních podmínek zůstaly pevně uzavřeny a obaly zůstaly těsné.
- 6.1.4.22.6 Nejvyšší vnitřní objem obalů: 40 litrů.
- 6.1.4.22.7 Nejvyšší čistá (netto) hmotnost: 50 kg.

6.1.5 Požadavky na zkoušky obalů

6.1.5.1 *Provedení a opakování zkoušek*

- 6.1.5.1.1 Konstrukční typ každého obalu musí být zkoušen, jak je uvedeno v 6.1.5, v souladu se stanovenými postupy odsouhlasenými příslušným orgánem povolujícím umístění značky a musí být tímto příslušným orgánem schválen.
- 6.1.5.1.2 Každý konstrukční typ obalu musí před použitím úspěšně projít zkouškami předepsanými v této kapitole. Konstrukční typ obalu je definován konstrukcí, rozměrem, materiálem a tloušťkou, způsobem výroby a systémem balení, ale mohou být zahrnuty různé úpravy povrchu. Zahrnuje též obaly, které se liší od konstrukčního typu pouze svou menší konstrukční výškou.
- 6.1.5.1.3 Zkoušky musí být opakovány na výrobních vzorcích sériově vyráběných obalů ve lhůtách stanovených příslušným orgánem. Pro takové zkoušky papírových a lepenkových obalů se příprava při okolních podmínkách považuje za rovnocennou požadavkům uvedeným v 6.1.5.2.3.
- 6.1.5.1.4 Zkoušky musí být též opakovány po každé úpravě, která mění konstrukci, materiál nebo způsob výroby obalu.
- 6.1.5.1.5 Příslušný orgán může povolit selektivní zkoušení obalů odlišujících se pouze nepatrně od již odzkoušeného konstrukčního typu, např. obaly obsahující vnitřní obaly menších rozměrů nebo nižší čisté (netto) hmotnosti, nebo obaly jako sudy, pytle a bedny, které jsou vyrobeny s malými zmenšeními vnějších rozměrů.
- 6.1.5.1.6 *(Vyhrazeno)*

POZNÁMKA: Pro podmínky sestavení různých vnitřních obalů ve vnějším obalu a přípustné změny pro vnitřní obaly, viz 4.1.1.5.1

- 6.1.5.1.7 Předměty nebo vnitřní obaly jakéhokoli typu na tuhé látky nebo na kapaliny mohou být společně uloženy a přepravovány bez zkoušení ve vnějším obalu za následujících podmínek:
- Vnější obal musel být úspěšně odzkoušen podle 6.1.5.3 s křehkými (např. skleněnými) vnitřními obaly obsahujícími kapaliny v parametrech pádové výšky pro obalovou skupinu I;
 - celková (brutto) hmotnost vnitřních obalů ve skupinovém balení nesmí přesáhnout polovinu celkové (brutto) hmotnosti vnitřních obalů použitých pro zkoušku pádem uvedenou výše v odstavci (a);
 - Tloušťka fixačního materiálu mezi vnitřními obaly a mezi vnitřními obaly a stěnou obalu nesmí být zmenšena pod odpovídající tloušťku v původně zkoušeném obalu; a jestliže byl použit samotný vnitřní obal při původní zkoušce, tloušťka fixace mezi vnitřními obaly nesmí být menší než tloušťka fixace mezi stěnou obalu a vnitřním obalem při původní zkoušce. Jestliže se použije buď menší počet, nebo menší vnitřní obaly (ve srovnání s vnitřními obaly použitými při zkoušce pádem), musí být použit dodatečný fixační materiál v dostatečně množství pro vyplnění volného prostoru;

- (d) Prázdný vnější obal musí být podroben s úspěchem zkoušce stohováním podle 6.1.5.6, vždy prázdný Celková hmotnost identických obalů musí být založena na celkové hmotnosti vnitřních obalů skupinového balení, použitých pro zkoušku pádem uvedenou výše v odstavci a) ;
- (e) Vnitřní obaly obsahující kapaliny musejí být úplně obklopeny dostatečným množstvím absorpčního materiálu k absorbování celkového obsahu kapalin ve vnitřních obalech;
- (f) Pokud vnější obal (skupinového balení) je určen pro vnitřní obaly obsahující kapaliny a není těsný nebo je určen pro vnitřní obaly obsahující tuhé látky a není prachotěsný, zajištění zábrany úniku jakékoli kapalné nebo tuhé látky musí být provedeno ve formě nepropustné vložky, vložkového plastového pytle, nebo jiných stejně účinných prostředků. V obalech obsahujících kapaliny musí být absorpční materiál požadovaný výše v odstavci e) umístěn mezi vnitřní obalové prostředky obsahujících kapalnou náplň;
- (g) Obaly musí být označeny UN kódem podle 6.1.3 jako odzkoušené pro obalovou skupinu I. v provedení pro skupinové obaly. Označená celková(brutto) hmotnost v kilogramech musí být součtem hmotnosti vnějšího obalu a jedné poloviny hmotnosti vnitřního(ch) obalu(ů), jak byly použity pro zkoušku pádem uvedenou výše v odstavci a). Takové značení obalu musí též obsahovat písmeno "V", jak je popsáno v 6.1.2.4.

6.1.5.1.8 Příslušný orgán může kdykoli požadovat důkaz, aby se zkouškami podle tohoto odstavce prokázalo, že sériově vyráběné obaly splňují požadavky zkoušek konstrukčního typu. Pro účely ověření musí být protokoly o takových zkouškách uchovávány.

6.1.5.1.9 Je-li z bezpečnostních důvodů požadována vnitřní úprava nebo povlak, musí si zachovat své ochranné vlastnosti i po zkouškách.

6.1.5.1.10 Na jednom vzorku smí být provedeno několik zkoušek, pokud to neovlivní platnost výsledků zkoušek a pokud to schválí příslušný orgán.

6.1.5.1.11 *Záchranné obaly*

Záchranné obaly (viz. 1.2.1) musí být zkoušeny a označeny UN kódem podle ustanovení vztahujících se na obaly obalové skupiny II určené pro přepravu tuhých látek nebo vnitřní obaly, s výjimkou těchto:

- (a) Látkou použitou při provádění zkoušek musí být voda a obaly musí být naplněny nejméně na 98 % jejich nejvyššího vnitřního objemu. Je dovoleno použít přídavného zatížení, jako jsou pytle s olověnými broky, aby bylo dosaženo požadované celkové hmotnosti kusu, pokud je umístěno tak, že nebudou ovlivněny výsledky zkoušek. Při provádění zkoušky pádem může být pádová výška měněna podle 6.1.5.3.5 b);
- (b) Obaly musí být kromě toho s úspěchem podrobeny zkoušce těsnosti při 30 kPa a výsledek této zkoušky musí být uveden ve zprávě o zkoušce (protokolu) požadované v 6.1.5.8; a
- (c) Obaly musí být označeny písmenem "T", jak je předepsáno v 6.1.2.4.

6.1.5.2 *Příprava obalů a jednotek balení pro zkoušky*

6.1.5.2.1 Zkoušky musí být provedeny s obaly připravenými jako k přepravě, včetně vnitřních obalů skupinových obalů. Vnitřní nebo samostatné nádoby nebo obaly jiné nežli pytle musí být naplněny nejméně do 98 % svého nejvyššího vnitřního objemu, jde-li o kapaliny, a nejméně do 95 %, jde-li o tuhé látky. Pytle budou plněny na maximální hmotnost pro kterou mohou být používány. Pro skupinové obaly, kde vnitřní obal je určen k přepravě kapalin nebo tuhých látek, se vyžaduje samostatné provedení zkoušky pro obojí obsahy, tj. kapaliny a tuhé látky. Látky nebo předměty, které mají být přepravovány v obalech, smějí být nahrazeny jinými látkami nebo předměty, pokud by tím nedošlo ke zkrácení výsledků zkoušek. Jsou-li tuhé látky nahrazeny jinými látkami, musí mít tyto látky stejné fyzikální vlastnosti (hmotnost, velikost zrna atd.) jako látky, které mají být přepravovány. Je dovoleno použít přivažky, jako sáčky s olověným šrotem, aby se dosáhlo potřebné celkové hmotnosti kusu, pokud jsou umístěny tak, že neovlivní výsledky zkoušky.

6.1.5.2.2 Použije-li se při zkoušce pádem u kapalných látek jiná kapalná látka, musí mít tato látka podobnou relativní hustotu a viskozitu jako látka, která se má přepravovat. Za podmínek stanovených v 6.1.5.3.5 smí být pro tyto zkoušky pádem použito i vody.

6.1.5.2.3 Obaly z papíru nebo z lepenky musí být nejméně po dobu 24 hodin kondicionovány v prostředí, jehož teplota a relativní vlhkost jsou kontrolovány. Je možno volit jednu ze tří možností. Přednostně se doporučuje 23 ± 2 °C a 50 ± 2 % relativní vlhkosti vzduchu. Další dvě možnosti jsou 20 ± 2 °C a 65 ± 2 % nebo 27 ± 2 °C a 65 ± 2 % relativní vlhkosti vzduchu.

POZNÁMKA: Průměrné hodnoty se musí pohybovat uvnitř těchto mezí. Krátkodobé výkyvy a limity měření mohou být příčinou, že jednotlivá měření se pohybují v rozmezí ± 5 % relativní vlhkosti bez znatelného zhoršení reprodukovatelnosti zkoušky.

6.1.5.2.4 (Vyhrazeno)

6.1.5.2.5 Sudy a kanystry z plastu podle 6.1.4.8 a, pokud je to nutné, kompozitní obaly (plast) podle 6.1.4.19 musí být po dobu 6 měsíců skladovány při teplotě okolí, aby se prokázala jejich dostatečná chemická snášenlivost s kapalnými látkami. Po tuto dobu musí zůstat zkušební vzorky naplněny látkami, které se v těchto obalech mají přepravovat.

Během prvních a posledních 24 hodin skladování musí být zkušební vzorky postaveny uzávěrem dolů. U obalů opatřených odvětrávacím zařízením se to však provede vždy jen na dobu 5 minut. Po tomto skladování musí být zkušební vzorky podrobeny zkouškám předepsaným v 6.1.5.3 až 6.1.5.6.

Je-li známo, že se pevnostní vlastnosti plastu vnitřních nádob kompozitních obalů (plast) působením plnicí látky podstatně nezmění, není nezbytná kontrola, zda je chemická snášenlivost dostačující.

Za podstatné změny pevnostních vlastností se považují:

- (a) zřetelné zkřehnutí;
- (b) značné snížení elasticity, pokud není spojeno alespoň s úměrným zvýšením prodloužení při zatížení.

Pokud chování plastu bylo stanoveno jinými prostředky, výše uvedená zkouška snášenlivosti může být vypuštěna. Takové postupy musí být nejméně rovnocenné výše uvedené zkoušce snášenlivosti a musí být uznány příslušným orgánem .

POZNÁMKA: Pro plastové sudy a kanystry a kompozitní obaly (plast) vyrobené z polyetylénu, viz též níže 6.1.5.2.6 .

6.1.5.2.6 Pro polyethylenové sudy a kanystry podle pododdílu 6.1.4.8 a pokud je to nutné, polyethylenové kompozitní obaly podle pododdílu 6.1.4.19, může být chemická snášenlivost s plnicími kapalinami přizpůsobená podle pododdílu 4.1.1.21 ověřena následovně se standardními kapalinami (viz oddíl 6.1.6).

Standardní kapaliny jsou zástupci pro procesy zhoršování vlastností polyetylénu, jako je měknutí v důsledku nabobtnání, praskání pod napětím, molekulární degradace a jejich kombinace. Dostatečná chemická snášenlivost těchto obalů může být prokázána skladováním s vhodnou standardní kapalinou po dobu tří týdnů při teplotě 40 °C; je-li jako standardní kapalina použita voda, není důkaz dostatečné chemické snášenlivosti nutný. Skladování se nevyžaduje pro zkušební vzorky, které byly použity pro zkoušku stohováním v případě standardních kapalin“ buďto „smáčecí roztok“ anebo „kyselina octová“.

Během prvních a posledních 24 hodin skladování musí být zkušební vzorky postaveny uzávěrem dolů. U obalů opatřených odvětrávacím zařízením se to však provede vždy jen na dobu 5 minut. Po tomto skladování musí být zkušební vzorky podrobeny zkouškám předepsaným v 6.1.5.3 až 6.1.5.6.

Zkouška snášenlivosti pro terc-butylhydroperoxid s obsahem více než 40 % peroxidu a kyselin peroxyoctových třídy 5.2 nesmí být prováděna použitím standardních kapalin. Pro tyto látky musí být

důkaz dostatečné chemické snášenlivosti zkušebních vzorků prováděn s látkami, které jsou určeny k přepravě, v průběhu skladovacího období šesti měsíců při okolní teplotě.

Výsledky postupu dle tohoto odstavce pro obaly z polyetylénu mohou být uznány také pro stejný konstrukční typ, jehož vnitřní povrch je fluorován.

6.1.5.2.7 Pro obaly vyrobené z polyetylénu, jak je specifikováno v 6.1.5.2.6, které prošly zkouškou v 6.1.5.2.6, mohou být rovněž schváleny plnicí látky jiné nežli látky přiřazené podle 4.1.1.21. Toto schválení musí být založeno na laboratorních zkouškách ověřujících, že vliv těchto plnicích látek na zkušební vzorky je menší než vliv příslušné zkušební kapaliny s přihlédnutím k příslušným procesům zhoršování vlastností. Vzhledem k relativní hustotě a tenzi par je nutno použít stejné podmínky, jak jsou uvedeny ve 4.1.1.21.2.

6.1.5.2.8 Pokud se pevnostní vlastnosti plastů vnitřních obalů skupinového obalu působením plnicí látky podstatně nezmění, není nezbytný důkaz chemické snášenlivosti. Za podstatné změny pevnostních vlastností se považují:

- (a) zřetelné zkřehnutí;
- (b) značné poklesy elasticity, pokud není spojeno alespoň s úměrným zvýšením prodloužení.

6.1.5.3 Zkouška volným pádem⁴

6.1.5.3.1 *Počet zkušebních vzorků (na konstrukční typ a výrobce) a orientace zkušební vzorku pro zkoušku pádem:*

Pro jiné zkoušky než pádem naplocho se musí těžiště nacházet na svislici procházející bodem nárazu.

Pokud je možných více než jedna orientace vzorku pro danou zkoušku pádem, musí být použita orientace, při níž nejpravděpodobněji vznikne poškození obalu.

Obal	Počet zkušebních vzorků	Orientace zkušební vzorku při zkoušce pádem
(a) Sudy ocelové, hliníkové, z jiného kovu než ocel a hliník Kanystry ocelové, hliníkové Sudy lepenkové Sudy a kanystry plastové Kompozitní obaly ve tvaru sudu Obaly z jemného plechu	Šest (tři pro každý typ pádu)	První typ pádu (se třemi zkušebními vzorky): obal musí dopadnout na dopadovou plochu diagonálně na hranu dna nebo, nemá-li jej, na obvodový šev nebo na obvod dna. Druhý typ pádu (se třemi dalšími zkušebními vzorky): obal musí narazit na dopadovou plochu nejslabším místem, které nebylo při první zkoušce pádem zkoušeno, např. uzávěr, nebo u některých válcových sudů, na podélný svar pláště sudu.
(b) Bedny z přírodního dřeva Bedny překližkové Bedny z rekonstituovaného dřeva Bedny lepenkové Bedny plastové Bedny ocelové nebo hliníkové Kompozitní obaly ve tvaru bedny	Pět (jeden pro každý pád)	1. vzorek pád: na plochu dna 2. vzorek pád na plochu víka (na horní část) 3. vzorek pád na bok (na nejdelší stranu) 4. vzorek pád: na čelo (na krátkou stranu) 5. vzorek pád na roh

⁴ Viz norma ISO 2248.

(c) Pytle – jednovrstvé s postranním švem	Tři (tři pády u každého pytle)	První pád: naplocho na širokou stranu Druhý pád naplocho na úzkou stranu Třetí pád na dno pytle
(d) Pytle – jednovrstvé bez postranního švu nebo vícevrstvé	Tři (dva pády u každého pytle)	První pád naplocho na širokou stranu Druhý pád na dno pytle
(e) Kompozitní obaly (sklo, kamenina nebo porcelán), označené znakem "RID/ADR" podle pododdílu 6.1.3.1 a) ii) a které jsou ve tvaru sudu nebo bedny	Tři (jeden pro jeden pád)	Diagonálně na hranu dna nebo, na obvodový šev dna nebo na obvod dna

6.1.5.3.2 Zvláštní příprava zkušebních vzorků pro zkoušku pádem

Teplota zkušební vzorku a jeho obsahu musí být redukována na -18 °C nebo níže pro:

- (a) plastové sudy (viz 6.1.4.8);
- (b) plastové kanystry (viz 6.1.4.8);
- (c) plastové bedny kromě beden z pěnového plastu (viz 6.1.4.13);
- (d) kompozitní obaly (plast) (viz 6.1.4.19); a
- (e) skupinové obaly s vnitřními obaly z plastu, jinými než plastové sáčky, určené pro tuhé látky a předměty.

Pokud jsou zkušební vzorky připraveny tímto způsobem, kondicionování podle 6.1.5.2.3 může být vypuštěno. Zkušební kapaliny musejí být udržovány v tekutém stavu, pokud je to nezbytné přidáním mrazuvzdorných látek.

6.1.5.3.3 Obaly s odnímatelným víkem, určené pro kapaliny, nesmějí být podrobeny pádům dříve než 24 hodin po plnění a uzavření, aby se vzala v úvahu jakákoliv možná změna vlastností těsnění.

6.1.5.3.4 Dopadová plocha

Dopadová plocha musí mít nepružný a horizontální povrch a musí být:

- dostatečně celistvá (integrální), aby se s ní nedalo pohybovat,
- hladká a bez místních poškození, které by mohly ovlivnit výsledky zkoušek,
- dostatečně pevná, nedeformovatelná za podmínek zkoušky a aby nebyla během zkoušek náchylná k poškození; a
- dostatečně velká, aby bylo zajištěno, že zkoušený obal dopadne na její povrch.

6.1.5.3.5 Výška pádu

Pro tuhé látky a kapaliny, jestliže se zkouška provádí s touhou látkou nebo kapalinou, která bude přepravována nebo s jinou látkou mající v podstatě tytéž fyzikální charakteristiky.

Obalová skupina I	Obalová skupina II	Obalová skupina III
1,8 m	1,2 m	0,8 m

Pro kapalné látky v samostatných obalech a pro vnitřní obaly skupinových obalů, jestliže se zkouška provádí s vodou:

POZNÁMKA: Pojem voda znamená vodu/nemrznoucí směs s minimální hustotou 0,95 při požadavku na teplotu zkoušky -18 °C.

- (a) pro látky, které mají být přepravovány, jejichž relativní hustota nepřesahuje 1,2:

Obalová skupina I	Obalová skupina II	Obalová skupina III
1,8 m	1,2 m	0,8 m

- (b) pro látky, které mají být přepravovány, jejichž relativní hustota přesahuje 1,2 se výška pádu vypočte na základě relativní hustoty látky d) určené k přepravě, zaokrouhlené na první desetinné místo takto:

Obalová skupina I	Obalová skupina II	Obalová skupina III
d x 1,5 (m)	d x 1,0 (m)	d x 0,67 (m)

- (c) pro obaly z jemného plechu označené znakem "RID/ADR" podle 6.1.3.1 (a) (ii) určené pro přepravu látek s viskozitou při 23°C vyšší než 200 mm²/s (což odpovídá výtokové době 30 sekund z normalizovaného kelímku ISO s výtokovou tryskou o vnitřním průměru 6 mm podle normy ISO 2431:1993);

- (i) jejichž relativní hustota nepřesahuje 1,2:

Obalová skupina II	Obalová skupina III
0,6 m	0,4 m

- (ii) pro látky, které mají být přepravovány, jejichž relativní hustota (d) přesahuje 1,2, se výška pádu vypočte na základě relativní (d) hustoty látky, která se má přepravovat, zaokrouhlené na první desetinné místo takto:

Obalová skupina II	Obalová skupina III
d x 0,5 m	d x 0,33 m

6.1.5.3.6 Kritéria pro vyhovění zkoušce

- 6.1.5.3.6.1 Každý obal obsahující kapalinu musí zůstat po vyrovnání vnitřního a vnějšího tlaku těsný, kromě vnitřních obalů skupinových obalů a kromě vnitřních nádob kompozitních obalů (sklo, porcelán nebo kamenina) označených znakem "RID/ADR" podle 6.1.3.1 (a) (ii), kde není nutné vyrovnání tlaků.
- 6.1.5.3.6.2 Pokud je obal na tuhé látky podroben zkoušce pádem a jeho horní část dopadne na dopadovou plochu, vyhověl zkušební vzorek zkoušce, jestliže celý obsah vnitřního(ch) obalu (ů) (např. plastový sáček) nebo vnitřní nádoby obsah úplně zadržel, i když uzávěr vnějšího obalu zatímco je funkční, není již prachotěsný.
- 6.1.5.3.6.3 Obal nebo vnější obal kompozitního nebo skupinového obalu nesmí vykazovat žádná poškození, která by mohla ovlivnit bezpečnost během přepravy. Vnitřní nádoby, vnitřní obaly nebo předměty musí zůstat zcela uvnitř vnějšího obalu a nesmí tam dojít k žádnému úniku látky z vnitřní(ch) nádob(y) nebo vnitřního(ch) obalu(ů).
- 6.1.5.3.6.4 Ani vnější vrstva pytle ani vnější obal nesmí vykazovat žádná poškození, která by mohla ovlivnit bezpečnost během přepravy.
- 6.1.5.3.6.5 Nepatrný únik obsahu z uzávěru(ů) při nárazu se nepovažuje za selhání obalu za předpokladu, že následně už nedochází k žádnému úniku.

- 6.1.5.3.6.6 Nesmí dojít k protržení obalů obsahujících věci třídy 1, které by mohlo zapříčinit únik uvolněných výbušných látek nebo předmětů z vnějšího obalu.

6.1.5.4 **Zkouška těsnosti**

Zkouška těsnosti musí být provedena u všech konstrukčních typů obalů určených pro kapalné látky; není však nutná u:

- vnitřních obalů skupinových obalů;
- vnitřních nádob kompozitních obalů (sklo, porcelán nebo kamenina) označených znakem "RID/ADR" podle 6.1.3.1 (a) (ii);
- obalů z jemného plechu označených znakem "RID/ADR" podle 6.1.3.1 (a) (ii) určených pro látky, jejichž viskozita při 23°C je větší než 200 mm²/s;

6.1.5.4.1 *Počet zkušebních vzorků:* tři zkušební vzorky od každého konstrukčního typu a výrobce.

6.1.5.4.2 *Zvláštní příprava zkušebních vzorků pro zkoušku:* Uzávěry opatřené odvodušňovacím ventilem musí být buď nahrazeny podobnými uzávěry bez odvodušňovacího ventilu nebo uzávěry musejí být neprodyšně uzavřeny.

6.1.5.4.3 *Zkušební postup a použitý tlak vzduchu:* obaly včetně jejich uzávěrů se musí ponořit pod vodu a udržovat tam po dobu 5 minut při současném udržování vnitřního přetlaku; způsob, jakým se drží pod vodou, nesmí ovlivnit výsledky zkoušky.

Použitý tlak vzduchu (přetlak) musí být:

Obalová skupina I	Obalová skupina II	Obalová skupina III
Nejméně 30 kPa (0.3 baru)	Nejméně 20 kPa (0.2 baru)	Nejméně 20 kPa (0.2 baru)

Mohou se také použít jiné nejméně stejně účinné postupy.

6.1.5.4.4 *Kritérium pro vyhovění zkoušce:* Nesmí být zpozorován žádný únik vzduchu.

6.1.5.5 **Zkouška vnitřním (hydraulickým) tlakem**

6.1.5.5.1 *Obaly pro zkoušku*

Zkouška vnitřním hydraulickým tlakem (musí být provedena u všech konstrukčních typů obalů z oceli, plastů a kompozitních obalů určených pro kapaliny. Avšak tato zkouška se nevyžaduje se u:

- vnitřních obalů skupinových obalů;
- vnitřních nádob kompozitních obalů (sklo, porcelán nebo kamenina) označených znakem "RID/ADR" podle 6.1.3.1 (a) (ii);
- obalů z jemných plechů označených znakem "RID/ADR" podle 6.1.3.1 (a) (ii) určených pro látky, jejichž viskozita při 23°C je větší než 200 mm²/s;

6.1.5.5.2 *Počet zkušebních vzorků:* tři zkušební vzorky od každého konstrukčního typu a výrobce.

6.1.5.5.3 *Zvláštní příprava zkušebních vzorků pro zkoušku:* Každý odvodušňovací ventil musí být buď nahrazeny obdobnými nepropustnými uzávěry nebo ventily musí být neprodyšně uzavřeny.

6.1.5.5.4 *Zkušební metoda a použitý tlak:* obaly z kovu a kompozitní obaly (sklo, porcelán nebo kamenina) včetně jejich uzávěrů musí být podrobeny zkušebnímu tlaku po dobu 5 minut. Plastové obaly

a kompozitní obaly (plast) musí být podrobeny zkušebnímu tlaku po dobu 30 minut. Tento tlak je tlakem uvedeným ve značení požadovaném v 6.1.3.1 (d). Způsob podepření obalů nesmí zkreslit výsledky zkoušky. Tlak se musí zvyšovat postupně a bez rázů; zkušební tlak musí být po celou dobu trvání zkoušky konstantní. Hydraulický tlak (přetlak) stanovený jednou z dále uvedených metod musí být:

- (a) nejméně celkový změřený přetlak v obalu (tj. tenze par naplněné látky a parciální tlak vzduchu nebo jiných inertních plynů, minus 100 kPa) při 55 °C, vynásobený koeficientem bezpečnosti 1,5; tento celkový přetlak se musí určit pro nejvyšší stupeň plnění podle 4.1.1.4 a plnicí teplotu 15 °C; nebo
- (b) nejméně 1,75 násobek tenze par naplněné látky při 50 °C, minus 100 kPa, avšak nejmenší zkušební tlak 100 kPa; nebo
- (c) nejméně 1,5 násobek tenze par naplněné látky při 55 °C, minus 100 kPa, avšak nejmenší zkušební tlak 100 kPa.

6.1.5.5.5 Navíc obaly určené pro látky obalové skupiny I musí být zkoušeny nejmenším zkušebním tlakem 250 kPa (přetlak) po dobu 5 nebo 30 minut v závislosti na materiálu konstrukce obalu.

6.1.5.5.6 *Kritérium pro vyhovění zkoušce:* nesmí dojít k žádnému úniku.

6.1.5.6 Zkouška stohováním

Všechny konstrukční typy obalů, s výjimkou pytlů a nestohovatelných kompozitních obalů (sklo, porcelán nebo kamenina), označených znakem "RID/ADR" podle pododdílu 6.1.3.1 (a) (ii) musejí být podrobeny zkoušce stohováním.

6.1.5.6.1 *Počet zkušebních vzorků:* tři zkušební vzorky od každého konstrukčního typu a výrobce.

6.1.5.6.2 *Zkušební postup:* zkušební vzorek musí být vystaven zatížení vrchní plochy zkušebního vzorku o stejné celkové hmotnosti totožných kusů které by na něj mohly být v průběhu přepravy nastohovány; pokud zkušební vzorky obsahují jinou než nebezpečnou kapalinu s relativní hustotou odlišnou od kapaliny určené k přepravě, zatížení musí být vypočteno vzhledem k poslednímu. Minimální výška stohování, včetně zkušebního vzorku, musí být 3 m. Zkouška musí trvat 24 hodiny, s výjimkou plastových sudů a kanystrů a kompozitních obalů - (plast) 6HH1 a 6HH2 určených pro kapaliny, které musí být podrobeny zkoušce stohováním po dobu 28 dnů při teplotě nejméně 40 °C.

Pro zkoušku dle 6.1.5.2.5 se použije originální plnicí látka. Pro zkoušku dle 6.1.5.2.6 se zkouška stohováním provede se standardní kapalinou.

6.1.5.6.3 *Kritéria pro vyhovění zkoušce:* žádný ze zkušebních vzorků se nesmí stát netěsným. U kompozitních obalů nebo skupinových obalů nesmí dojít k úniku naplněné látky z vnitřní nádoby nebo vnitřního obalu. Žádný zkušební vzorek nesmí vykazovat poškození, která by mohla zhoršit bezpečnost během přepravy, ani deformace, které by mohly snížit jeho odolnost nebo způsobit nestabilitu, jsou-li obaly stohovány. Plastové obaly musí být před ohodnocením ochlazeny na okolní teplotu.

6.1.5.7 Dodatková zkouška propustnosti pro plastové sudy a kanystry podle 6.1.4.8 a pro kompozitní obaly (plast) podle 6.1.4.19 určené pro přepravu kapalin s bodem vzplanutí ≤ 60 °C, s výjimkou obalů 6HA1.

U obalů z polyetylénu se tato zkouška provede jen tehdy, mají-li být schváleny pro přepravu benzenu, toluenu, xylenu nebo směsi a přípravků obsahujících tyto látky.

6.1.5.7.1 *Počet zkušebních vzorků:* tři obaly od každého konstrukčního typu a výrobce.

6.1.5.7.2 *Zvláštní příprava zkušebního vzorku pro zkoušku:* Zkušební vzorky se předem uskladní s originální náplní podle 6.1.5.2.5 nebo u obalů z polyetylénu se standardní kapalinou - směs uhlovodíků (White spirit) podle 6.1.5.2.6.

6.1.5.7.3. *Zkušební postup:* Zkušební vzorky naplněné látkou, pro kterou má být obal schválen, se před a po 28 denním skladování při teplotě 23 °C a 50 % relativní vlhkosti vzduchu zváží. U obalů

z polyetylénu smí být zkouška provedena se standardní kapalinou směsi uhlovodíků (White spirit) namísto benzenu, toluenu nebo xylenu.

6.1.5.7.4 *Kritérium pro vyhovění zkoušce:* propustnost nesmí být větší než 0,008 g/l.h.

6.1.5.8 *Zkušební protokol*

6.1.5.8.1 O provedených zkouškách musí být sepsán zkušební protokol, obsahující minimálně následující údaje a musí být k dispozici uživatelům obalů

1. Název a adresa zkušebny;
2. Jméno a adresa žadatele, pokud je to vhodné;
3. Jednoznačná identifikace protokolu o zkoušce (např. číslo);
4. Datum protokolu o zkoušce;
5. Výrobce obalu;
6. Popis konstrukčního typu obalu (např. rozměry, materiály, uzávěry, tloušťka atd.) včetně způsobu výroby (např. vyfukování lisování, atd.), který může zahrnovat výkres(y) a/nebo fotografií(e);
7. Nejvyšší vnitřní objem;
8. Charakteristiky zkušebních náplní, např. viskozita a relativní hustota pro kapaliny a rozměry částic pro tuhé látky;
9. Popis zkoušky a výsledky;
10. Protokol o zkoušce musí být podepsán s uvedením jména a funkce podepsaného.

6.1.5.8.2 Protokol o zkoušce musí obsahovat prohlášení, že obal určený pro přepravu byl odzkoušen podle příslušných požadavků tohoto oddílu a že použití jiných metod balení nebo komponent, může mít za následek jeho neplatnost. Kopie protokolu o zkoušce musí být dána k dispozici příslušnému orgánu.

6.1.6. *Standardní kapaliny pro důkaz chemické snášenlivosti obalů a IBC z polyetylénu podle 6.1.5.2.6, popřípadě 6.5.6.3.5*

6.1.6.1 Pro tyto plasty se používají následující standardní kapaliny:

- (a) **Smáčecí roztok** pro látky, které u polyetylénu pod napětím silně působí na vznik trhlin, zejména pro všechny roztoky a přípravky obsahující smáčecí prostředky.

Musí se použít vodný roztok 1 % alkylbenzensulfonátu, nebo vodný roztok 5 % nonylfenoethoxylátu, který byl předtím skladován nejméně 14 dní při teplotě 40 °C, předtím než byl poprvé použit pro zkoušky. Povrchové napětí tohoto roztoku musí být 31 až 35 mN/m při 23 °C.

Pro zkoušku stohováním se bere za základ relativní hustota nejméně 1,20.

Je-li prokázána dostatečná chemická snášenlivost se smáčecím roztokem, nevyžaduje se zkouška snášenlivosti s kyselinou octovou.

Pro originální náplně způsobující v polyetylénu trhliny pod napětím, který je odolný působení smáčecího prostředku, může být důkazem odpovídající chemické snášenlivosti provedení předběžného třítydenního skladování, avšak s originální náplní při 40 °C podle 6.1.5.2.6.

- (b) **Kyselina octová** pro látky a přípravky, které u polyetylénu způsobují za napětí vznik trhlin, zejména pro monokarboxylové kyseliny a jednomocné alkoholy.

Musí se použít kyselina octová o koncentraci 98 až 100 %. Relativní hustota = 1,05.

Pro zkoušku stohováním se bere za základ relativní hustota nejméně 1,1.

Pro originální náplně způsobující že polyetylén nabobtnává více než působením kyseliny octové tak, že hmotnost polyetylénu se zvýší až o 4 %, může být důkazem odpovídající chemické snášenlivosti provedení předběžného třítýdenního skladování, avšak s originální náplní při 40 °C podle 6.1.5.2.6.

- (c) ***n*-butylacetát/smáčecí roztok nasycený *n*-butylacetátem** pro látky a přípravky, které nabobtnávají polyetylén tak, že se hmotnost polyetylénu zvýší nejvýše asi o 4 %, a které současně způsobují vznik trhlin za napětí, zejména pro prostředky k ochraně rostlin, tekuté barvy a estery. Pro předběžné skladování podle 6.1.5.2.6 se musí použít *n*-butylacetát o koncentraci 98 až 100 %.

Pro zkoušku stohováním v souladu s 6.1.5.6 se musí použít zkušební kapalina sestávající z 1 až 10 % vodného roztoku smáčecího prostředku smíšeného s 2 % *n*-butylacetátu podle předcházejícího odstavce a).

Pro zkoušku stohováním se bere za základ relativní hustota nejméně 1,0.

U plnicích látek, jejichž působením polyetylén nabobtnává více než působením *n*-butylacetátu a tak, že se hmotnost polyetylénu zvýší nejvýše o 7,5 %, smí být odpovídající chemická snášenlivost prokázána po předběžném třítýdenním skladování při 40 °C podle 6.1.5.2.6, avšak s originální náplní.

- (d) ***Směs uhlovodíků (White spirit)*** pro látky a přípravky, které působí nabobtnávání polyetylénu, zejména pro uhlovodíky, estery a ketony.

Musí se použít směs uhlovodíků s rozmezím bodu varu od 160 do 200 °C, relativní hustotou 0,78 až 0,80, bodem vzplanutí vyšším než 50 °C a obsahem aromatických uhlovodíků od 16 do 21 %.

Pro zkoušku stohováním se bere za základ relativní hustota nejméně 1,0.

U plnicích látek, které nabobtnávají polyetylén tak, že se hmotnost polyetylénu zvýší o více než 7,5 %, smí být přiměřená chemická snášenlivost prokázána po třítýdenním předběžném skladování při 40 °C podle 6.1.5.2.6, avšak s originální plnicí látkou.

- (e) ***Kyselina dusičná*** pro všechny látky a přípravky, které působí na polyetylén oxidačně a způsobují molekulární degradaci (a následně snižují molekulární hmotnost) stejnou nebo menší než 55 % kyselina dusičná.

Musí se použít kyselina dusičná o koncentraci nejméně 55 %.

Pro zkoušku stohováním se bere za základ relativní hustota nejméně 1,4.

U originálních náplní, které oxidují silněji než 55 % kyselina dusičná, nebo které snižují molekulární hmotnost, se musí postupovat podle 6.1.5.2.5.

Doba životnosti obalu musí být v takových případech stanovena pozorováním stupně poškození (např. dva roky pro kyselinu dusičnou o koncentraci nejméně 55 %).

- (f) ***Voda*** pro látky, které nenapadají polyetylén způsoby uvedenými v předchozích odstavcích a) až e), zejména pro anorganické kyseliny a louhy, vodné roztoky solí, vícemocné alkoholy a organické látky ve vodném roztoku.

Pro zkoušku stohováním se bere za základ relativní hustota nejméně 1,2.

Zkouška konstrukčního typu s vodou se nevyžaduje, pokud je prokázána přiměřená chemická snášenlivost se smáčecím roztokem nebo s kyselinou dusičnou.

KAPITOLA 6.2

POŽADAVKY NA KONSTRUKCI A ZKOUŠENÍ TLAKOVÝCH NÁDOB, AEROSOLOVÝCH ROZPRAŠOVAČŮ, MALÝCH NÁDOBEK OBSAHUJÍCÍCH PLYN (PLYNOVÝCH KARTUŠÍ) A ZÁSObNÍKŮ DO PALIVOVÝCH ČLÁNKŮ OBSAHUJÍCÍCH ZKAPALNĚNÝ HOŘLAVÝ PLYN

POZNÁMKA: *Aerosolové rozprašovače, malé nádoby obsahující plyn (plynové kartuše) a zásobníky do palivových článků obsahující zkapalněný hořlavý plyn nejsou předmětem požadavků oddílů 6.2.1 až 6.2.5.*

6.2.1 Všeobecné požadavky

6.2.1.1 Konstrukce a výroba

6.2.1.1.1 Tlakové nádoby a jejich uzávěry musí být zkonstruovány, vyrobeny, odzkoušeny a vybaveny takovým způsobem, aby vydržely všechny podmínky, včetně únavy, kterým budou vystaveny během normálních podmínek přepravy a používání.

6.2.1.1.2 *(Vyhrazeno)*

6.2.1.1.3 V žádném případě nesmí být minimální tloušťka stěny menší nežli ta, která je specifikovaná v technických normách pro konstrukci a výrobu.

6.2.1.1.4 Pro svařované tlakové nádoby se smějí použít pouze kovy dobře svařitelné.

6.2.1.1.5 Zkušební tlak láhví, trubkových nádob, tlakových sudů a svazků láhví musí splňovat pokyn pro balení P200 pododdílu 4.1.4.1 nebo pro chemikálie pod tlakem pokyn pro balení P206 pododdílu 4.1.4.1. Zkušební tlak pro uzavřené kryogenní nádoby musí splňovat podmínky pokynu pro balení P203 pododdílu 4.1.4.1. Zkušební tlak zásobníkového systému s hydridem kovu musí splňovat podmínky pokynu pro balení P 205 pododdílu 4.1.4.1.

6.2.1.1.6 Tlakové nádoby uspořádané do svazků musí být strukturálně podepřeny a musí držet pohromadě jako jednotka. Tlakové nádoby musí být zabezpečeny způsobem, který zabraňuje v pohybu ve vztahu ke strukturálnímu uspořádání a k pohybu, který by měl za následek vznik lokálních koncentrací nebezpečných napětí. Různá příslušenství (např. sběrné potrubí, ventily a měřiče tlaku) musí být zkonstruována a vyrobena tak, aby byla chráněna před poškozením nárazem a před silami, kterým jsou při přepravě normálně vystavena. Sběrná a rozdělovací potrubí musejí mít nejméně stejný zkušební tlak jako láhve. Pro toxické zkapalněné plyny, musí mít každá tlaková nádoba izolační ventil, který zajistí, že každá tlaková nádoba může být plněna samostatně a dále zaručí, že během přepravy nedojde ke vzájemné výměně obsahu tlakových nádob.

POZNÁMKA: *Toxické zkapalněné plyny mají klasifikační kódy 2T, 2TF, 2TC, 2TO, 2TFC nebo 2TOC.*

6.2.1.1.7 Je třeba se vyvarovat styku rozdílných kovů, který může mít za následek poškození vlivem galvanického působení.

6.2.1.1.8 *Dodatečné požadavky na konstrukci uzavřených kryogenních nádob pro hluboce zchlazené zkapalněné plyny.*

6.2.1.1.8.1 Mechanické vlastnosti použitého kovu musí být stanoveny pro každou tlakovou nádobu; rovněž musí být stanovena vrubová houževnatost a koeficient ohybu.

POZNÁMKA: *Pro vrubovou houževnatost jsou detaily zkušebních požadavků, které je možno použít, uvedeny v 6.8.5.3.*

- 6.2.1.1.8.2 Tlakové nádoby musí být tepelně izolovány. Tepelná izolace musí být chráněna proti nárazu pomocí izolačního pláště. Jestliže prostor mezi tlakovou nádobou a izolačním pláštěm je zbaven vzduchu (vakuová izolace) musí být plášť zkonstruován tak, aby bez trvalé deformace vydržel vnější tlak nejméně 100 kPa (1 bar), vypočtený podle uznaného technického kódu, nebo vypočtený kritický tlak, při kterém dojde ke zhroutilí, ne menší než 200 kPa (2 bary) přetlaku. Jestliže je plášť uzavřený tak, že je plynotěsný (např. v případě vakuové izolace), musí být vybaven zařízením, které má zabránit, v případě neodpovídající plynotěsnosti tlakové nádoby nebo jejího příslušenství, vzniku jakéhokoli nebezpečného tlaku v izolační vrstvě. Zařízení musí zabránit pronikání vlhkosti do izolace.
- 6.2.1.1.8.3 Uzavřené kryogenní nádoby určené pro přepravu hluboce zchlazených zkapalněných plynů s bodem varu pod $-182\text{ }^{\circ}\text{C}$ při atmosférickém tlaku nesmějí obsahovat materiály, které by mohly nebezpečným způsobem reagovat s kyslíkem nebo s atmosférou obohacenou kyslíkem, pokud jsou umístěny v částech tepelné izolace, kde existuje riziko styku s kyslíkem nebo s kapalinou obohacenou kyslíkem.
- 6.2.1.1.8.4 Uzavřené kryogenní nádoby musí být zkonstruovány a vyrobeny s vhodným zdvihacím a zabezpečovacím zařízením.

6.2.1.1.9 *Dodatečné požadavky na konstrukci tlakových nádob pro acetylen*

Tlakové nádoby pro UN 1001 acetylen, rozpuštěný a UN 3374 acetylen, bez rozpouštědla musí být naplněny porézním materiálem, rovnoměrně rozloženým a typu, který vyhovuje předpisům a zkouškám specifikovaným příslušným orgánem a který:

- (a) je snášlivý s tlakovou nádobou a nevytváří škodlivé nebo nebezpečné sloučeniny buďto s acetylenem, nebo s rozpouštědlem v případě UN 1001; a
- (b) je schopný zabránit šíření rozkladu acetyleny v porézním materiálu.

V případě UN 1001 se musí rozpouštědlo snášet s tlakovou nádobou.

6.2.1.2 Materiály

- 6.2.1.2.1 Konstrukční materiály tlakových nádob a jejich uzávěrů, které jsou v přímém styku s nebezpečnými látkami, které se mají přepravovat, nesmějí být těmito látkami napadány nebo zeslabeny a nesmějí být příčinou nebezpečného efektu, jako je například katalytická reakce nebo reakce s nebezpečnými látkami.
- 6.2.1.2.2 Tlakové nádoby a jejich uzávěry musí být vyrobeny z materiálů specifikovaných v konstrukčních a výrobních technických normách a v odpovídajícím pokynu pro balení pro látky určené k přepravě v tlakové nádobě. Materiály musí být odolné proti křehkému lomu a vůči trhlínkové korozi, jak je stanoveno v konstrukčních a výrobních normách.

6.2.1.3 Provozní výstroj

- 6.2.1.3.1 Ventily, potrubí a jiná příslušenství vystavená tlaku, s výjimkou zařízení pro vyrovnávání tlaku, musí být zkonstruovány a vyrobeny tak, aby tlak při roztržení byl nejméně 1,5 násobkem zkušebního tlaku tlakové nádoby.
- 6.2.1.3.2 Provozní výstroj musí být uspořádána nebo zkonstruována tak, aby se zabránilo poškození, které by mohlo vést k uvolnění obsahu tlakové nádoby během normálních podmínek manipulace a přepravy. Sběrná potrubí vedoucí k uzavíracím ventilům musí být dostatečně flexibilní, aby chránila ventily a potrubí před smykovým lomem nebo uvolněním obsahu tlakových nádob. Plnicí a vyprazdňovací ventily a všechna ochranná víka musí být schopna zajištění proti neúmyslnému otevření. Ventily musí být chráněny, jak je specifikováno v 4.1.6.8.
- 6.2.1.3.3 Tlakové nádoby, které nejsou schopné ruční manipulace nebo valení, musí být vybaveny příslušenstvím (skluznicemi, úchyty, řemeny), které zajistí, že mohou být bezpečně manipulovány mechanickými prostředky a které je uzpůsobeno tak, aby nebyla narušena jejich pevnost, ani aby nezpůsobilo nepřiměřená napětí v tlakové nádobě.
- 6.2.1.3.4 Jednotlivé tlakové nádoby musí být vybaveny zařízením pro vyrovnávání tlaku, jak je to specifikováno v pokynu pro balení P200 (2) nebo P205 pododdílu 4.1.4.1 nebo v 6.2.1.3.6.4 a 6.2.1.3 6.5. Zařízení pro vyrovnávání tlaku musí být zkonstruována tak, aby zabránila vniknutí cizí

látky, úniku plynu a vzniku jakéhokoliv nebezpečného nadměrného tlaku. Pokud jsou zařízení pro vyrovnávání tlaku na horizontálních tlakových nádobách spojených sběrným potrubím a naplněných hořlavým plynem, musí být uspořádána tak, aby plyn volně unikal do volného prostoru takovým způsobem, aby se unikajícímu plynu zabránilo dostat se do styku s vlastní tlakovou nádobou za normálních podmínek přepravy.

6.2.1.3.5 Tlakové nádoby, jejichž plnění se měří objemově, musí být vybaveny ukazatelem hladiny.

6.2.1.3.6 *Dodatečné požadavky na uzavřené kryogenní nádoby*

6.2.1.3.6.1 Každý plnicí a vyprazdňovací otvor uzavřené kryogenní nádoby použité pro přepravu hořlavých hluboce zchladených zkapalněných plynů, musí být vybaven nejméně dvěma navzájem nezávislými uzavíracími zařízeními v sérii, z nichž první je uzavírací ventil a druhé zátka nebo ekvivalentní zařízení.

6.2.1.3.6.2 Pro sekce potrubí, které mohou být na obou koncích uzavřeny a kde kapalný produkt může být zachycen, musí být použit způsob automatického uvolnění tlaku, aby se zabránilo nadměrnému nárůstu tlaku v potrubí.

6.2.1.3.6.3 Každé připojení k uzavřené kryogenní nádobě musí být jasně označeno, aby byla určena jeho funkce (např. plynná nebo kapalná fáze).

6.2.1.3.6.4 Zařízení pro vyrovnávání tlaku

6.2.1.3.6.4.1 Každá uzavřená kryogenní nádoba musí být vybavena nejméně jedním zařízením pro vyrovnávání tlaku. Toto zařízení musí být takového typu, aby odolávalo dynamickým silám včetně rázové vlny.

6.2.1.3.6.4.2 Uzavřené kryogenní nádoby mohou mít navíc průtržný kotouč paralelně s pružinovým(i) zařízením(ími), aby byly splněny požadavky 6.2.1.3.6.5.

6.2.1.3.6.4.3 Připojení k zařízením pro vyrovnávání tlaku musí mít dostatečný rozměr, aby umožnily neomezený průchod požadovaného množství plynu k zařízení pro vyrovnávání tlaku.

6.2.1.3.6.4.4 Veškeré přírůdky zařízení pro vyrovnávání tlaku musí být za podmínek maximálního plnění umístěny v plynném prostoru uzavřené kryogenní nádoby a zařízení musí být uspořádána tak, aby se zajistilo, že unikající plyn může být vypouštěn bez omezení.

6.2.1.3.6.5 Kapacita a nastavení zařízení pro vyrovnávání tlaku

POZNÁMKA: *Ve vztahu k zařízením pro vyrovnávání tlaku uzavřených kryogenních nádob znamená nejvyšší dovolený provozní tlak (MAWP) maximální účinný přetlak přípustný na horní části naplněné uzavřené kryogenní nádoby v její provozní poloze včetně nejvyššího účinného tlaku během plnění a vyprazdňování.*

6.2.1.3.6.5.1 Zařízení pro vyrovnávání tlaku se musí otevírat automaticky při tlaku ne nižším nežli MAWP a musí být plně otevřena při tlaku rovném 110% MAWP. Po odpouštění se musí uzavřít při tlaku ne nižším než 10 % pod hodnotou tlaku, při kterém začíná odpouštění, a musí zůstat uzavřená při všech nižších tlacích.

6.2.1.3.6.5.2 Průtržné kotouče musí být nastaveny tak, aby praskly při nominálním tlaku, který je nižší než zkušební tlak nebo 150 % MAWP.

6.2.1.3.6.5.3 V případě ztráty vakua ve vakuově izolované uzavřené kryogenní nádobě musí být kombinovaná kapacita všech instalovaných zařízení pro vyrovnávání tlaku natolik dostatečná, aby tlak (včetně akumulace) uvnitř uzavřené kryogenní nádoby nepřekročil 120 % MAWP.

6.2.1.3.6.5.4 Požadovaná kapacita zařízení pro vyrovnávání tlaku musí být vypočtena podle stanoveného technického předpisu uznaného příslušným orgánem¹.

¹ viz např. CGA Publikace S-1.2-2003 „Pressure Relief Device Standards Part 2– Cargo and Portable Tanks for Compressed Gases“ and S-1.1-2003 „Pressure Relief Device Standards – Part 1 – Cylinders for Compressed Gases“.

6.2.1.4 Schvalování tlakových nádob

6.2.1.4.1 Shoda tlakových nádob musí být hodnocena (sledována) v době výroby, jak požaduje příslušný orgán. Tlakové nádoby musí být podrobeny inspekci, zkouškám a musí být schváleny inspekční organizací. Technická dokumentace musí zahrnovat všechny specifikace týkající se konstrukce a výroby a úplnou dokumentaci pro výrobu a zkoušky.

6.2.1.4.2 Systémy zajištění kvality musí být v souladu s požadavky příslušného orgánu.

6.2.1.5 První inspekce a zkouška

6.2.1.5.1 Nové tlakové nádoby, jiné než uzavřené kryogenní nádoby a zásobníkové systémy s hydridem kovu, musí být podrobeny zkouškám a inspekčním během a po výrobě podle příslušných konstrukčních norem, včetně následujících ustanovení:

Na adekvátním vzorku tlakových nádob:

- (a) zkoušení mechanických vlastností konstrukčních materiálů;
- (b) ověření minimální tloušťky stěny;
- (c) ověření homogenity materiálu pro každou výrobní šarži;
- (d) inspekce vnějšího a vnitřního stavu tlakových nádob;
- (e) inspekce závitů hrdla;
- (f) ověření souladu s konstrukční normou;

Pro všechny tlakové nádoby:

- (g) hydraulická tlaková zkouška. Tlakové nádoby musí odolat zkušebnímu tlaku bez expanze větší než je dovolena v konstrukční specifikaci;

POZNÁMKA: Se souhlasem příslušného orgánu může být hydraulická tlaková zkouška nahrazena zkouškou za použití plynu, kde taková operace neznamená žádné nebezpečí.

- (h) inspekce a vyhodnocení výrobních závad a buďto jejich oprava nebo označení tlakových nádob za nepoužitelné. V případě svařovaných tlakových nádob musí být věnována zvláštní pozornost kvalitě svárů;
- (i) inspekce značení na tlakových nádobách;
- (j) tlakové nádoby určené k přepravě UN 1001 acetylenu, rozpuštěného a UN 3374 acetylenu, bez rozpouštědla musí být navíc podrobeny inspekci, aby byla zajištěna odpovídající instalace a stav porézního materiálu a, pokud je to patřičné, množství rozpouštědla.

6.2.1.5.2 Na přiměřeném vzorku uzavřených kryogenních nádob musí být provedeny inspekce a zkoušky specifikované v 6.2.1.5.1 (a), (b), (d) a (f). Svary musí být navíc podrobeny inspekci pomocí radiografické, ultrazvukové nebo jiné vhodné nedestruktivní zkušební metodě na vzorku uzavřených kryogenních nádob podle příslušné konstrukční a výrobní normy. Tato inspekce svárů se nepoužívá pro plášť.

Všechny uzavřené kryogenní nádoby musí navíc podstoupit první inspekce a zkoušky specifikované v 6.2.1.5.1 (g), (h) a (i), a po kompletaci zkoušku těsnosti a zkoušku funkční způsobilosti provozní výstroje.

6.2.1.5.3 Pro zásobníkový systém s hydridem kovu, musí být ověřeno, že inspekce a zkoušky specifikované v 6.2.1.5.1 (a), (b), (c), (d), (e) pokud je to vhodné, (f), (g), (h) a (i) byly provedeny na přiměřeném vzorku nádob použitých v zásobníkovém systému s hydridem kovu. Kromě toho na přiměřeném vzorku zásobníkového systému s hydridem kovu musí být provedeny inspekce a zkoušky specifikované v 6.2.1.5.1 (c) a (f) stejně jako 6.2.1.5.1 (e), pokud je to vhodné a zkoušky vnějšího stavu zásobníkového systému s hydridem kovu.

Všechny zásobníkové systémy s hydridem kovu musí navíc podstoupit první inspekce a zkoušky specifikované v 6.2.1.5.1 (h) a (i), stejně jako zkoušku těsnosti a zkoušku funkční způsobilosti provozní výstroje.

6.2.1.6 Periodická inspekce a zkouška

6.2.1.6.1 Opakovatelně plnitelné tlakové nádoby, jiné než kryogenní nádoby, musí být podrobeny periodickým inspekcím a zkouškám organizací pověřenou příslušným orgánem podle dále uvedených požadavků:

- (a) kontrola vnějšího stavu tlakové nádoby a ověření výstroje a vnějšího značení ;
- (b) kontrola vnitřního stavu tlakové nádoby (např. kontrolou vnitřku, ověření minimální tloušťky stěny);
- (c) ověření závitů, jsou-li stopy koroze nebo je-li demontováno příslušenství;
- (d) hydraulická tlaková zkouška, a pokud je to nutné, ověření charakteristik materiálu vhodnými zkouškami;
- (e) ověření provozní výstroje, jiných příslušenství a zařízení pro vyrovnávání tlaku, pokud mají být znovu uvedeny do provozu.

POZNÁMKA 1: Se souhlasem příslušného orgánu může být hydraulická tlaková zkouška nahrazena zkouškou za použití plynu, pokud není tento postup nebezpečný.

POZNÁMKA 2: Se souhlasem příslušného orgánu může být hydraulická tlaková zkouška láhvi nebo trubkových nádob nahrazena ekvivalentní metodou na základě zkoušky akustické emise nebo kombinace zkoušky akustické emise a zkoušky ultrazvukem. ISO 16148:2006 může být použita jako návod pro postup zkoušky akustické emise.

POZNÁMKA 3: Hydraulická tlaková zkouška může být nahrazena ultrazvukovou zkouškou uskutečněnou v souladu s ISO 10461:2005+A1:2006 pro bezešvé plynové láhve ze slitiny hliníku a v souladu s ISO 6406:2005 pro bezešvé ocelové plynové láhve.

POZNÁMKA 4: Periodické kontroly a četnosti zkoušek – viz pokyn pro balení P200 pododdíl 4.1.4.1 nebo pro chemikálie pod tlakem pokyn pro balení P206 pododdíl 4.1.4.1.

6.2.1.6.2 U tlakových nádob určených pro přepravu UN 1001 acetyleny, rozpuštěného a UN 3374 acetyleny, bez rozpouštědla musí být provedena pouze kontrola podle 6.2.1.6.1 (a), (c) a (e). Navíc musí být zkontrolován stav porézního materiálu (např. praskliny, volný prostor v horní části, uvolnění, usazení).

6.2.1.6.3 U tlakových pojistných ventilů pro uzavřené kryogenní nádoby se musí provádět periodické kontroly a zkoušky.

6.2.1.7 Požadavky na výrobce

6.2.1.7.1 Výrobce musí být technicky schopný a musí vlastnit veškeré prostředky požadované pro úspěšnou výrobu tlakových nádob, zvláště kvalifikovaný personál pro:

- (a) dohled nad celým výrobním procesem;
- (b) provedení spojů materiálů; a
- (c) provedení příslušných zkoušek.

6.2.1.7.2 Zkouška odbornosti výrobce musí být ve všech případech vykonána inspekční organizací pověřenou příslušným orgánem země schválení.

6.2.1.8 Požadavky na inspekční organizaci

6.2.1.8.1 Inspekční organizace musí být nezávislá na výrobních podnicích a kompetentní pro provádění zkoušek, inspekcí a požadovaných schválení.

6.2.2 Požadavky na UN tlakové nádoby

Navíc k všeobecným požadavkům oddílu 6.2.1, musí UN tlakové nádoby splňovat požadavky tohoto oddílu, včetně příslušných norem.

6.2.2.1 Konstrukce, výroba a první inspekce a zkouška

6.2.2.1.1 Následující normy se vztahují na konstrukci, výrobu a první inspekci a zkoušku UN láhví, s výjimkou toho, že požadavky na inspekci vztahující se k systému posuzování shody a schvalování musí být v souladu s 6.2.2.5:

ISO 9809-1:1999	Plynové láhve – Opakovaně plnitelné bezešvé ocelové plynové láhve – Konstrukce, výroba a zkoušení - Část 1: Kalené a temperované ocelové láhve s pevností v tahu menší než 1100 MPa POZNÁMKA: Poznámka týkající se F faktoru v oddílu 7.3 této normy nesmí být použita pro UN láhve.
ISO 9809-2:2000	Plynové láhve – Opakovaně plnitelné bezešvé ocelové plynové láhve - Konstrukce, výroba a zkoušení - Část 2: Kalené a temperované ocelové láhve s pevností v tahu větší nebo rovnou 1100 MPa
ISO 9809-3:2000	Plynové láhve – Opakovaně plnitelné bezešvé ocelové plynové láhve - Konstrukce, výroba a zkoušení - Část 3: Normalizované ocelové láhve
ISO 7866:1999	Plynové láhve - Opakovaně plnitelné bezešvé plynové láhve ze slitiny hliníku-Konstrukce, výroba a zkoušení POZNÁMKA: Poznámka týkající se F faktoru v oddílu 7.2 této normy nesmí být použita pro UN láhve. Slitina hliníku 6351A – T6 nebo ekvivalentní není dovolena.
ISO 4706:2008	Plynové láhve – Opakovaně plnitelné svařované ocelové láhve – zkušební tlak 60 barů a nižší
ISO 18172-1:2007	Plynové láhve – Opakovaně plnitelné svařované nerezové ocelové láhve – Část 1: Zkušební tlak 6 MPa a nižší
ISO 20703:2006	Plynové láhve - Opakovaně plnitelné plynové láhve ze slitiny hliníku – Konstrukce, výroba a zkoušení
ISO 11118:1999	Plynové láhve – Kovové plynové láhve pro jedno použití – Specifikace a zkušební metody
ISO 11119-1:2002	Plynové láhve kompozitní konstrukce- Specifikace a zkušební metody – Část 1: Kompozitní plynové láhve ovinuté obručí
ISO 11119-2:2002	Plynové láhve kompozitní konstrukce - Specifikace a zkušební metody - Část 2: Plně ovinuté, vláknem vyztužené kompozitní plynové láhve s kovovými vložkami podílejícími se na zátěži
ISO 11119-3:2002	Plynové láhve kompozitní konstrukce – Specifikace a zkušební metody - Část 3: Plně ovinuté, vláknem vyztužené kompozitní plynové láhve s kovovými nebo nekovovými vložkami nepodílejícími se na zátěži

POZNÁMKA 1: Ve výše uvedených referenčních normách musí být kompozitní láhve zkonstruovány pro neomezenou provozní životnost.

POZNÁMKA 2: Po prvních 15 letech provozu mohou být kompozitní láhve vyrobené dle těchto norem schváleny pro další provoz příslušným orgánem, který je zodpovědný za původní schválení láhvi a který založí svoje rozhodnutí na informacích ze zkoušky, které mu poskytne výrobce nebo vlastník nebo uživatel.

6.2.2.1.2 Následující norma se vztahuje na konstrukci, výrobu a první inspekci a zkoušku UN trubkových nádob, s výjimkou toho, že požadavky na inspekci vztahující se k systému posuzování shody a schvalování musí být podle 6.2.2.5:

ISO 11120:1999	Plynové láhve – Opakovaně plnitelné bezešvé ocelové trubkové nádoby pro přepravu stlačeného plynu s hydraulickým vnitřním objemem mezi 150 l a 3000 l – Konstrukce, výroba a zkoušení POZNÁMKA : Poznámka týkající se F faktoru v oddílu 7.1. této normy nesmí být pro UN trubkové nádoby použita.
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6.2.2.1.3 Následující normy se vztahují na konstrukci, výrobu a první inspekci a zkoušku UN láhví na acetylen, s výjimkou toho, že požadavky na inspekci vztahující se k systému posuzování shody a schvalování musí být podle 6.2.2.5:

Pro vlastní láhev:

ISO 9809-1: 1999	Plynové láhve – Opakovaně plnitelné bežešvé ocelové plynové láhve – Konstrukce, výroba a zkoušení – Část 1 : Kalené a temperované ocelové láhve s pevností v tahu menší než 1100 MPa POZNÁMKA: Poznámka týkající se F faktoru v oddílu 7.3. této normy nesmí být pro UN láhve použita.
ISO 9809-3:2000	Plynové láhve – Opakovaně plnitelné bežešvé ocelové plynové láhve – Konstrukce, výroba a zkoušení – Část 3: Normalizované ocelové láhve

Pro porézní materiály v láhvi:

ISO 3807-1:2000	Láhve na acetylen - Základní požadavky – Část 1: Láhve bez tavných zátek
ISO 3807-2:2000	Láhve na acetylen - Základní požadavky – Část 2: Láhve s tavnými zátkami

- 6.2.2.1.4** Následující norma se vztahuje na konstrukci, výrobu a první inspekci a zkoušku UN kryogenních nádob, s výjimkou toho, že požadavky na inspekci vztahující se k systému posuzování shody a schvalování musí být podle 6.2.2.5:

ISO 21029-1:2004	Kryogenní nádoby - Převratitelné vakuově izolované nádoby s objemem nejvýše 1000 l - Část 1: Konstrukce, výroba, inspekce a zkoušky
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- 6.2.2.1.5** Následující norma se vztahuje na konstrukci, výrobu a první inspekci a zkoušku UN zásobníkového systému s hydridem kovu, s výjimkou toho, že požadavky na inspekci vztahující se k systému posuzování shody a schvalování musí být podle 6.2.2.5:

ISO 16111:2008	Převratitelný plynový zásobníkový systém – vodík absorbovaný v reversibilním hydridu kovu
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6.2.2.2 Materiály

Navíc k materiálovým požadavkům specifikovaným v normách pro konstrukci a výrobu tlakových nádob a k veškerým omezením specifikovaným v příslušném pokynu pro balení pro přepravovaný plyn(y) (např. pokyn pro balení P200 nebo P 205 v 4.1.4.1), se ke snášenlivosti materiálu použijí následující normy:

ISO 11114- 1:1997	Převratitelné plynové láhve - Snášenlivost materiálů lahví a ventilů s plynným obsahem – Část 1 : Kovové materiály
ISO 11114- 2:2000	Převratitelné plynové láhve- Snášenlivost materiálů lahví a ventilů s plynným obsahem – Část 2 : Nekomové materiály

POZNÁMKA: Omezení stanovená v ISO 11114 – 1 pro použití ocelových slitin vysoké pevnosti o maximální pevnosti v tahu až do 1 100 MPa se nevztahují na UN 2203 silan.

6.2.2.3 Provozní výstroj

Na uzávěry a jejich ochranu se vztahují následující normy:

ISO 11117:1998	Plynové láhve – Ochranná víčka ventilů a ochrana ventilů pro průmyslové a lékařské plynové láhve - Konstrukce, výroba a zkoušky
ISO 10297:2006	Převratitelné plynové láhve - Ventily lahví - Specifikace a typová zkouška POZNÁMKA : Verze EN této ISO normy splňuje požadavky a je možno ji rovněž použít.
ISO 11117:2008 + Cor 1:2009	Láhve na plyny – Ochranné kloboučky ventilů a kryty ventilů – Návrh, konstrukce a zkoušky POZNÁMKA: Výroba podle ISO 11117:1998 může pokračovat do 31. prosince 2014.
ISO 13340:2001	Láhve na přepravu plynů – Ventily lahví na jedno použití (kartuše) – Technické podmínky a prototypové zkoušky

Pro UN zásobníkový systém s hydridem kovu, se požadavky specifikované v následující normě vztahují na uzávěry a jejich ochranu:

ISO 16111:2008	Převratitelný plynový zásobníkový systém – vodík absorbovaný v reversibilním hydridu kovu
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6.2.2.4 Periodická inspekce a zkouška

Na periodické inspekce a zkoušky UN lahví a UN zásobníkový systém s hydridem kovu se vztahují následující normy:

ISO 6406:2005	Periodická inspekce a zkouška bezešvých ocelových plynových lahví
ISO 10461:2005 + A1: 2006	Bezešvé plynové láhve ze slitiny hliníku - Periodická inspekce a zkouška
ISO 10462 : 2005	Plynové láhve – Převratitelné láhve na rozpuštěný acetylen – Periodická inspekce a údržba
ISO 11623 : 2002	Převratitelné plynové láhve – Periodická inspekce a zkouška kompozitních plynových lahví
ISO 16111:2008	Převratitelný plynový zásobníkový systém – vodík absorbovaný v reversibilním hydridu kovu
ISO 10460:2005	Lahve na plyny – Lahve na plyny ze svařované uhlíkové oceli – Periodické kontroly a zkoušení POZNÁMKA: Oprava svarů popsaná v pododdlílu 12.1 této normy není přípustná. Opravy popsané v pododdlílu 12.2 vyžadují schválení příslušného orgánu, který schválil organizace pro periodické inspekce a zkoušky v souladu s 6.2.2.6.

6.2.2.5 Systém posuzování shody a schvalování pro výrobu tlakových nádob

6.2.2.5.1 Definice

Pro účely tohoto pododdlílu:

Systém posuzování shody znamená systém schválení výrobce příslušným orgánem, schválením konstrukčního typu tlakových nádob, schválením systému kvality výrobce a schválením inspekčních organizací,

Konstrukční typ znamená konstrukci tlakové nádoby, jak je specifikována v příslušné normě pro tlakové nádoby,

Ověřit znamená potvrdit zkouškou nebo poskytnutím objektivního důkazu, že předepsané požadavky byly splněny.

6.2.2.5.2 Všeobecné požadavky

Příslušný orgán

6.2.2.5.2.1 Příslušný orgán schvalující tlakovou nádobu musí schválit systém posuzování shody, aby zaručil, že tlakové nádoby splňují požadavky ADR. V případech, kdy příslušný orgán, který schvaluje tlakovou nádobu, není příslušným orgánem v zemi výroby, musí být ve značení na tlakové nádobě uvedeny značky země schválení a země výroby (viz 6.2.2.7 a 6.2.2.8).

Příslušný orgán země schválení musí na žádost předložit svému protějšku v zemi používání důkaz o tom, že účinně aplikuje systém posuzování shody.

6.2.2.5.2.2 Příslušný orgán může delegovat své funkce v tomto systému posuzování shody úplně nebo částečně.

6.2.2.5.2.3 Příslušný orgán musí zajistit, že je k dispozici platný seznam schválených inspekčních organizací a jejich identifikačních značek a schválených výrobců a jejich identifikačních značek.

Inspekční organizace

6.2.2.5.2.4 Inspekční organizace musí být schválena příslušným orgánem pro inspekci tlakových nádob a musí:

- (a) mít personál s organizační strukturou, způsobilý, vyškolený, kompetentní a zručný k uspokojivému výkonu jeho technických funkcí;
- (b) mít přístup k vhodnému a odpovídajícímu vybavení a zařízením;
- (c) pracovat nestranně a být oproštěna od jakéhokoliv vlivu, který by jí v tom mohl bránit;
- (d) zajistit důvěrnost obchodních a vlastnických aktivit výrobce a jiných organizací;
- (e) udržovat jasnou hranici mezi aktuálními funkcemi inspekční organizace a funkcemi nesouvisejícími;
- (f) používat zdokumentovaný systém kvality;
- (g) zajistit, aby byly provedeny zkoušky a inspekce specifikované v příslušné normě pro tlakové nádoby a v ADR; a
- (h) udržovat účinný a vhodný systém zpráv a záznamů dle 6.2.2.5.6.

6.2.2.5.2.5 Inspekční organizace musí provádět schválení konstrukčního typu, výrobní inspekce a zkoušky tlakových nádob a certifikaci k ověření shody s odpovídající normou pro tlakové nádoby (viz 6.2.2.5.4 a 6.2.2.5.5).

Výrobce

6.2.2.5.2.6 Výrobce musí :

- (a) používat dokumentovaný systémem kvality podle 6.2.2.5.3;
- (b) požádat o schválení konstrukčního typu podle 6.2.2.5.4;
- (c) vybrat inspekční organizaci ze seznamu schválených inspekčních organizací vedeného příslušným orgánem v zemi schválení; a
- (d) uchovávat záznamy podle 6.2.2.5.6.

Zkušební laboratoř

6.2.2.5.2.7 Zkušební laboratoř musí mít:

- (a) personál v organizační struktuře, v dostatečném počtu, kompetentní a zkušený; a
- (b) vhodná a odpovídající zařízení a vybavení k provádění zkoušek vyžadovaných výrobní normou ke spokojenosti inspekční organizace.

6.2.2.5.3 Systém kvality výrobce

6.2.2.5.3.1 Systém kvality musí obsahovat všechny prvky, požadavky a předpisy převzaté výrobcem. Musí být systematicky a přehledně zdokumentován formou písemných rozhodnutí, postupů a instrukcí.

Musí zejména obsahovat odpovídající popisy:

- (a) organizační struktury a zodpovědnosti personálu vzhledem ke konstrukci a kvalitě výrobků;
- (b) postupů kontroly a ověřování konstrukce a postupů použitých při konstrukci tlakových nádob;
- (c) instrukcí, které budou používány pro výrobu tlakových nádob, kontrolu kvality, zajištění kvality a instrukcí k průběhu operací;
- (d) záznamů o kvalitě, jako jsou inspekční zprávy a zkušební a kalibrační data;
- (e) rozborů managementu k zajištění účinné činnosti systému kvality vycházejících z auditů podle 6.2.2.5.3.2;
- (f) postupu popisujícího, jak jsou plněny požadavky zákazníka;
- (g) postupu kontroly dokumentů a jejich revize;

- (h) prostředků pro kontrolu tlakových nádob neodpovídajících předpisům, nakoupených komponentů a výrobních a finálních materiálů; a
- (i) školicích programů a kvalifikačních postupů pro příslušné zaměstnance.

6.2.2.5.3.2 **Audit systému kvality**

Systém kvality musí být nejprve posouzen, aby se zjistilo, zda splňuje požadavky uvedené v 6.2.2.5.3.1 ke spokojenosti příslušného orgánu.

Výrobce musí být seznámen s výsledky auditu. Sdělení musí obsahovat závěry auditu a veškerá požadovaná nápravná opatření.

Periodické audity musí být prováděny ke spokojenosti příslušného orgánu, aby se zajistilo, že výrobce dodržuje a používá systém kvality. Zprávy o periodických auditech musí být poskytnuty výrobci.

6.2.2.5.3.3 **Dodržování systému kvality**

Výrobce musí dodržovat systém kvality tak, jak je schválen, aby zůstal přiměřený a účinný.

Výrobce musí oznámit příslušnému orgánu, který schválil systém kvality, všechny zamýšlené změny systému. Navržené změny musí být vyhodnoceny, aby se stanovilo, zda pozměněný systém kvality bude splňovat požadavky uvedené v 6.2.2.5.3.1.

6.2.2.5.4 **Schvalovací proces**

První schválení konstrukčního typu

6.2.2.5.4.1 První schválení konstrukčního typu se musí skládat ze schválení systému kvality výrobce a schválení konstrukce vyráběné tlakové nádoby, která se má vyrábět. Žádost o první schválení konstrukčního typu musí splňovat požadavky uvedené v 6.2.2.5.4.2 až 6.2.2.5.4.6 a 6.2.2.5.4.9.

6.2.2.5.4.2 Výrobce, který chce vyrábět tlakové nádoby podle normy pro tlakové nádoby a ADR, musí požádat, obdržet a uchovávat osvědčení o schválení konstrukčního typu vydané příslušným orgánem v zemi schválení pro nejméně jeden konstrukční typ tlakové nádoby podle postupu uvedeného v 6.2.2.5.4.9. Toto osvědčení musí být na žádost předloženo příslušnému orgánu země použití.

6.2.2.5.4.3 Žádost musí být podána pro každou výrobní jednotku a musí obsahovat:

- (a) jméno a registrovanou adresu výrobce, a pokud je žádost podávána pověřeným zástupcem, také jeho jméno a adresu;
- (b) adresu výrobní jednotky(je li rozdílná od výše uvedené);
- (c) jméno a titul osoby (osob) zodpovědné za systém kvality;
- (d) identifikaci tlakové nádoby a příslušné normy pro tlakovou nádobu;
- (e) podrobnosti jakéhokoliv odmítnutí schválení podobné žádosti jiným příslušným orgánem;
- (f) identitu inspekční organizace pro schválení konstrukčního typu;
- (g) dokumentaci o výrobní jednotce, jak je specifikována pod 6.2.2.5.3.1; a
- (h) technickou dokumentaci vyžadovanou pro schválení konstrukčního typu, která umožní ověření shody tlakových nádob s požadavky odpovídající normy pro tlakovou nádobu. Technická dokumentace musí pokrýt konstrukci a způsob výroby a musí obsahovat, pokud je to důležité pro posouzení, nejméně následující:
 - (i) normu pro konstrukci tlakové nádoby, konstrukční a výrobní výkresy ukazující komponenty a montážní podskupiny, pokud existují;
 - (ii) popisy a vysvětlivky nezbytné pro porozumění výkresům a k předpokládanému použití tlakových nádob;
 - (iii) seznam norem nutných pro úplnou definici výrobního procesu;
 - (iv) konstrukční výpočty a specifikace materiálů; a
 - (v) zkušební protokoly ze zkoušek provedených ke schválení konstrukčního typu, popisující výsledky prohlídek a zkoušek provedených podle 6.2.2.5.4.9.

- 6.2.2.5.4.4 První audit podle 6.2.2.5.3.2 musí být proveden ke spokojenosti příslušného orgánu.
- 6.2.2.5.4.5 Pokud je výrobci schválení odepřeno, musí příslušný orgán poskytnout písemné podrobné zdůvodnění takového zamítnutí.
- 6.2.2.5.4.6 Po obdržení schválení musí být příslušný orgán informován o změnách v informacích poskytnutých podle 6.2.2.5.4.3, vztahujících se k prvnímu schválení.

Následná schválení konstrukčního typu

- 6.2.2.5.4.7 Žádost o následné schválení konstrukčního typu musí splňovat požadavky uvedené v 6.2.2.5.4.8 a 6.2.2.5.4.9, pokud je výrobce vlastníkem prvního schválení konstrukčního typu. V tomto případě systém kvality výrobce podle 6.2.2.5.3 musí být schválen během prvního schválení konstrukčního typu a musí být použitelný pro novou konstrukci.

- 6.2.2.5.4.8 Žádost musí obsahovat:

- (a) jméno a adresu výrobce, a pokud je žádost podávána pověřeným zástupcem, také jeho jméno a adresu;
- (b) podrobnosti jakéhokoliv odmítnutí podobné žádosti jiným příslušným orgánem;
- (c) důkaz, že bylo uděleno první schválení konstrukčního typu; a
- (d) technickou dokumentaci, jak je popsána v 6.2.2.5.4.3 (h).

Postup pro schválení konstrukčního typu

- 6.2.2.5.4.9 Inspekční organizace musí:

- (a) přezkoumat technickou dokumentaci, aby ověřila že:
 - (i) konstrukce je v souladu s odpovídajícími ustanoveními normy; a
 - (ii) prototyp byl vyroben podle technické dokumentace a je reprezentantem konstrukčního typu;
- (b) ověřit, že výrobní inspekce byly provedeny tak, jak je vyžadováno podle 6.2.2.5.5;
- (c) vybrat tlakové nádoby z prototypové výrobní série a dohlížet nad zkouškami těchto tlakových nádob, jak se to vyžaduje pro schválení konstrukčního typu;
- (d) provést nebo nechat provést prohlídky a zkoušky specifikované v normě pro tlakové nádoby, aby se zjistilo, že:
 - (i) norma byla použita a splněna; a
 - (ii) postupy použité výrobcem splňují požadavky normy; a
- (e) zajistit, aby různé druhy schvalovacích prohlídek a zkoušek byly provedeny správně a úplně.

Po úspěšném provedení zkoušek prototypu a po splnění všech příslušných požadavků v 6.2.2.5.4 musí být vydáno osvědčení o schválení konstrukčního typu, které musí obsahovat jméno a adresu výrobce, výsledky a závěry šetření a data nutná pro identifikaci konstrukčního typu.

Pokud je výrobci schválení odepřeno, musí příslušný orgán poskytnout podrobné písemné zdůvodnění tohoto zamítnutí.

- 6.2.2.5.4.10 **Změny schválených konstrukčních typů**

Výrobce musí buď:

- (a) informovat vydávající příslušný orgán o změnách schváleného konstrukčního typu v případech, že takové změny nevytvářejí novou konstrukci, jak je to specifikováno v normě pro tlakové nádoby; nebo
- (b) požádat o dodatečné schválení konstrukčního typu v případě, že tyto změny vytvářejí novou konstrukci podle příslušné normy pro tlakové nádoby. Toto dodatečné schválení musí být uděleno ve formě změny původního osvědčení o schválení konstrukčního typu.

6.2.2.5.4.11 Na žádost musí příslušný orgán sdělit všem dalším příslušným orgánům informace týkající se schválení konstrukčního typu, změn schválení a odejmutých schválení.

6.2.2.5.5 Výrobní inspekce a certifikace

Všeobecné požadavky

Inspekční organizace, nebo její zástupce, musí provést inspekci a certifikaci každé tlakové nádoby. Inspekční organizace vybraná výrobcem pro inspekci a zkoušení během výroby, může být odlišná od inspekční organizace, která provedla zkoušky pro schválení konstrukčního typu.

Tam, kde může být ke spokojenosti inspekční organizace prokázáno, že výrobce vyškolil kompetentní inspektory, nezávislé na výrobě, může být inspekce prováděna těmito inspektory. V tomto případě musí výrobce uchovat zprávy o školení inspektorů.

Inspekční organizace musí ověřit, že inspekce provedené výrobcem a zkoušky provedené na těchto tlakových nádobách jsou plně v souladu s normou a požadavky ADR. Pokud by byl zjištěn nesoulad v souvislosti s touto inspekci a zkouškami, může být povolení k provádění inspekce vlastními inspektory výrobcem odebráno.

Výrobce musí, po schválení inspekční organizací, učinit prohlášení o shodě s konstrukčním typem. Umístění certifikační značky na tlakovou nádobu musí být považováno prohlášením, že tlaková nádoba splňuje příslušné normy pro tlakové nádoby a požadavky systému posuzování shody a ADR. Inspekční organizace umístí nebo nechá umístit výrobce certifikační značku tlakové nádoby a registrovanou značku inspekční organizace na každou schválenou tlakovou nádobu.

Certifikát o shodě, podepsaný inspekční organizací a výrobcem, musí být vydán předtím, než budou tlakové nádoby naplněny.

6.2.2.5.6 Záznamy

Záznamy o schválení konstrukčního typu a certifikát o shodě musí být uchovány výrobcem a inspekční organizací po dobu nejméně 20 let.

6.2.2.6 Schvalovací systém pro periodické inspekce a zkoušky tlakových nádob

6.2.2.6.1 Definice

Pro účely tohoto oddílu:

Schvalovací systém znamená systém příslušného orgánu ke schválení organizace k výkonu periodických inspekci a zkoušek tlakových nádob (dále uváděna jako "organizace pro periodické inspekce a zkoušky"), včetně schválení systému kvality této organizace.

6.2.2.6.2 Všeobecné požadavky

Příslušný orgán

6.2.2.6.2.1 Příslušný orgán musí vytvořit schvalovací systém, aby zajistil, že periodické inspekce a zkoušky tlakových nádob splňují požadavky ADR. V případech, kdy příslušný orgán, který schvaluje organizaci provádějící periodickou inspekci a zkoušku tlakové nádoby, není příslušným orgánem v zemi schvalující výrobu tlakové nádoby, musí být značky země schvalující periodické inspekce a zkoušky uvedeny ve značení tlakové nádoby (viz 6.2.2.6.7).

Příslušný orgán země schválení pro periodickou inspekci a zkoušku musí na žádost svému protějšku v zemi použití poskytnout přesvědčivý důkaz o souladu s tímto schvalovacím systémem včetně zpráv o periodických inspekci a zkouškách.

Příslušný orgán země schválení může ukončit platnost schvalovacího certifikátu zmíněného v 6.2.2.6.4.1, pokud přesvědčivý důkaz prokáže nesoulad se schvalovacím systémem.

6.2.2.6.2.2 Příslušný orgán může delegovat svoje funkce v tomto schvalovacím systému vcelku nebo částečně.

6.2.2.6.2.3 Příslušný orgán musí zajistit dostupnost aktuálního seznamu schválených organizací pro periodické inspekce a zkoušky i s jejich identifikačními značkami.

Organizace pro periodické inspekce a zkoušky

6.2.2.6.2.4 Organizace pro periodické inspekce a zkoušky musí být schválena příslušným orgánem a musí:

- (a) mít personál s organizační strukturou, způsobilý, vyškolený, kompetentní a kvalifikovaný k uspokojivému výkonu jeho technických funkcí;
- (b) mít přístup k vhodnému a odpovídajícímu vybavení a zařízením;
- (c) pracovat nestranně a být oproštěna od jakéhokoliv vlivu, který by jí v tom mohl bránit;
- (d) zajistit důvěrnost obchodních aktivit;
- (e) zachovávat jasnou hranici mezi aktuálními funkcemi organizace pro periodické inspekce a zkoušky a funkcemi nesouvisejícími;
- (f) používat zdokumentovaný systém kvality podle 6.2.2.6.3;
- (g) požádat o schválení podle 6.2.2.6.4;
- (h) zajistit provádění periodických inspekcí a zkoušek dle 6.2.2.6.5; a
- (i) udržovat účinný a vhodný systém zpráv a záznamů dle 6.2.2.6.6.

6.2.2.6.3 Systém kvality a audit organizace pro periodické inspekce a zkoušky**6.2.2.6.3.1 Systém kvality**

Systém kvality musí obsahovat všechny prvky, požadavky a předpisy přijaté organizací pro periodické inspekce a zkoušky. Musí být systematicky a přehledně zdokumentován formou písemných rozhodnutí, postupů a instrukcí.

Systém kvality musí obsahovat:

- (a) popis organizační struktury a odpovědností;
- (b) pravidla a postup, které budou používány pro inspekce a zkoušky, kontrolu kvality a zajištění kvality,
- (c) záznamy o kvalitě, jako jsou zprávy o inspekci, zkušební a kalibrační data a certifikáty;
- (d) rozbor managementu k zajištění účinné činnosti systému kvality vycházející z auditů provedených podle 6.2.2.6.3.2;
- (e) postup kontroly dokumentů a jejich revize;
- (f) prostředky pro kontrolu tlakových nádob neodpovídajícím předpisům; a
- (g) školicí programy a kvalifikační postupy pro příslušný personál.

6.2.2.6.3.2 Audit

Organizace pro periodické inspekce a zkoušky a jeho systém kvality musí být podroben auditu, aby se zjistilo, zda splňuje požadavky ADR ke spokojenosti příslušného orgánu.

Audit musí být proveden jako součást prvního schvalovacího procesu (viz 6.2.2.6.4.3). Audit může být vyžádán jako součást postupu pro změnu schválení (viz 6.2.2.6.4.6).

Periodické audity musí být provedeny ke spokojenosti příslušného orgánu, aby se zajistilo, že organizace pro periodické inspekce a zkoušky stále splňuje požadavky ADR.

Organizace pro periodické inspekce a zkoušky musí být seznámen s výsledky auditu. Oznámení musí obsahovat všechny závěry auditu a veškerá požadovaná nápravná opatření.

6.2.2.6.3.3 Udržování systému kvality

Organizace pro periodické inspekce a zkoušky musí udržovat systém kvality tak, jak byl schválen, aby zůstal odpovídající a účinný.

Organizace pro periodické inspekce a zkoušky musí oznámit příslušnému orgánu, který, schválil systém kvality, jakékoli zamýšlené změny, podle postupu pro změnu schválení uvedeného v 6.2.2.6.4.6.

6.2.2.6.4 Schvalovací proces organizace pro periodické inspekce a zkoušky

První schválení

6.2.2.6.4.1 Organizace, která si přeje provádět periodické inspekce a zkoušky tlakových nádob podle norem pro tlakové nádoby a ADR, musí požádat, získat a uchovat schvalovací certifikát vydaný příslušným orgánem.

Toto písemné schválení musí být, na požádání, předloženo příslušnému orgánu země použití.

6.2.2.6.4.2 Žádost musí být podána pro každou organizaci pro periodické inspekce a zkoušky a musí obsahovat:

- (a) jméno a adresu organizace pro periodické inspekce a zkoušky, a pokud je žádost podána pověřeným zástupcem, také jeho jméno a adresu;
- (b) adresu každého střediska provádějícího periodickou inspekci a zkoušku;
- (c) jméno a titul osoby (osob) zodpovědné za systém kvality;
- (d) identifikaci tlakových nádob, metod periodických inspekci a zkoušek a příslušných norem pro tlakové nádoby zohledněných v systému kvality;
- (e) dokumentaci každého střediska, vybavení a systému kvality, jak je to specifikováno v 6.2.2.6.3.1;
- (f) záznamy o kvalifikaci a o školení zkušebního personálu pro periodické inspekce a zkoušky; a,
- (g) podrobnosti o jakémkoli zamítnutí nebo schválení podobné žádosti jiným příslušným orgánem.

6.2.2.6.4.3 Příslušný orgán musí:

- (a) přezkoumat dokumentaci, aby ověřil, že postupy jsou v souladu s požadavky odpovídajících norem pro tlakové nádoby a ADR; a
- (b) provést audit podle 6.2.2.6.3.2, aby ověřil, zda jsou inspekce a zkoušky prováděny podle požadavků příslušných norem pro tlakové nádoby a ADR, ke spokojenosti příslušného orgánu.

6.2.2.6.4.4 Po provedení auditu s uspokojivými výsledky a splnění všech příslušných požadavků uvedených v 6.2.2.6.4 musí být vydán schvalovací certifikát. Ten musí obsahovat jméno organizace pro periodické inspekce a zkoušky, registrovanou značku, adresu každého střediska a data nezbytná pro identifikaci jeho schválených činností (např. identifikace tlakových nádob, metody periodických inspekci a zkoušek a příslušné normy pro tlakové nádoby).

6.2.2.6.4.5 Pokud je organizací pro periodické inspekce a zkoušky schválení odepřeno, musí příslušný orgán poskytnout písemně podrobné zdůvodnění tohoto zamítnutí.

Modifikace schválení organizace pro periodické inspekce a zkoušky

6.2.2.6.4.6 Po schválení musí organizace pro periodické inspekce a zkoušky oznámit vydávajícímu příslušnému orgánu veškeré změny týkající se informací poskytnutých podle 6.2.2.6.4.2 ve vztahu k prvnímu schválení.

Změny musí být vyhodnoceny, aby se určilo, zdali požadavky příslušných norem pro tlakové nádoby a ADR budou splněny. Může být požadován audit podle 6.2.2.6.3.2. Příslušný orgán musí tyto změny přijmout, nebo je písemnou formou zamítnout, a pokud je to nutné, vydat pozměněný schvalovací certifikát.

6.2.2.6.4.7 Na žádost musí příslušný orgán sdělit všem dalším příslušným orgánům informace týkající se prvních schválení, změn ve schváleních a odejmutých schválení.

6.2.2.6.5 Periodické inspekce a zkoušky a certifikace tlakových nádob

Umístění značky organizace pro periodické inspekce a zkoušky na tlakovou nádobu je považováno za prohlášení, že tlaková nádoba splňuje příslušné normy pro tlakové nádoby a požadavky ADR.

Organizace pro periodické inspekce a zkoušky musí umístit označení periodické inspekce a zkoušky, včetně své registrované značky na každou schválenou tlakovou nádobu (viz 6.2.2.7.6).

Zpráva potvrzující, že tlaková nádoba úspěšně prošla periodickou inspekcí a zkouškou musí být vydána organizací pro periodické inspekce a zkoušky před naplněním tlakové nádoby.

6.2.2.6.6. Záznamy

Organizace pro periodické inspekce a zkoušky musí uchovávat záznamy o všech periodických inspekcích a zkouškách tlakových nádobách (jak úspěšných, tak i neúspěšných) včetně adresy zkušebního střediska po dobu nejméně 15 let.

Vlastník tlakové nádoby musí uchovávat identickou zprávu až do příští periodické inspekce a zkoušky, pokud tlaková nádoba není trvale vyřazena z provozu.

6.2.2.7. Značení opakovaně plnitelných UN tlakových nádob

6.2.2.7.1

Opakovaně plnitelné UN tlakové nádoby musí být označeny jasně a čitelně certifikačními, provozními a výrobními značkami. Tyto značky musí být na tlakové nádobě trvale připevněny (např. vyraženy, vyryty nebo vyleptány). Označení musí být na rameni, na horním konci nebo na hrdle tlakové nádoby nebo na trvale připojené součásti tlakové nádoby (např. přivařený límec nebo korozi odolná destička přivařená na vnějším plášti kryogenní nádoby). S výjimkou UN znaku pro obaly musí být minimální rozměr těchto značek 5 mm pro tlakové nádoby s průměrem větším nebo rovným 140 mm a 2,5 mm pro tlakové nádoby s průměrem menším než 140 mm. Minimální rozměr UN znaku pro obaly musí být 10 mm pro tlakové nádoby s průměrem větším nebo rovným 140 mm a 5 mm pro tlakové nádoby s průměrem menším než 140 mm.

POZNÁMKA: požadavky na značení pro UN zásobníkový systém s hydridem kovů jsou uvedeny v 6.2.2.9.

6.2.2.7.2

Musí se použít následující certifikační značky:

- (a) Znak Spojených národů pro obaly



Tento znak nesmí být použit pro účely jiné nežli k osvědčení, že obal, přemístitelná cisterna nebo MEGC splňuje příslušné požadavky kapitoly 6.1, 6.2, 6.3, 6.5, 6.6 nebo 6.7². Tento znak nesmí být použit pro tlakové nádoby, které splňují pouze požadavky uvedené v 6.2.3 až 6.2.5 (viz 6.2.3.9).

- (b) Technická norma (např. ISO 9809-1) použitá pro konstrukci, výrobu a zkoušení;
- (c) Písmeno(a) identifikující zemi schválení, jak je udáno pomocí rozlišovacích značek motorových vozidel v mezinárodním provozu³,

POZNÁMKA: Zemí schválení se rozumí země, která schválila organizaci, která provedla inspekci jednotlivé nádoby při výrobě.

- (d) Identifikační značka nebo značka inspekční organizace, která je zaregistrována u příslušného orgánu země schvalující značení;
- (e) Datum první inspekce, rok (čtyři číslice) následovaný měsícem (2 číslice) oddělené lomítkem (např. “/”).

6.2.2.7.3

Musí se použít následující provozní značení:

- (f) Zkušební tlak v barech, kterému předchází písmena “PH” a následují písmena “BAR”;

² Tento symbol se také používá k potvrzení, že flexibilní objemové vaky schválené pro ostatní druhy dopravy jsou v souladu s požadavky uvedenými v kapitole 6.8 UN Modelového Regulativu.

³ Rozlišovací značky pro motorová vozidla v mezinárodním provozu předepsané Vídeňskou úmluvou o silničním provozu (1968).

- (g) Hmotnost prázdné tlakové nádoby včetně všech trvale připojených integrálních částí (např. hrdlový kroužek, patní kroužek atd.) v kilogramech, následovaná písmeny "KG". Tato hmotnost nesmí zahrnovat hmotnost ventilu, čepičky ventilu nebo ochrany ventilu, žádný povlak, nebo v případě acetyleny porézní materiál. Hmotnost musí být vyjádřena číslem s třemi platnými číslicemi, poslední číslice se zaokrouhluje nahoru. Pro láhve s hmotností menší než 1 kg musí být hmotnost vyjádřena číslem se dvěma platnými číslicemi, poslední číslice se zaokrouhluje nahoru. V případě tlakových nádob pro UN 1001 acetylen, rozpuštěný a UN 3374 acetylen, bez rozpouštědla bude za desetinnou čárkou nejméně jedno desetinné místo a dvě desetinná místa pro tlakové nádoby menší než 1 kg.
- (h) Minimální zaručená tloušťka stěny tlakové nádoby v mm, následovaná písmeny "MM". Toto značení se nevyžaduje pro tlakové nádoby s hydraulickým vnitřním objemem menším nebo rovným 1 litr nebo pro kompozitní láhve nebo pro uzavřené kryogenní nádoby.
- (i) V případě tlakových nádob pro stlačené plyny, UN 1001 acetylen, rozpuštěný a UN 3374 acetylen, bez rozpouštědla provozní tlak v barech, kterému předchází písmena "PW". V případě uzavřených kryogenních nádob nejvyšší dovolený provozní tlak, jemuž předchází písmena "MAWP".
- (j) V případě tlakových nádob na zkapalněné plyny a hluboce zchladené zkapalněné plyny, hydraulický vnitřní objem v litrech, vyjádřený na tři platné číslice, poslední číslice se zaokrouhluje dolů, po kterém následuje písmeno "L". Pokud hodnota minimálního nebo jmenovitého hydraulického vnitřního objemu je celé číslo, nemusí být číslice za desetinnou čárkou uvedeny.
- (k) V případě tlakových nádob pro UN 1001 acetylen, rozpuštěný součet hmotností prázdné tlakové nádoby, připojení a příslušenství, které se během plnění neodnímají, jakéhokoli povlaku, porézního materiálu, rozpouštědla a saturačního plynu, vyjádřený číslem se třemi platnými číslicemi (poslední číslice se zaokrouhluje dolů), následovaný písmeny "KG". Nejméně jedno desetinné místo musí být za desetinnou čárkou. Hmotnost musí být vyjádřena číslem se dvěma platnými číslicemi, poslední číslice se zaokrouhluje dolů.
- (l) V případě tlakových nádob pro UN 3374 acetylen, bez rozpouštědla, součet hmotností prázdné tlakové nádoby, připojení a příslušenství, které se během plnění neodnímají, jakéhokoli povlaku a porézního materiálu, vyjádřený číslem se třemi platnými číslicemi, poslední číslice zaokrouhlená směrem dolů, následovaný písmeny "KG". Hmotnost musí být vyjádřena nejméně na jedno desetinné místo. Pro tlakové nádoby menší než 1 kg musí být hmotnost vyjádřena číslem se dvěma platnými číslicemi, poslední číslice se zaokrouhluje směrem dolů.

6.2.2.7.4 Musí být použita následující výrobní značení :

- (m) Označení závitu láhve (např. 25E). Tato značka se nevyžaduje pro uzavřené kryogenní nádoby.
- (n) Značka výrobce registrovaná příslušným orgánem. Pokud země výroby není stejná jako země schválení, musí značka výrobce předcházet značka identifikující zemi výroby, jak je udána pomocí rozlišovacích značek pro motorová vozidla v mezinárodním provozu³. Značka země a značka výrobce musí být odděleny mezerou nebo lomítkem.
- (o) Sériové číslo přidělené výrobcem;
- (p) V případě ocelových tlakových nádob a kompozitních tlakových nádob s ocelovou vložkou, určených pro přepravu plynů s rizikem vodíkového zkřehnutí, písmeno "H" udávající snášenlivost oceli (viz ISO 11114-1:1997).


6.2.2.7.5 Výše uvedená značení musí být umístěna ve třech skupinách:

- Výrobní značení musí být v horní skupině a musí se objevit postupně v pořadí uvedeném v 6.2.2.7.3.
- Provozní značení podle 6.2.2.7.2 musí být ve skupině uprostřed a zkušební tlak (f) musí být bezprostředně za provozním tlakem (i), pokud je vyžadován.

³ Rozlišovací značky pro motorová vozidla v mezinárodním provozu předepsané Vídeňskou úmluvou o silničním provozu (1968).

- Certifikační značení musí být ve spodní skupině a musí být uvedeno v pořadí uvedeném v 6.2.2.7.1.

Následující příklad značení je použitelný pro plynové láhve:

(m)	(n)	(o)	(p)	
25E	D MF	765432	H	
(i)	(f)	(g)	(j)	(h)
PW200	PH300BAR	62,1KG	50L	5.8MM
(a)	(b)	(c)	(d)	(e)
	ISO 9809-1	F	IB	2000/12

- 6.2.2.7.6** Jiná značení jsou dovolena na jiných plochách mimo boční stěny za předpokladu, že jsou umístěna na málo namáhaných plochách a ne v rozměrech a do hloubky, které by mohly způsobit škodlivé koncentrace napětí. V případě uzavřených kryogenních nádob může být toto značení na oddělené destičce připevněné k vnějšímu plášti. Taková značení nesmějí být v rozporu s předepsaným značením.
- 6.2.2.7.7** Navíc k předchozímu značení musí být každá opakovaně plnitelná tlaková nádoba, která splňuje požadavky na periodické inspekce a zkoušky podle 6.2.2.4, opatřena značením uvádějícím:
- (a) písmeno(a) rozlišovací značky země, která schválila organizaci pro periodické inspekce a zkoušky, jak je indikováno charakteristickými znaky motorových vozidel v mezinárodní dopravě³. Toto označení se nevyžaduje, pokud je tato organizace schválena příslušným orgánem země schvalující výrobu.
 - (b) registrovanou značku organizace pověřené příslušným orgánem pro provádění periodických inspekci a zkoušek;
 - (c) datum periodické inspekce a zkoušky, rok (dvě číslice), následovaný měsícem (dvě číslice), oddělené lomítkem (např. "/"). Pro označení roku je možno použít čtyři číslice.

Výše uvedené značení se objeví postupně v uvedeném pořadí.

- 6.2.2.7.8** Se souhlasem příslušného orgánu může být pro acetylenové láhve datum poslední periodické inspekce a značka organizace provádějící periodickou inspekci a zkoušku, vyraženy na prstenci upevněném na lahvi pomocí ventilu. Prstenec musí být umístěn tak, aby mohl být odstraněn pouze odpojením ventilu od láhve.
- 6.2.2.7.9** Pro svazky lahví se požadavky na značení tlakových nádob použijí pouze na jednotlivé láhve ze svazku a ne na kompletní celek.

6.2.2.8 Značení UN tlakových lahví pro jedno použití

- 6.2.2.8.1** UN tlakové láhve pro jedno použití musí být zřetelně a viditelně označeny certifikační značkou a specifickým označením pro plyny nebo pro tlakové nádoby. Tyto značky musí být trvale připevněny (např. nastříkány pomocí šablony, vyraženy, vyryty nebo vyleptány) na každé tlakové nádobě. S výjimkou použití šablony musí být značky na rameni, horní konci nebo na hrdle tlakové nádoby nebo na trvale připevněné součásti tlakové nádoby (např. na přivařeném límci). S výjimkou UN znaku pro obaly a nápisu " ZNOVU NEPLNIT" , musí být minimální rozměr značek 5 mm pro tlakové nádoby o průměru větším nebo rovném 140 mm a 2,5 mm pro tlakové nádoby o průměru menším než 140 mm. Minimální rozměr UN znaku pro obaly musí být 10 mm pro tlakové nádoby

³ Charakteristické znaky motorových vozidel v mezinárodní dopravě předepsané Vídeňskou úmluvou o silničním provozu (1968).

o průměru větším nebo rovném 140 mm a 5 mm pro tlakové nádoby o průměru menším než 140 mm. Nejmenší rozměr nápisu "ZNOVU NEPLNIT" musí být 5 mm.

6.2.2.8.2 Značky uvedené v 6.2.2.7.1 až 6.2.2.7.3 musí být použity, s výjimkou (g), (h) a (m). Sériové číslo (o) může být nahrazeno číslem šarže. Navíc, slova "ZNOVU NEPLNIT" se vyžadují s výškou písmen nejméně 5 mm.

6.2.2.8.3 Požadavky uvedené v 6.2.2.7.4 se použijí.

POZNÁMKA: U tlakových láhví pro jedno použití je možno, kvůli jejich rozměrům, nahradit toto značení nálepkou.

6.2.2.8.4 Jiná značení jsou dovolena za předpokladu, že jsou provedena na plochách s nízkým napětím mimo boční stěny a nemají takové rozměry a hloubku, aby mohly způsobit škodlivé koncentrace napětí. Takové značky nesmějí být v rozporu s předepsaným označením.

6.2.2.9 Značení UN zásobníkového systému s hydridem kovu

6.2.2.9.1 UN zásobníkový systém s hydridem kovu musí být označen jasně a čitelně značkami uvedenými níže. Tyto značky musí být trvale připevněny (např. vyraženy, vyryty nebo vyleptány) na UN zásobníkovém systému s hydridem kovu. Označení musí být na rameni, na horním konci nebo na hrdle UN zásobníkového systému s hydridem kovu nebo na trvale připojené součásti UN zásobníkového systému s hydridem kovu. S výjimkou UN znaku pro obaly musí být minimální rozměr těchto značek 5 mm pro UN zásobníkový systém s hydridem kovu s nejmenším celkovým rozměrem větším nebo rovným 140 mm a 2,5 mm pro UN zásobníkový systém s hydridem kovu s nejmenším celkovým rozměrem menším než 140 mm. Minimální rozměr UN znaku pro obaly musí být 10 mm pro UN zásobníkový systém s hydridem kovu s nejmenším celkovým rozměrem větším nebo rovným 140 mm a 5 mm pro UN zásobníkový systém s hydridem kovu s nejmenším celkovým rozměrem menším než 140 mm.

6.2.2.9.2 Musí se použít následující značky:



(a) Znak Spojených národů pro obaly ;

Tento znak nesmí být použit pro jiné účely než pro osvědčení, že obal, přemístitelná cisterna nebo MEGC splňuje příslušné požadavky kapitoly 6.1, 6.2, 6.3, 6.5, 6.6 nebo 6.7².

(b) „ISO 16111“ (technická norma použitá pro konstrukci, výrobu a zkoušení) ;

(c) Písmeno(a) identifikující zemi schválení, jak je udáno pomocí rozlišovacích značek motorových vozidel v mezinárodním provozu³,

POZNÁMKA: Zemí schválení se rozumí země, která schválila organizaci, která provedla inspekci jednotlivé nádoby při výrobě.

(d) Identifikační značka nebo značka inspekční organizace, která je zaregistrována u příslušného orgánu země schvalující značení;

(e) Datum první inspekce, rok (čtyři číslice) následovaný měsícem (2 číslice) oddělené lomítkem (např. "/").

(f) Zkušební tlak nádoby v barech, kterému předchází písmena "PH" a následují písmena "BAR";

(g) Jmenovitý plnicí tlak zásobníkového systému s hydridem kovu v barech, kterému předchází písmena "RCP" a následují písmena "BAR";

(h) Značka výrobce registrovaná příslušným orgánem. Pokud země výroby není stejná jako země schválení, musí značka výrobce předcházet značka identifikující zemi výroby, jak je udána

² Tento symbol se také používá k potvrzení, že flexibilní objemové vaky schválené pro ostatní druhy dopravy jsou v souladu s požadavky uvedenými v kapitole 6.8 UN Modelového Regulativu.

³ Rozlišovací značky pro motorová vozidla v mezinárodním provozu předepsané Vídeňskou úmluvou o silničním provozu (1968).

pomocí rozlišovacích značek pro motorová vozidla v mezinárodním provozu³. Značka země a značka výrobce musí být odděleny mezerou nebo lomítkem.

- (i) Sériové číslo přidělené výrobcem;
- (j) V případě ocelových nádob a kompozitních nádob s ocelovou vložkou, písmeno "H" udávající snášenlivost oceli (viz ISO 11114-1:1997) ; a
- (k) V případě zásobníkového systému s hydridem kovu mající omezenou dobu životnosti, datum spotřeby, označené písmeny „FINAL“ následují rok (čtyři číslice) následovaný měsícem (2 číslice) oddělené lomítkem (např. "/").

Certifikační značky specifikované v (a) až (e) se musí objevovat postupně v pořadí uvedeném výše. Zkušební tlak (f) musí bezprostředně předcházet jmenovitému plnicímu tlaku (g). Výrobní značení specifikované od (h) do (k) se musí objevovat postupně v pořadí uvedeném výše.

6.2.2.9.3 Jiná značení jsou povolena na plochách mimo boční stěny, za předpokladu, že jsou provedena na plochách s nízkým napětím a nemají takové rozměry a hloubku, aby mohly způsobit škodlivé koncentrace napětí. Takové značky nesmějí být v rozporu s předepsaným označením.

6.2.2.9.4 Navíc k předchozímu značení musí být každý zásobníkový systém s hydridem kovu, který splňuje požadavky na periodické inspekce a zkoušky podle 6.2.2.4, opatřena značením uvádějícím:

- (a) písmeno(a) rozlišovací značky země, která schválila organizaci pro periodické inspekce a zkoušky, jak je udáno pomocí rozlišovacích značek motorových vozidel v mezinárodním provozu². Toto označení se nevyžaduje, pokud je tato organizace schválena příslušným orgánem země schvalující výrobu.
- (b) registrovanou značku organizace pověřené příslušným orgánem pro provádění periodických inspekcí a zkoušek;
- (c) datum periodické inspekce a zkoušky, rok (dvě číslice), následovaný měsícem (dvě číslice), oddělené lomítkem (např. "/"). Pro označení roku je možno použít čtyři číslice.

Výše uvedené značení se objeví postupně v uvedeném pořadí.

6.2.2.10 Ekvivalentní postupy pro posuzování shody a periodické inspekce a zkoušky

Pro UN tlakové nádoby se považují požadavky uvedené v 6.2.2.5 a 6.2.2.6 za splněné, pokud se použijí následující postupy:

Postup	Příslušná organizace
Typové schválení (1.8.7.2)	Xa
Dohled nad výrobou (1.8.7.3)	Xa nebo IS
První inspekce a zkoušky (1.8.7.4)	Xa nebo IS
Periodická inspekce (1.8.7.5)	Xa nebo Xb nebo IS

Xa znamená příslušný orgán, jeho zástupce nebo inspekční organizaci podle 1.8.6.2, 1.8.6.4, 1.8.6.5 a 1.8.6.8 a akreditovanou podle EN ISO/IEC 17020:2004 typ A.

Xb znamená inspekční organizaci podle 1.8.6.2, 1.8.6.4, 1.8.6.5 a 1.8.6.8 a akreditovanou podle EN ISO/IEC 17020:2004 typ B.

IS znamená vlastní inspekční službu žadatele pod dohledem inspekční organizace podle 1.8.6.2, 1.8.6.4, 1.8.6.5 a 1.8.6.8 a akreditované podle EN ISO/IEC 17020:2004 typ A. Vlastní inspekční služba musí být nezávislá na procesu konstrukce, výroby, oprav a údržby.

6.2.3 Všeobecné požadavky na tlakové nádoby neodpovídající UN

6.2.3.1 Konstrukce a výroba

³ Rozlišovací značky pro motorová vozidla v mezinárodním provozu předepsané Vídeňskou úmluvou o silničním provozu (1968).

6.2.3.1.1 Tlakové nádoby a jejich uzávěry, které nejsou zkonstruovány, vyrobeny, kontrolovány, zkoušeny a schváleny podle požadavků 6.2.2 musí být zkonstruovány, vyrobeny, kontrolovány, zkoušeny a schváleny podle všeobecných požadavků v 6.2.1, doplněných nebo upravených podle požadavků tohoto oddílu a požadavků uvedených v 6.2.4 nebo 6.2.5.

6.2.3.1.2 Kdykoliv je to možné, musí být tloušťka stěny stanovena výpočtem doprovázeným, pokud je to zapotřebí, experimentální analýzou napětí. Jinak může být tloušťka stěny stanovena experimentálně.

K zajištění bezpečnosti tlakových nádob musí být použity při konstrukci tlakového pláště a podpěrných částí nádoby vhodné výpočty.

Minimální tloušťka stěny k odolání tlaku musí být vypočtena se zvláštním zřetelem na:

- výpočtové tlaky, které nesmějí být menší než zkušební tlak;
- výpočtové teploty dovolující dostatečné míry bezpečnosti;
- maximální napětí a koncentrace špičkového napětí tam, kde je to nutné;
- faktory spojené s vlastnostmi materiálu.

6.2.3.1.3 Pro svařované tlakové nádoby musí být použity pouze kovy s dobrou svařitelností, jejichž vrubová houževnatost při teplotě okolí – 20 °C může být zaručena.

6.2.3.1.4 Pro uzavřené kryogenní nádoby musí být zkouška vrubové houževnatosti, která musí být určena podle 6.2.1.1.8.1, provedena tak, jak je to stanoveno v 6.8.5.3.

6.2.3.2 *(Vyhrazeno)*

6.2.3.3 Provozní výstroj

6.2.3.3.1 Provozní výstroj musí splňovat požadavky uvedené v 6.2.1.3.

6.2.3.3.2 Otvory

Tlakové sudy mohou být opatřeny otvory pro plnění a vyprazdňování a dalšími otvory určenými pro měřiče hladiny, měřiče tlaku nebo odpouštěcí zařízení. Počet otvorů musí být udržován na minimu v souladu s bezpečností práce. Tlakové sudy mohou být opatřeny rovněž otvorem pro inspekci, který musí být uzavřen účinným uzávěrem.

6.2.3.3.3 Příslušenství

- (a) Pokud jsou láhve vybaveny zařízením pro válení, nesmí být toto zařízení součástí ochranného krytu ventilu.
- (b) Tlakové sudy, které jsou schopné válení, musí být vybaveny obručemi pro válení, nebo být jinak chráněny proti poškození v důsledku válení (např. korozi odolným kovem nastříkaným na povrch tlakové nádoby).
- (c) Svazky lahví musí být vybaveny vhodným příslušenstvím umožňujícím bezpečnou manipulaci a přepravu.
- (d) Pokud jsou instalovány měřiče hladiny, měřiče tlaku nebo odpouštěcí zařízení, musí být chráněny stejným způsobem, jak se to vyžaduje pro ventily v 4.1.6.8.

6.2.3.4 První inspekce a zkouška

6.2.3.4.1 Nové tlakové nádoby musí být podrobeny zkoušení a inspekci v průběhu výroby a po výrobě podle požadavků 6.2.1.5.

6.2.3.4.2 Specifické předpisy platné pro tlakové nádoby z hliníkových slitin

- (a) Navíc k první inspekci vyžadované podle 6.2.1.5.1 je nutná zkouška kvůli možné mezikrystalické korozi vnitřní stěny tlakových nádob vyrobených z hliníkové slitiny obsahující měď, nebo vyrobených z hliníkové slitiny obsahující hořčík a mangan, pokud je obsah hořčíku větší než 3,5 % nebo obsah manganu nižší než 0,5 %;

- (b) V případě slitiny hliník/měď musí být zkouška provedena výrobcem v době schvalování nové slitiny příslušným orgánem; poté musí být zkouška opakována během výroby pro každé lití slitiny;
- (c) V případě slitiny hliník/hořčík musí být zkouška provedena výrobcem v době schvalování nové slitiny a výrobního procesu příslušným orgánem. Zkouška musí být opakována při každé změně ve složení slitiny nebo ve výrobním procesu.

6.2.3.5 Periodická inspekce a zkouška

6.2.3.5.1 Periodická inspekce a zkouška musí být v souladu s 6.2.1.6.1.

POZNÁMKA : Se souhlasem příslušného orgánu země, která vydala typové schválení, může být hydraulická tlaková zkouška každé svařované ocelové láhve určené pro přepravu plynů UN 1965, uhlovodíky, plynné, směs, zkapalněná, j.n. s vnitřním objemem pod 6,5 l nahrazena jinou zkouškou zajišťující stejnou úroveň bezpečnosti.

6.2.3.5.2 (Vypuštěno)

6.2.3.6 Schvalování tlakových nádob

6.2.3.6.1 Postupy pro posuzování shody a periodické inspekce oddílu 1.8.7 musí být provedeny příslušným orgánem podle následující tabulky:

Postup	Příslušná organizace
Typové schválení (1.8.7.2)	Xa
Dohled nad výrobou (1.8.7.3)	Xa nebo IS
První inspekce a zkoušky (1.8.7.4)	Xa nebo IS
Periodická inspekce (1.8.7.5)	Xa nebo Xb nebo IS

Pro tlakové nádoby s možností plnění, posouzení shody ventilů a jiných demontovatelných příslušenství majících přímou bezpečnostní funkci může být provedeno odděleně od nádob a postup pro posouzení shody musí být nejméně tak přísný, jako ten, který podstoupila tlaková nádoba, ke které jsou připojeny.

Xa znamená příslušný orgán, jeho zástupce nebo inspekční organizaci dle 1.8.6.2, 1.8.6.4, 1.8.6.5 a 1.8.6.8 a akreditovanou podle EN ISO/IEC 17020:2004 typ A.

Xb znamená inspekční organizaci podle 1.8.6.2, 1.8.6.4, 1.8.6.5 a 1.8.6.8 a akreditovanou podle EN ISO/IEC 17020:2004 typ B.

IS znamená vlastní inspekční službu žadatele pod dohledem inspekční organizace podle 1.8.6.2, 1.8.6.4, 1.8.6.5 a 1.8.6.8 a akreditované podle EN ISO/IEC 17020:2004 typ A. Vlastní inspekční služba musí být nezávislá na procesu konstrukce, výroby, oprav a údržby.

6.2.3.6.2 Jestliže země schválení není smluvní stranou ADR, musí být příslušný orgán zmíněný v 6.2.1.7.2 příslušným orgánem smluvní strany ADR.

6.2.3.7 Požadavky na výrobce

6.2.3.7.1 Musí být splněny odpovídající požadavky oddílu 1.8.7.

6.2.3.8 Požadavky na inspekční organizaci

Musí být splněny požadavky oddílu 1.8.6.

6.2.3.9 Značení opakovaně plnitelných tlakových nádob

6.2.3.9.1 Značení musí být v souladu s pododdílem 6.2.2.7 s následujícími změnami.

6.2.3.9.2 UN znak pro obaly, specifikovaný v 6.2.2.7.1 (a), se nesmí používat.

- 6.2.3.9.3** Požadavky uvedené v 6.2.2.7.2(j) musí být nahrazeny následovně:
- (j) Hydraulický vnitřní objem tlakové nádoby v litrech následovaný písmenem "L". V případě tlakových nádob pro zkapalněné plyny musí být hydraulický vnitřní objem v litrech vyjádřen číslem se třemi platnými číslicemi, poslední se zaokrouhluje dolů. Pokud je hodnota minimálního nebo jmenovitého hydraulického vnitřního objemu celé číslo, je možno číslice za desetinnou čárkou vynechat.
- 6.2.3.9.4** Značky specifikované v 6.2.2.7.2 (g) a (h) a v 6.2.2.7.3 (m) nejsou vyžadovány pro tlakové nádoby na UN 1965 uhlovodíky, plynné, směs, zkapalněná, j.n.
- 6.2.3.9.5** Pokud se vyžaduje vyznačení dat podle 6.2.2.7.6 (c), nemusí být udán měsíc pro plyny mající interval mezi periodickými inspekčními 10 let nebo více (viz pokyny pro balení P200 a P203 pododdílu 4.1.4.1).
- 6.2.3.9.6** Značení podle 6.2.2.7.6 mohou být vyryta na prstenec z vhodného materiálu připevněný k láhvi, když je nainstalován ventil, a který je odnímatelný pouze odpojením ventilu od láhve.
- 6.2.3.9.7** Značení svazků láhví
- 6.2.3.9.7.1 Jednotlivé láhve ve svazku musí být značeny podle 6.2.3.9.
- 6.2.3.9.7.2 Štítek trvale připevněný k rámu svazku musí nést následující značení:
- (a) Certifikační značky specifikované v 6.2.2.7.2 (b), (c), (d) a (e);
- (b) Provozní značení specifikované v 6.2.2.7.3 (f), (i), (j) a celkovou (brutto) hmotnost, která musí zahrnovat hmotnost rámu svazku a všech trvale připevněných dílů (láhve, potrubí, armatury a ventily). Svazky určené pro dopravu UN 1001 acetylenu rozpuštěného a UN 3374 acetyleny bez rozpouštědla musí být označeny hmotností obalu podle specifikace v odstavci (a) (6) odstavce 5.4 EN 12755:2000; a
- (c) Výrobní značení specifikované v 6.2.2.7.4 (n), (o) a tam, kde je to použitelné, (p).
- 6.2.3.9.7.3 Značení musí být umístěna ve třech skupinách:
- (a) Výrobní značení musí být v horní skupině a musí se objevit postupně v pořadí uvedeném v 6.2.3.9.7.2 (c);
- (b) Provozní značení podle 6.2.3.9.7.2 (b) musí být ve skupině uprostřed a provoznímu značení specifikovanému v 6.2.2.7.3 (f) musí bezprostředně předcházet provozní značení specifikované v 6.2.2.7.3 (i), pokud se toto značení požaduje;
- (c) Certifikační značení musí být ve spodní skupině a musí být uvedeno v pořadí uvedeném v 6.2.3.9.7.2 (a).
- 6.2.3.10 Značení tlakových nádob pro jedno použití**
- 6.2.3.10.1** Značení musí být v souladu s 6.2.2.8 s výjimkou toho, že UN znak pro obaly, specifikovaný v 6.2.2.7.1 (a), nesmí být použit.
- 6.2.3.11 Záchranné tlakové nádoby**
- 6.2.3.11.1** Pro umožnění bezpečné manipulace a likvidace tlakových nádob nesených uvnitř záchranné tlakové nádoby, může návrh obsahovat zařízení, které se jinak nepoužívá pro válce nebo tlakové nádoby, jako jsou ploché hlavy, zařízení pro rychlé otevření a otvory ve válcové části.
- 6.2.3.11.2** Pokyny pro bezpečnou manipulaci a používání záchranné tlakové nádoby musí být jasně uvedeny v dokumentaci pro předložení příslušnému orgánu země schválení, a musí tvořit součást osvědčení o schválení. V osvědčení o schválení musí být uvedeny tlakové nádoby schválené pro přepravu

v záchranné tlakové nádobě. Musí být rovněž uveden seznam konstrukčních materiálů všech částí, které mohou být v kontaktu s nebezpečnými věcmi.

6.2.3.11.3 Kopie osvědčení o schválení musí být dodaná výrobcem vlastníkovvi záchranné tlakové nádoby.

6.2.3.11.4 Označování záchranných nádob podle 6.2.3 musí být stanoveno příslušným orgánem země a schválení musí brát v úvahu ustanovení odstavce 6.2.3.9 o vhodném označení podle potřeby. Označení musí obsahovat objem vody a zkušební tlak záchranné tlakové nádoby.

6.2.4 Požadavky na tlakové nádoby neodpovídající UN, které jsou zkonstruovány, vyrobeny a odzkoušeny podle norem

POZNÁMKA : Osoby nebo organizace uvedené v normách jako odpovědné podle ADR musí splňovat požadavky ADR.

6.2.4.1 Konstrukce, výroba a první inspekce a zkouška

Normy v níže uvedené tabulce musí být použity pro vydání typových schválení jak je uvedeno ve sloupci (4), aby byly splněny požadavky kapitoly 6.2 dle sloupce (3). Požadavky kapitoly 6.2 dle sloupce (3) musí být ve všech případech nadřazeny. Sloupec (5) uvádí poslední datum kdy existující typové schválení musí být odebráno s ohledem na 1.8.7.2.4; pokud není datum uvedeno typové schválení zůstává v platnosti do doby jeho platnosti.

Od 1. ledna 2009 je použití norem závazné. Výjimky jsou řešeny v 6.2.5.

Jestliže je více nežli jedna norma uvedena jako povinná pro použití stejných požadavků, může být použita pouze jedna z nich, ale v úplném znění, pokud není v tabulce níže specifikováno jinak.

Odkaz	Název dokumentu	Použitelné oddíly a pododdíly	Použitelné pro schválení nového typu nebo pro obnovení	Poslední datum pro odejmutí existujících typových schválení
(1)	(2)	(3)	(4)	(5)
Pro konstrukci a výrobu				
Příloha I, Části 1-3 k 84/525/EEC	Směrnice Rady o sblížení právních a správních předpisů členských států týkající se bezešvých ocelových plynových lahví, uveřejněná v Official Journal of the European Communities No. L 300 z 19.11.1984	6.2.3.1 a 6.2.3.4	Až do odvolání	
Příloha I, Části 1-3 k 84/526/EEC	Směrnice Rady o sblížení právních a správních předpisů členských států týkající se bezešvých plynových lahví z čistého hliníku nebo ze slitiny hliníku, uveřejněná v Official Journal of the European Communities No. L 300 z 19.11.1984	6.2.3.1 a 6.2.3.4	Až do odvolání	
Příloha I, Části 1-3 k 84/527/EEC	Směrnice Rady o sblížení právních a správních předpisů členských států týkající se svařovaných ocelových plynových lahví bez slitin, uveřejněná v Official Journal of the European Communities No. L 300 z 19.11.1984	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 1442:1998 +AC:1999	Převážitelné opakovaně plnitelné svařované ocelové láhve na zkapalněný ropný plyn (LPG) – Konstrukce a výroba	6.2.3.1 a 6.2.3.4	Mezi 1.7.2001 a 30.6.2007	31.12.2012
EN 1442:1998 +	Převážitelné opakovaně plnitelné	6.2.3.1	Mezi	

Odkaz	Název dokumentu	Použitelné oddíly a pododdíly	Použitelné pro schválení nového typu nebo pro obnovu	Poslední datum pro odejmutí existujících typových schválení
(1)	(2)	(3)	(4)	(5)
A2:2005	svařované ocelové láhve na zkapalněný ropný plyn (LPG) – Konstrukce a výroba	a 6.2.3.4	1.1.2009 a 31.12.2010	
EN 1442:2006 +A1:2008	Převratitelné opakovaně plnitelné svařované ocelové láhve na zkapalněný ropný plyn (LPG) – Konstrukce a výroba	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 1800:1998 +AC:1999	Převratitelné plynové láhve - Láhve na acetylen- Základní požadavky a definice	6.2.1.1.9	Mezi 1.1.2009 a 31.12.2010	
EN 1800:2006	Převratitelné plynové láhve - Láhve na acetylen- Základní požadavky, definice a typová zkouška	6.2.1.1.9	Až do odvolání	
EN 1964 -1:1999	Převratitelné plynové láhve - Specifikace pro konstrukci a výrobu opakovaně plnitelných převratitelných bezešvých ocelových plynových lahví s objemem od 0,5 litru až do 150 litrů - Část 1: Láhve vyrobené bez svarů z oceli s hodnotou Rm menší než 1 100 MPa	6.2.3.1 a 6.2.3.4	Do 31. 12. 2014	
EN 1975:1999 (kromě přílohy G)	Převratitelné plynové láhve - Specifikace pro konstrukci a výrobu opakovaně plnitelných převratitelných bezešvých plynových lahví z hliníku a ze slitiny hliníku s objemem od 0,5 litru až do 150 litrů	6.2.3.1 a 6.2.3.4	Před 1.7.2005	
EN 1975:1999 + A1:2003	Převratitelné plynové láhve - Specifikace pro konstrukci a výrobu opakovaně plnitelných převratitelných bezešvých plynových lahví z hliníku a ze slitiny hliníku.s objemem od 0,5 litru do 150 litrů	6.2.3.1 a 6.2.3.4	Před 1. 1. 2015	
EN ISO 11120:1999	Plynové láhve – Opakovaně plnitelné bezešvé ocelové trubkové nádoby pro přepravu stlačeného plynu s hydraulických vnitřním objemem mezi 150 litry a 3000 litry - Konstrukce, výroba a zkoušení	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 1964-3:2000	Převratitelné plynové láhve - Specifikace pro konstrukci a výrobu opakovaně plnitelných převratitelných bezešvých ocelových plynových lahví s objemem od 0,5 litru do 150 litrů – Část 3: Láhve vyrobené bez svarů z nerezové oceli s hodnotou Rm menší než 1 100 MPa	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 12862:2000	Převratitelné plynové láhve - Specifikace pro konstrukci a výrobu opakovaně plnitelných převratitelných svařovaných plynových lahví ze slitiny hliníku	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 1251- 2:2000	Kryogenní nádoby – Převratitelné,	6.2.3.1	Až do odvolání	

Odkaz	Název dokumentu	Použitelné oddíly a pododdíly	Použitelné pro schválení nového typu nebo pro obnovu	Poslední datum pro odejmutí existujících typových schválení
(1)	(2)	(3)	(4)	(5)
	vakuově izolované, s objemem nejvýše 1000 litrů – Část 2: Konstrukce, výroba, inspekce a zkoušení	a 6.2.3.4		
EN 12257:2002	Převratitelné plynové láhve – Bezešvé kompozitní láhve ovinuté obručí	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 12807:2001 (mimo přílohu A)	Převratitelné opakovaně plnitelné na tvrdo pájené ocelové láhve na zkapalněný ropný plyn (LPG) – Konstrukce a výroba	6.2.3.1 a 6.2.3.4	Mezi 1.1.2005 a 31.12.2010	31.12.2012
EN 12807:2008	Převratitelné opakovaně plnitelné na tvrdo pájené ocelové láhve na zkapalněný ropný plyn (LPG) – Konstrukce a výroba	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 1964 -2:2001	Převratitelné plynové láhve - Specifikace pro konstrukci a výrobu opakovaně plnitelných přepravitelných bezešvých ocelových plynových lahví s hydraulickým vnitřním objemem od 0,5 litru do 150 litrů včetně – Část 2: Láhve vyrobené bez svarů z oceli s hodnotou Rm větší nebo rovnou 1100 MPa	6.2.3.1 a 6.2.3.4	Do 31.12.2014	
EN ISO 9809-1:2010	Láhve na plyny – Znovuplnitelné bezešvé ocelové lahve na plyny – Návrh, konstrukce a zkoušení – Část 1: Lahve ze zušlechtěné oceli s mezí pevnosti v tahu menší než 1100 MPa (ISO 9809-1:2008)	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN ISO 9809-2:2010	Láhve na plyny – Znovuplnitelné bezešvé ocelové lahve na plyny – Návrh, konstrukce a zkoušení – Část 2: Lahve ze zušlechtěné oceli s mezí pevnosti v tahu 1100 MPa nebo větší (ISO 9809-2:2008)	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN ISO 9809-3:2010	Láhve na plyny – Znovuplnitelné bezešvé ocelové lahve na plyny – Návrh, konstrukce a zkoušení – Část 3: Lahve z normalizačně žíhané oceli (ISO 9809-3:2008)	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 13293:2002	Převratitelné plynové láhve - Specifikace pro konstrukci a výrobu opakovaně plnitelných přepravitelných bezešvých plynových lahví z normalizované uhlíkové a manganové oceli s hydraulickým vnitřním objemem až do 0,5 litru pro stlačené, zkapalněné a rozpuštěné plyny a až do 1 litru pro oxid uhličitý	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 13322-1:2003	Převratitelné plynové láhve – Opakovaně plnitelné svařované ocelové plynové láhve - Konstrukce a výroba – Část 1: Svařovaná ocel	6.2.3.1 a 6.2.3.4	Před 1.7.2007	
EN 13322-1:2003	Převratitelné plynové láhve –	6.2.3.1	Až do odvolání	

Odkaz	Název dokumentu	Použitelné oddíly a pododdíly	Použitelné pro schválení nového typu nebo pro obnovu	Poslední datum pro odejmutí existujících typových schválení
(1)	(2)	(3)	(4)	(5)
+A1:2006	Opakovaně plnitelné svařované ocelové plynové láhve - Konstrukce a výroba - Část 1: Svařovaná ocel	a 6.2.3.4		
EN 13322-2:2003	Přepřavitelné plynové láhve - Opakovaně plnitelné svařované plynové láhve z nerezové oceli - Konstrukce a výroba - Část 2: Svařovaná nerezová ocel	6.2.3.1 a 6.2.3.4	Před 1.7.2007	
EN 13322-2:2003 +A1:2006	Přepřavitelné plynové láhve - Opakovaně plnitelné svařované plynové láhve z nerezové oceli - Konstrukce a výroba - Část 2: Svařovaná nerezová ocel	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 12245:2002	Přepřavitelné plynové láhve - Plně ovinuté kompozitní láhve	6.2.3.1 a 6.2.3.4	Před 1.1.2015	
EN 12245:2009 +A1:2011	Lahve na přepravu plynů - Plně ovinuté kompozitové lahve	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 12205:2001	Přepřavitelné plynové láhve - Kovové plynové láhve pro jedno použití	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 13110:2002	Přepřavitelné opakovaně plnitelné svařované hliníkové láhve na zkapalněný ropný plyn (LPG) - Konstrukce a výroba	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 14427:2004	Přepřavitelné opakovaně plnitelné plně ovinuté kompozitní láhve na zkapalněné ropné plyny - Konstrukce a výroba <i>POZNÁMKA: Tato norma se používá pouze pro láhve vybavené ventily na vyrovnávání tlaku</i>	6.2.3.1a 6.2.3.4	Před 1.7.2007	
EN 14427:2004 + A1:2005	Přepřavitelné opakovaně plnitelné plně ovinuté kompozitní láhve na zkapalněné ropné plyny - Konstrukce a výroba <i>POZNÁMKA 1: Tato norma se používá pouze pro láhve vybavené ventily na vyrovnávání tlaku</i> <i>POZNÁMKA 2: V 5.2.9.2.1 a 5.2.9.3.1 musí být obě láhve podrobeny zkoušce na prasknutí, pokud vykazují poškození stejné nebo horší, nežli jsou kritéria pro zamítnutí</i>	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 14208:2004	Přepřavitelné plynové láhve - Specifikace pro svařované tlakové sudy s objemem až do 1000 litrů pro přepravu plynů - Konstrukce a výroba	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 14140:2003	Přepřavitelné opakovaně plnitelné svařované ocelové láhve na zkapalněný ropný plyn (LPG) - Alternativní konstrukce a výroba	6.2.3.1 a 6.2.3.4	mezi 1.1.2005 a 31.12.2010	
EN 14140: 2003 + A1:2006	Zařízení pro LPG a jejich příslušenství - Přepřavitelné opakovaně plnitelné svařované ocelové láhve na LPG - Alternativní	6.2.3.1 a 6.2.3.4	Až do odvolání	

Odkaz	Název dokumentu	Použitelné oddíly a pododdíly	Použitelné pro schválení nového typu nebo pro obnovu	Poslední datum pro odejmutí existujících typových schválení
(1)	(2)	(3)	(4)	(5)
	konstrukce a výroba			
EN 13769:2003	Převratitelné plynové láhve - Svazky lahví - Konstrukce, výroba, identifikace a zkoušení	6.2.3.1 a 6.2.3.4	Před 1.7.2007	
EN 13769:2003 + A1:2005	Převratitelné plynové láhve - Svazky lahví - Konstrukce, výroba, identifikace a zkoušení	6.2.3.1 a 6.2.3.4	Před 1.1.2015	
EN ISO 10961:2012	Lahve na plyny - Svazky lahví - Návrh, výroba, zkoušení a kontrola	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 14638-1:2006	Převratitelné plynové láhve - Opakovaně plnitelné svařované nádoby s objemem nepřevyšujícím 150 litrů - Část 1: Svařované láhve z austenitické nerezové oceli zkonstruované experimentálními postupy	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 14893:2006 + AC:2007	Zařízení pro LPG a jejich příslušenství - Převratitelné svařované ocelové tlakové sudy na LPG s objemem mezi 150 litry a 1000 litry	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN ISO 7866:2011	Lahve na plyny - Znovuplnitelné bezešvé lahve na plyny z hliníkových slitin - Návrh, konstrukce a zkoušení (ISO/DIS 7866:2011)	6.2.3.1 a 6.2.3.4	Až do odvolání	
EN 14638-3:2010	Lahve na přepravu plynů - Znovuplnitelné svařované nádoby o objemu nejvýše 150 litrů - Část 3: Svařované lahve z uhlíkové oceli vyrobené podle návrhu podloženého experimentálními metodami	6.2.3.1 a 6.2.3.4	Až do odvolání	
Pro uzávěry				
EN 849 :1996 (mimo přílohu A)	Převratitelné plynové láhve - Ventily lahví - Specifikace a typová zkouška	6.2.3.1 a 6.2.3.3	Před 1.7.2003	31.12.2014
EN 849 :1996/ A2:2001	Převratitelné plynové láhve - Ventily lahví: Specifikace a typová zkouška	6.2.3.1 a 6.2.3.3	Před 1.7.2007	31.12.2016
EN ISO 10297:2006	Převratitelné plynové láhve - Ventily lahví: Specifikace a typová zkouška	6.2.3.1 a 6.2.3.3	Až do odvolání	
EN ISO 14245:2010	Lahve na plyny - Technické požadavky a zkoušení ventilů lahví na LPG - Samouzavírací ventily (ISO 14245:2006)	6.2.3.1 a 6.2.3.3	Až do odvolání	
EN 13152:2001	Specifikace a zkoušení ventilů lahví na LPG - samouzavíracích	6.2.3.1 a 6.2.3.3	Mezi 1.7.2005 a 31.12.2010	
EN 13152:2001 + A1:2003	Specifikace a zkoušení ventilů lahví na LPG - samouzavíracích	6.2.3.1 a 6.2.3.3	Mezi 1.1.2009 a 31.12.2014	
EN ISO 15995:2010	Lahve na plyny - Technické požadavky a zkoušení ventilů lahví na LPG - Ručně ovládané ventily (ISO 15995:2006)	6.2.3.1 a 6.2.3.3	Až do odvolání	

Odkaz	Název dokumentu	Použitelné oddíly a pododdíly	Použitelné pro schválení nového typu nebo pro obnovu	Poslední datum pro odejmutí existujících typových schválení
(1)	(2)	(3)	(4)	(5)
EN 13153:2001	Specifikace a zkoušení ventilů lahví na LPG - ručně ovládaných	6.2.3.1 a 6.2.3.3	Mezi 1.7.2005 a 31.12.2010	
EN 13153:2001 + A1:2003	Specifikace a zkoušení ventilů lahví na LPG - ručně ovládaných	6.2.3.1 a 6.2.3.3	Mezi 1.1.2009 a 31.12.2014	
EN ISO 13340:2001	Lahve na přepravu plynů – Ventily lahví na jedno použití (kartuše) – Technické podmínky a prototypové zkoušky	6.2.3.1 a 6.2.3.3	Až do odvolání	

6.2.4.2 Periodické inspekce a zkoušky

Normy v níže uvedené tabulce musí být použity pro periodické inspekce a zkoušky tlakových nádob jak je uvedeno ve sloupci (3), aby byly splněny požadavky uvedené v 6.2.3.5, které mají ve všech případech přednost.

Použití uvedených norem je závazné.

Pokud je tlaková nádoba konstruovaná v souladu s ustanovením 6.2.5, postup pro periodickou inspekci, pokud je specifikován v typovém schválení, musí být dodržen.

Jestliže je více než jedna norma uvedena pro použití stejných požadavků, musí být použita pouze jedna z nich, avšak v úplném znění, pokud není v tabulce níže specifikováno jinak.

Odkaz	Název dokumentu	Použitelnost
(1)	(2)	(3)
Pro periodickou inspekci a zkoušku		
EN 1251-3:2000	Kryogenní nádoby- Přepravitelné, vakuově izolované, s objemem nejvýše 1000 litrů- Část 3: Požadavky na provoz	Až do odvolání
EN 1968:2002 +A1:2005 (mimo přílohu B)	Přepravitelné plynové láhve - Periodická inspekce a zkoušení bežešvých ocelových plynových lahví	Až do odvolání
EN 1802:2002 (mimo přílohu B)	Přepravitelné plynové láhve - Periodická inspekce a zkoušení bežešvých plynových lahví z hliníkových slitin	Až do odvolání
EN 12863:2002 + A1:2005	Přepravitelné plynové láhve - Periodická inspekce a údržba lahví na rozpuštěný acetylen <i>POZNÁMKA: V této normě se "první inspekci" rozumí „první periodická inspekce“ po konečném schválení nové acetylenové láhve</i>	Až do odvolání
EN 1803:2002 (mimo přílohu B)	Přepravitelné plynové láhve - Periodická inspekce a zkoušení svařovaných ocelových plynových lahví	Až do odvolání
EN ISO 11623:2002 (mimo doložku 4)	Přepravitelné plynové láhve - Periodická inspekce a zkoušení kompozitních plynových lahví	Až do odvolání
EN 14189:2003	Přepravitelné plynové láhve - Inspekce a údržba ventilů lahví během periodické inspekce plynových lahví	Až do odvolání
EN 14876:2007	Přepravitelné plynové láhve - Periodická inspekce a zkoušení svařovaných ocelových tlakových sudů	Až do odvolání
EN 14912:2005	Zařízení pro LPG a jejich příslušenství - Inspekce a údržba ventilů lahví na LPG během periodické inspekce lahví	Až do odvolání
EN 15888:2011	Lahve na přepravu plynů – Svazky lahví – Pravidelná revize a zkoušení	Povinně od 1.1.2015
EN 1440:2008 +A1:2012 (kromě Příloh G a H)	Zařízení a příslušenství na LPG – Pravidelná revize znovuplnitelných lahví na přepravu zkapalněných uhlovodíkových plynů (LPG)	Povinně od 1.1.2015

6.2.5 Požadavky na tlakové nádoby neodpovídající UN, které nejsou zkonstruovány, vyrobeny a odzkoušeny podle norem

S ohledem na vědecký a technický pokrok nebo tam, kde není uvedena žádná norma v seznamu v 6.2.2 nebo 6.2.4, nebo jde-li o specifické aspekty neuvedené v seznamu norem v 6.2.2 nebo 6.2.4, může příslušný orgán připustit používání technického předpisu zaručujícího stejnou úroveň bezpečnosti.

V typovém schválení musí vydávající organizace specifikovat postup pro periodickou inspekci pokud normy odkazované v 6.2.2 nebo 6.2.4 nejsou nebo nesmí být použity.

Příslušný orgán musí předat sekretariátu EHK OSN seznam technických předpisů, které připouští. Seznam by měl zahrnovat následující podrobnosti: název a datum předpisu, účel předpisu a informace, jak je možno je získat. Sekretariát musí tuto informaci zpřístupnit na svých webových stránkách.

Norma, která byla přijata pro odkaz do příštího vydání ADR může být schválena příslušným orgánem pro použití bez oznámení sekretariátu EHK OSN.

Požadavky 6.2.1, 6.2.3 a následující požadavky musí být splněny.

POZNÁMKA: *Pro tento oddíl musí odkazy na technické normy v 6.2.1 být považovány jako odkazy na technické předpisy.*

6.2.5.1 Materiály

Následující ustanovení obsahují příklady materiálů, které mohou být použity pro splnění požadavků na materiály podle 6.2.1.2.

- (a) Uhlíková ocel pro stlačené, zkapalněné, hluboce zchlazené zkapalněné plyny a rozpuštěné plyny, jakož i pro látky nepatřící do třídy 2, které jsou uvedeny v tabulce 3 pokynu pro balení P200 v 4.1.4.1;
- (b) Slitiny oceli (speciální oceli), nikl, slitiny niklu (např. Monelův kov) pro stlačené, zkapalněné, hluboce zchlazené zkapalněné plyny a rozpuštěné plyny, jakož i pro látky nepatřící do třídy 2, které jsou uvedeny v tabulce 3 pokynu pro balení P200 v 4.1.4.1;
- (c) Měď pro:
 - (i) plyny s klasifikačními kódy 1A, 1O, 1F a 1TF, jejichž plnicí tlak vztažený na teplotu 15 °C nepřekročí 2MPa (20 bar);
 - (ii) plyny s klasifikačním kódem 2A a také UN 1033 dimethylether, UN 1037 chlorethan (ethylchlorid), UN 1063 chlormethan (methylchlorid), UN 1079 oxid siřičitý, UN 1085 vinylbromid, UN 1086 vinylchlorid a UN 3300 ethylenoxid a oxid uhličitý, směs s více nežli 87 % ethylenoxidu;
 - (iii) plyny s klasifikačním kódem 3A, 3O a 3F;
- (d) Hliníkové slitiny, viz zvláštní požadavek "a" v pokynu pro balení P200 (10) v 4.1.4.1;
- (e) Kompozitní materiály pro stlačené, zkapalněné, hluboce zchlazené zkapalněné plyny a rozpuštěné plyny;
- (f) Syntetické materiály pro hluboce zchlazené zkapalněné plyny; a
- (g) Sklo pro hluboce zchlazené zkapalněné plyny s klasifikačním kódem 3A, jiné než UN 2187 oxid uhličitý, hluboce zchlazený, kapalný nebo jeho směsi, a pro plyny s klasifikačním kódem 3O.

6.2.5.2 Provozní výstroj*(Vyhrazeno)***6.2.5.3 Kovové láhve, trubkové nádoby, tlakové sudy a svazky lahví**

Při zkušebním tlaku nesmí napětí v kovu v nejvíce namáhaném bodě tlakové nádoby překročit 77 % zaručené minimální meze pružnosti (Re).

„Mez pružnosti“ znamená napětí, při kterém došlo k trvalému prodloužení 2 na tisíc (tj. 0,2 %) nebo, pro austenitické ocele, 1 % kontrolní délky na zkušební vzorku.

POZNÁMKA: V případě plechu osa tahu zkušební vzorku musí být v pravém úhlu ve směru válcování. Trvalé prodloužení při prasknutí musí být měřeno na zkušební vzorku, na kterém kontrolní délka "l" je rovna pětinásobku průměru "d" ($l = 5d$); pokud jsou použity zkušební vzorky obdélníkového průřezu, musí být kontrolní délka vypočtena podle vzorce:

$$l = 5,65 \sqrt{F_0}$$

kde F_0 označuje počáteční plochu průřezu zkušební vzorku.

Tlakové nádoby a jejich uzávěry musí být vyrobeny z vhodných materiálů, které budou odolné proti křehkému lomu a proti trhlínkové korozi za napětí při teplotách mezi -20 °C a + 50 °C.

Sváry musí být provedeny odborně a musí zaručovat plnou bezpečnost.

6.2.5.4 Dodatečné předpisy vztahující se na tlakové nádoby z hliníkových slitin pro stlačené plyny, zkvalněné plyny, rozpuštěné plyny a pro plyny, které nejsou pod tlakem a jsou předmětem zvláštních požadavků (vzorky plynů), jakož i na předměty obsahující plyn pod tlakem, jiné nežli aerosolové rozprašovače a malé nádoby obsahující plyn (plynové kartuše)**6.2.5.4.1** Materiály tlakových nádob ze slitin hliníku, které mají být akceptovány, musí splňovat následující požadavky:

	A	B	C	D
Pevnost v tahu, R _m , v MPa (= N/mm ²)	49 až 186	196 až 372	196 až 372	343 až 490
Mez pružnosti, Re, v MPa (= N/mm ²) (trvalé prodloužení $\lambda = 0,2 \%$)	10 až 167	59 až 314	137 až 334	206 až 412
Trvalé prodloužení při zlomu ($l = 5d$) v procentech	12 až 40	12 až 30	12 až 30	11 až 16
Zkouška na ohyb (původní průměr $d = n \times e$, kde e je tloušťka zkušební vzorku)	n = 5 (R _m ≤ 98) n = 6 (R _m > 98)	n = 6 (R _m ≤ 325) n = 7 (R _m > 325)	n = 6 (R _m ≤ 325) n = 7 (R _m > 325)	n = 7 (R _m ≤ 392) n = 8 (R _m > 392)
Sériové číslo Hliníkové Asociace ^a	1000	5000	6000	2000

^a viz "Aluminium Standards and Data", páté vydání, leden 1976, vydáno Aluminium Association, 750 Third Avenue, New York.

Skutečné vlastnosti budou záviset na složení dané slitiny a na konečném provedení tlakové nádoby, avšak pro jakoukoliv slitinu musí být tloušťka tlakové nádoby vypočtena podle jednoho ze dvou následujících vzorců:

$$e = \frac{P_{\text{MPa}} \times D}{2 \times Re + P_{\text{MPa}}} \times 1.30 \quad \text{nebo} \quad e = \frac{P_{\text{bar}} \times D}{20 \times Re + P_{\text{bar}}} \times 1.30$$

kde
 e = minimální tloušťka stěny tlakové nádoby, v mm
 P_{MPa} = zkušební tlak, v MPa
 P_{bar} = zkušební tlak, v barech
 D = jmenovitý vnější průměr tlakové nádoby, v mm; a
 Re = zaručená minimální mez pružnosti při trvalém prodloužení 0,2 %, v MPa ($= N/mm^2$)

Navíc, hodnota minimální zaručené meze pružnosti (Re) dosažená do vzorce nesmí být v žádném případě větší nežli 0,85 násobek zaručené minimální pevnosti v tahu (Rm), při jakémkoli typu použité slitiny.

POZNÁMKA 1: Výše uvedené charakteristiky jsou založeny na dřívější zkušenosti s následujícími materiály použitými pro tlakové nádoby:

Sloupec A : Hliník, nelegovaný, čistota 99 %;

Sloupec B : Slitiny hliníku a hořčíku;

Sloupec C : Slitiny hliníku, křemíku a hořčíku, jako ISO/R209-Al-Si-Mg (Aluminium Association 6351);

Sloupec D : Slitiny hliníku, mědi a hořčíku.

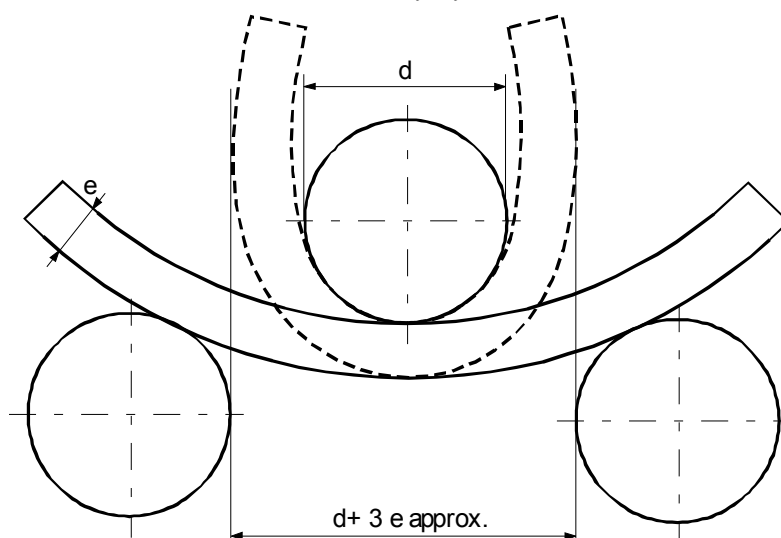
POZNÁMKA 2: Trvalé prodloužení při přetržení se měří pomocí zkušebních vzorků kruhového průměru, ve kterých standardní délka "l" je rovna pětinasobku průměru "d" ($l=5d$); pokud se použije zkušební vzorek obdélníkového průřezu standardní délka se vypočte ze vzorce:

$$l = 5,65 \sqrt{F_0}$$

kde F_0 je počáteční plocha zkušebního vzorku.

- POZNÁMKA 3:**
- Zkouška na ohyb (viz schéma) musí být provedena na vzorku získaném vyseknutím dvou stejných částí tloušťky $3e$, ale v žádném případě ne menší nežli 25 mm, kruhové sekce válce. Vzorky musí být strojně obrobeny všude kromě hran;
 - Zkouška ohybem musí být provedena mezi ohýbacím trnem o průměru (d) a dvěma kruhovými podpěrami oddělenými mezerou o velikosti $(d+3e)$. Během zkoušky musí být vnitřní čela oddělena mezerou ne větší nežli je průměr ohýbacího trnu;
 - Vzorek nesmí vykazovat trhliny, pokud byl ohnut směrem do dovnitř okolo ohýbacího trnu, dokud jsou vnitřní čela oddělena mezerou ne větší, nežli je průměr jádra;
 - Poměr (n) mezi průměrem ohýbacího trnu a tloušťkou vzorku musí být v souladu s hodnotami uvedenými v tabulce.

Schéma zkoušky ohybem



6.2.5.4.2 Nižší hodnota minimálního prodloužení je přijatelná za předpokladu, že dodatečná zkouška schválená příslušným orgánem země, ve které je tlaková nádoba vyrobena, prokáže, že bezpečnost přepravy je zajištěna na stejné úrovni, jako v případě tlakových nádob zkonstruovaných tak, aby splnily vlastnosti uvedené v tabulce 6.2.5.4.1 (viz rovněž EN 1975:1999 + A1:2003).

6.2.5.4.3 Tloušťka stěny tlakové nádoby v nejslabším bodě musí být následující:

- kde je průměr tlakové nádoby menší než 50 mm, ne menší než 1.5 mm,
- kde je průměr tlakové nádoby od 50 do 150 mm, ne menší než 2 mm a
- kde je průměr tlakové nádoby větší než 150 mm, ne menší než 3 mm.

6.2.5.4.4 Dna tlakových nádob musí mít polokruhový, eliptický nebo nepravidelně eliptický profil; musí poskytovat stejný stupně bezpečnosti jako těleso tlakové nádoby.

6.2.5.5 Tlakové nádoby z kompozitních materiálů

Pro láhve, trubkové nádoby, tlakové sudy a svazky lahví, které využívají kompozitní materiály, musí být konstrukce taková, aby minimální poměr mezi tlakem při prasknutí a zkušebním tlakem) je:

- 1,67 pro tlakové nádoby vyztužené obručemi;
- 2,00 pro tlakové nádoby plně vyztužené.

6.2.5.6 Uzavřené kryogenní nádoby

Na konstrukci uzavřených kryogenních nádob pro hluboce zchlazené zkapalněné plyny se vztahují následující požadavky:

6.2.5.6.1 Pokud se použijí nekovové materiály, musí odolat křehkému lomu při nejnižší provozní teplotě tlakové nádoby včetně její výstroje.

6.2.5.6.2 Zařízení pro vyrovnávání tlaku musí být zkonstruována takovým způsobem, aby pracovala bezvadně i při svých nejnižších provozních teplotách. Jejich funkční spolehlivost při této teplotě musí být stanovena a ověřena vyzkoušením každého zařízení nebo vzorku zařízení stejného konstrukčního typu.

6.2.5.6.3 Ventily a zařízení pro vyrovnávání tlaku tlakových nádob musí být zkonstruovány takovým způsobem, aby bylo zabráněno vystřikování kapaliny.

6.2.6 Všeobecné požadavky na aerosolové rozprašovače, malé nádoby obsahující plyn (plynové kartuše) a zásobníky do palivových článků obsahující zkapalněný hořlavý plyn

6.2.6.1 Návrh a konstrukce

6.2.6.1.1 Aerosolové rozprašovače (UN 1950 aerosoly) obsahující pouze plyn nebo směs plynů a nádoby, malé, obsahující plyn (kartuše) UN 2037, musí být vyrobeny z kovu. Tento požadavek se nevztahuje na aerosoly a nádoby, malé, obsahující plyn (kartuše), s vnitřním objemem nejvýše 100 ml pro UN 1011 butan. Jiné aerosolové nádoby (UN 1950) musí být vyrobeny z kovu, syntetického materiálu nebo skla. Nádoby vyrobené z kovu s vnějším poloměrem nejméně 40 mm musí mít vyduté dno.

6.2.6.1.2 Vnitřní objem nádobek vyrobených z kovu nesmí být větší než 1000 ml; vnitřní objem nádobek vyrobených ze syntetického materiálu nebo ze skla nesmí být větší než 500 ml.

6.2.6.1.3 Každý typ nádobek (aerosolů nebo kartuší) musí být před uvedením do provozu s úspěchem podroben hydraulické tlakové zkoušce podle 6.2.6.2.

6.2.6.1.4 Odpouštěcí ventily a rozprašovací zařízení aerosolových nádobek s plyny pod tlakem (UN 1950 aerosoly) a ventily UN 2037 nádobek, malých obsahujících plyny (kartuší) musí zajišťovat, že nádoby jsou neprodyšně uzavřeny a že jsou chráněny proti nežádoucímu otevření. Ventily a rozprašovací zařízení, které jsou uzavřeny pouze účinkem vnitřního tlaku, jsou nepřijatelné.

6.2.6.1.5 Vnitřní tlak při 50 °C nesmí překročit ani 2/3 zkušebního tlaku, ani 1,32 MPa (13,2 barů). Aerosolové

rozprašovače a malé nádoby obsahující plyn musí být naplněny takovým způsobem, aby jejich obsah při 50 °C nepřesáhl 95 % jejich vnitřního objemu.

6.2.6.2 Zkouška hydraulickým přetlakem

6.2.6.2.1 Použitý vnitřní tlak (zkušební tlak) musí být 1,5 násobek vnitřního tlaku při 50 °C, s minimálním tlakem 1 MPa (10 barů);

6.2.6.2.2 Hydraulické tlakové zkoušky musí být provedeny s nejméně pěti prázdnými nádobkami každého typu.

- (a) po dobu do dosažení předepsaného zkušební tlaku se nesmí objevit žádný únik ani viditelná trvalá deformace; a
- (b) než dojde k úniku nebo roztržení, musí povoliti jako první vydutý konec, pokud existuje, a nádobka nesmí ztratit těsnost nebo se roztrhnout před dosažením 1,2 násobku zkušební tlaku.

6.2.6.3 Zkouška těsnosti

6.2.6.3.1 *Malé nádoby obsahující plyny (plynové kartuše a zásobníky do palivových článků obsahující zkapalněný hořlavý plyn/náboje)*

6.2.6.3.1.1 Každá nádoba a zásobník do palivových článků musí splňovat zkoušku těsnosti v lázni s horkou vodou.

6.2.6.3.1.2 Teplota lázně a doba trvání zkoušky musí být takové, aby vnitřní tlak v každé nádobce nebo zásobníku do palivových článků dosáhl nejméně 90 % vnitřního tlaku, který by byl dosažen při 55 °C. Jestliže je obsah nádoby nebo zásobníku do palivových článků citlivý na teplo, nebo jsou nádoby vyrobeny z plastu a při této teplotě měknou, musí být teplota lázně od 29 °C do 30 °C. Navíc musí být z každých 2000 nádobek nebo zásobníků do palivových článků jedna zkoušena při 55 °C.

6.2.6.3.1.3 Nesmí dojít k žádnému úniku, nebo trvalé deformaci nádoby nebo zásobníku do palivových článků, s výjimkou případu, kdy plastová nádoba nebo zásobník do palivových článků může být deformována vlivem změkčení za předpokladu, že nedochází k úniku.

6.2.6.3.2 Aerosolové rozprašovače

Každý naplněný aerosolový rozprašovač musí být podroben zkoušce těsnosti v lázni s horkou vodou nebo ve schválené alternativě lázně s horkou vodou.

6.2.6.3.2.1 Zkouška těsnosti v lázni s horkou vodou

6.2.6.3.2.1.1 Teplota lázně a doba trvání zkoušky musí být takové, aby vnitřní tlak v každé nádobě dosáhl takové hodnoty vnitřního tlaku, které by bylo dosaženo při 55 °C (50 °C pokud kapalná fáze nepřekročí 95 % objemu aerosolového rozprašovače při 50 °C). Jestliže je obsah nádoby citlivý na teplo nebo jsou nádoby vyrobeny z plastu a při této teplotě měknou, musí být teplota lázně od 20 °C a 30 °C. Navíc musí být z každých 2000 nádobek jedna zkoušena při vyšší teplotě.

6.2.6.3.2.1.2 Nesmí dojít k žádnému úniku nebo k trvalé deformaci aerosolového rozprašovače s výjimkou případů, kdy plastový aerosolový rozprašovač může být deformován změkčením za předpokladu, že nedochází k úniku.

6.2.6.3.2.2 Alternativní metody

Se souhlasem příslušného orgánu mohou být použity alternativní metody, které poskytují stejnou úroveň bezpečnosti za předpokladu, že požadavky 6.2.4.3.2.2.1, 6.2.4.3.2.2.2 a 6.2.4.3.2.2.3 jsou splněny.

6.2.6.3.2.2.1 Systém kvality

Plniči nádobek aerosolových rozprašovačů a výrobci komponent musí mít zaveden systém kvality. Systém kvality musí obsahovat postupy, které zajistí, že všechny aerosolové rozprašovače, které netěsní, nebo které jsou deformovány budou vyřazeny a nebudou předány k přepravě.

Systém kvality musí obsahovat:

- (a) popis organizační struktury a zodpovědnosti;
- (b) odpovídající prohlídky a zkoušky, kontrolu kvality, zajištění kvality a instrukce pro použité pracovní postupy;
- (c) záznamy o kvalitě, jako jsou zprávy o prohlídce, zkušební data, kalibrační data a certifikáty;
- (d) recenze managementu pro zajištění účinného vlivu systému kvality;
- (e) proces kontroly dokumentů a jejich revize;
- (f) prostředky pro kontrolu neodpovídajících aerosolových rozprašovačů;
- (g) školicí programy a kvalifikační postupy pro odpovídající zaměstnance a
- (h) postupy zajišťující, že nedojde k poškození finálního výrobku.

Počáteční audit a další pravidelné audity musí být provedeny ke spokojenosti příslušného orgánu. Účelem těchto auditů je zajistit že schvalovaný systém je a zůstane přiměřený a účinný. Všechny navrhované změny schváleného systému musí být předem oznámeny příslušnému orgánu.

6.2.6.3.2.2.2 Zkoušení tlaku a úniku nádob aerosolových rozprašovačů před plněním

Každá prázdná nádoba aerosolového rozprašovače musí být podrobena tlaku rovnému nebo vyššímu nežli je maximální předpokládaný tlak naplněných nádobek aerosolových rozprašovačů při teplotě 55 °C (50 °C pokud kapalná fáze nepřekročí 95 % objemu nádoby při 50 °C), to znamená nejméně dvě třetiny navrhovaného tlaku pro nádobu aerosolového rozprašovače. Pokud některá z nádob aerosolového rozprašovače vykazuje známky úniku rychlostí rovnou nebo vyšší nežli $3,3 \times 10^{-2}$ mbar.l.s⁻¹ při pracovním tlaku, při deformaci nebo vykazuje jiné poškození, musí být vyřazena.

6.2.6.3.2.2.3 Zkoušení nádob aerosolových rozprašovačů po plnění

Před plněním musí plnič zajistit, že lemovací zařízení je patřičně nastaveno a že je použit odpovídající propellant (hnací plyn).

Každá naplněná nádoba aerosolového rozprašovače musí být zvážena a přezkoušena na těsnost. Zařízení na zjišťování úniku musí být dostatečně citlivé, aby zjistilo rychlost úniku nejméně $2,0 \times 10^{-3}$ mbar.l.s⁻¹ při teplotě 20 °C.

Všechny nádoby aerosolových rozprašovačů, které vykazují známky úniku, deformaci nebo nadbytečnou hmotnost, musejí být vyřazeny.

6.2.6.3.3

Se souhlasem příslušného orgánu nepodléhají aerosoly a malé nádoby ustanovením v 6.2.6.3.1 a 6.2.6.3.2, pokud musí být sterilní a mohly by být negativně ovlivněny zkouškou ve vodní lázni, pokud:

- (a) obsahují nehořlavý plyn a buď
 - (i) obsahují jiné látky, které jsou součástí farmaceutických výrobků pro zdravotnické, veterinární nebo podobné účely;
 - (ii) obsahují jiné látky použité ve výrobních procesech pro farmaceutické výrobky; nebo
 - (iii) jsou používány ve zdravotnictví, veterinářství nebo k podobným účelům;
- (b) ekvivalentní úroveň bezpečnosti je dosažena tím, že výrobce použije alternativní způsoby pro zjišťování úniku a odolnosti proti tlaku, jako jsou detekce pomocí helia a pomocí zkoušky ve vodní lázni na statistickém vzorku nejméně 1 z 2000 každé výrobní šarže.
- (c) farmaceutické výrobky podle výše uvedených (a) (i) a (iii), jsou vyrobeny pod dohledem národního zdravotního úřadu. Pokud to vyžaduje příslušný orgán, zásady Good

Manufacturing Practice (GMP) vytvořené World Health Organization (WHO)⁴ musí být dodrženy.

6.2.6.4 Odkazy na normy

Požadavky tohoto oddílu se považují za splněné, pokud jsou splněny dále uvedené normy:

- pro aerosolové rozprašovače (UN 1950 aerosoly): Příloha ke Směrnici Rady 75/324/EEC⁵ ve znění pozdějších předpisů platných v den výroby;
- pro UN 2037 nádoby, malé, obsahující plyn (kartuše) obsahující UN 1965 uhlovodíky, plynné, směs, zkapalněná, j.n.: EN 417:2012 Kovové kartuše na zkapalněné ropné plyny pro jedno použití, s ventilem nebo bez ventilu, pro používání v přenosných zařízeních - Konstrukce, inspekce, zkoušení a značení.

⁴ Publikace WHO: „Quality assurance of pharmaceuticals. A compendium of guidelines and related materials. Volume 2: Good manufacturing practices and inspection“.

⁵ Směrnice Rady EU 75/324/EEC z 20 května o přibližování zákonů členských států vztahující se na aerosolové rozprašovače (aerosoly) publikovaný v Official Journal of the European Commission č. L 147 z 9/06/1975.

KAPITOLA 6.3

POŽADAVKY NA KONSTRUKCI A ZKOUŠENÍ OBALŮ PRO INFEKČNÍ LÁTKY KATEGORIE A TŘÍDY 6.2

POZNÁMKA: *Požadavky této kapitoly neplatí pro obaly, které budou používány dle 4.1.4.1, pokyny pro balení P 621 pro přepravu látek třídy 6.2*

6.3.1 Obecné

6.3.1.1 Požadavky této kapitoly se použijí pro obaly určené k přepravě infekčních látek kategorie A.

6.3.2 Požadavky na balení

6.3.2.1 Požadavky na obaly v tomto oddílu jsou založeny na obalech, jak jsou specifikovány v 6.1.4, běžně používaných. S ohledem na vědecký a technický pokrok, není žádná námitka proti používání obalů se specifikací odlišnou od té, která je uvedena v této kapitole, za předpokladu, že jsou stejně účinné, přijatelné pro příslušný orgán a schopné úspěšně projít zkouškami popsány v 6.3.5. Způsoby zkoušení, jiné nežli ty uvedené v ADR, jsou přijatelné za předpokladu, že jsou rovnocenné a jsou uznány příslušným orgánem.

6.3.2.2 Obaly musí být vyrobeny a odzkoušeny podle programu zajištění kvality, který uspokojí příslušný orgán, aby se zajistilo, že každý obal splňuje požadavky této kapitoly.

POZNÁMKA: *ISO 16106:2006 „Obaly - Přepravní balení pro nebezpečné věci - Obaly na nebezpečné věci, IBC a velké obaly - Směrnice pro použití ISO 9001“ poskytuje vhodné nároky na postupy, které mohou být využity.*

6.3.2.3 Výrobci a následní distributoři obalů musí uživatelům poskytnout informace týkající se postupů, které je nutno dodržet, a popis typů a rozměrů uzávěrů (zahrnující v to požadovaná těsnění) a jakékoliv další komponenty potřebné k tomu, aby obaly jak jsou podávány k přepravě byly schopny projít schvalovacími zkouškami konstrukčního typu dle této kapitoly.

6.3.3 Kód pro určení typu obalů

6.3.3.1 Kódy k označení typů obalů jsou stanoveny v 6.1.2.7.

6.3.3.2 Písmena "U" nebo "W" mohou následovat po obalovém kódu. Písmeno "U" označuje speciální obal splňující požadavky uvedené v 6.3.5.1.6. Písmeno "W" označuje, že obal, ačkoli je stejného typu určeného tímto kódem, je vyroben odlišně od specifikace uvedené v 6.1.4 a je považován za ekvivalentní podle požadavků v 6.3.2.1.

6.3.4 Značení

POZNÁMKA 1: *Značení udává, že obal, který ho nese, odpovídá úspěšně odzkoušenému konstrukčnímu typu a je v souladu s požadavky této kapitoly vztahujícími se na výrobu, ale ne na používání obalu.*

POZNÁMKA 2: *Značení je určeno jako podpora výrobcům obalů, rekondicionovatelům, uživatelům obalů, dopravcům a legislativním orgánům.*

POZNÁMKA 3: *Značení ne vždy poskytuje všechny podrobnosti o úrovních zkoušek atd. a tyto je třeba vzít dále v úvahu, např. odkazem na zkušební certifikát, záznamy o zkoušce nebo na registr úspěšně odzkoušených obalů.*

6.3.4.1 Každý obal určený pro použití podle ADR musí nést značení, která jsou trvalá, čitelná a umístěná na místě a v takové velikosti v poměru k obalu, aby byla snadno viditelná. Pro kusy s celkovou (brutto) hmotností vyšší nežli 30 kg, značení nebo jeho duplikát se musí objevit na horní části nebo na straně obalu. Písmena, číslice a znaky musí být nejméně 12 mm vysoké, s výjimkou obalů s kapacitou 30 litrů nebo 30 kg nebo méně, kde mohou být nejméně 6 mm vysoké, a pro obaly s kapacitou 5 litrů nebo 5 kg nebo méně, kdy budou mít odpovídající rozměr.

6.3.4.2 Obal splňující požadavky tohoto oddílu a oddílu 6.3.5 musí být označen UN kódem takto:

(a) Znak Spojených národů pro obaly;



Tento znak nesmí být použit pro jiné účely než pro osvědčení, že obal, přemístitelná cisterna nebo MEGC splňuje příslušné požadavky kapitoly 6.1, 6.2, 6.3, 6.5, 6.6 nebo 6.7¹.

(b) Kódem označujícím typ obalu podle požadavků uvedených v oddílu 6.1.2;

(c) Textem „TRÍDA 6.2“;

(d) Posledními dvěma číslicemi roku výroby obalu;

(e) Označením státu schvalujícího přidělení značky (UN kódu) uvedením rozlišovací značky pro motorová vozidla v mezinárodním provozu²;

(f) Jménem výrobce nebo jinou identifikací obalu stanovenou příslušným orgánem;

(g) Pro obaly splňující požadavky pododdílu 6.3.5.1.6 písmenem „U“ umístěným bezprostředně za označením požadovaným ve výše uvedeném odstavci (b).

6.3.4.3 Značení musí být používáno v pořadí uvedeném v 6.3.4.2 (a) až (g); každý prvek značení požadovaný v tomto pododdílu musí být jasně oddělen, např. pomocí lomítka nebo mezery tak, aby byl jasně identifikovatelný. Příklady viz 6.3.4.4.

Každé dodatečné značení schválené příslušným orgánem musí ještě umožnit, aby části značky byly správně identifikovatelné podle 6.3.4.1.

6.3.4.4 **Příklad značení**

	4G/ TRÍDA 6.2/06	jako v 6.3.4.2 a), b), c), a d)
	S/SP-9989-ERIKSSON	jako v 6.3.4.2 (e) a f)

6.3.5 **Požadavky na zkoušení obalů**

6.3.5.1 **Provedení a frekvence zkoušek**

6.3.5.1.1 Konstrukční typ každého obalu musí být odzkoušen, jak je uvedeno v tomto pododdílu podle postupů stanovených příslušným orgánem povolujícím umístění značek a musí být tímto příslušným orgánem schválen.

6.3.5.1.2 Každý konstrukční typ obalu musí před použitím úspěšně projít zkouškami předepsanými v této kapitole. Konstrukční typ obalu je definován svou konstrukcí, rozměrem, druhem materiálu a tloušťkou, způsobem výroby a balení, ale může zahrnovat různé povrchové úpravy. Zahrnuje rovněž obaly, které se od konstrukčního typu liší pouze svou menší konstrukční výškou.

6.3.5.1.3 Zkoušky musí být opakovány také na výrobních vzorcích v intervalech stanovených příslušným orgánem.

¹ Tento symbol se také používá k potvrzení, že flexibilní objemové vaky schválené pro ostatní druhy dopravy jsou v souladu s požadavky uvedenými v kapitole 6.8 UN Modelového Regulativu.

² Rozlišovací značka pro motorová vozidla v mezinárodní dopravě předepsaná Úmluvou o silničním provozu (Videň, 1968).

- 6.3.5.1.4** Zkoušky musí být také opakovány po každé změně, která mění konstrukci, materiál nebo způsob výroby obalu.
- 6.3.5.1.5** Příslušný orgán může povolit výběrové zkoušení obalů odlišných pouze v malé míře od zkušebnímu typu, např. menších rozměrů nebo nižší čisté (netto) hmotnosti primárních nádob a obaly takové jako sudy, bedny, které jsou vyráběny s malým zmenšením vnějšího(ch) rozměru(ů).
- 6.3.5.1.6** Primární obaly jakéhokoli typu mohou být vloženy do sekundárního obalu a přepravovány bez zkoušení v tuhém vnějším obalu za dále uvedených podmínek:
- (a) Kombinace tuhý vnější obal musí být uspokojivě odzkoušena podle 6.3.5.2.2 (a) s křehkými (např. skleněnými) primárními nádobami;
 - (b) Součtová celková (btto) hmotnost primárních nádob nesmí přesáhnout polovinu celkové (btto) hmotnosti primárních nádob použitých pro zkoušku pádem ve výše uvedeném odstavci a);
 - (c) Tloušťka fixace mezi primárními nádobami a mezi primárními nádobami a vnitřní stěnou sekundárního obalu nesmí být zmenšena pod odpovídající tloušťky v původně testovaném obalu; a jestliže jednoduchá primární nádoba byla použita pro původní zkoušku, tloušťka fixace mezi primárními nádobami nesmí být menší než tloušťka fixace mezi vnitřní stěnou sekundárního obalu a primární nádobou při původní zkoušce. Pokud se použijí buď menší počet nebo menší primární nádoby (ve srovnání s primárními nádobami použitými pro zkoušku pádem), musí být použit pro vyplnění prázdného prostoru dodatečný fixační materiál;
 - (d) Prázdný tuhý vnější obal musí projít úspěšně stohovací zkouškou uvedenou v 6.1.5.6. Celková hmotnost totožných kusů musí být založena na součtové hmotnosti obalů použitých pro zkoušku pádem uvedenou výše v odstavci (a);
 - (e) Pro primární nádoby obsahující kapaliny musí být do vnějšího obalu vloženo přiměřené množství absorpčního materiálu k absorpci kapalného obsahu primárních nádob;
 - (f) Pokud tuhý vnější obal je určen, aby obsahoval kapaliny a není vodotěsný, nebo je určen, aby obsahoval primární nádoby pro tuhé látky a není prachotěsný, pak musí být opatřen prostředky zachycujícími jakékoli kapalné nebo tuhé obsahy provedenými ve formě těsné vložky, plastového pytle nebo jiných rovnocenně účinných prostředků ;
 - (g) Kromě značení předepsaných v 6.3.4.2 (a) až (f) musí být obaly značeny podle 6.3.4.2(g).
- 6.3.5.1.7** Příslušný orgán může kdykoli vyžadovat důkaz pomocí zkoušek podle tohoto pododdílu, že sériově vyráběné obaly splňují požadavky zkoušek konstrukčního typu.
- 6.3.5.1.8** Za předpokladu, že platnost výsledků zkoušek není ovlivněna, a se schválením příslušného orgánu, může být na jednom vzorku provedeno několik zkoušek.
- 6.3.5.2 Příprava obalů pro zkoušky**
- 6.3.5.2.1** Vzorky každého obalu musí být připraveny jako pro přepravu, kromě toho, že kapalná, nebo pevná infekční látka určená k přepravě musí být nahrazena vodou nebo, kde se vyžaduje teplota $-18\text{ }^{\circ}\text{C}$, nemrznoucí kapalinou. Každá primární nádoba musí být naplněna na ne méně nežli 98 % její kapacity.
- POZNÁMKA:** Výraz *voda zahrnuje voda /mrazuvzdorný roztok s minimální specifickou hmotností 0.95 při zkoušce při teplotě $-18\text{ }^{\circ}\text{C}$.*

6.3.5.2.2 Zkoušky a počet vyžadovaných vzorků

Zkoušky požadované pro typy obalů

Typ obalu ^a			Požadované zkoušky					Průraz 6.3.5.4	Stohování 6.1.5.6
Pevný vnější obal	Primární obal		Zkrápění vodou 6.3.5.3.6.1	Redukce teploty 6.3.5.3.6.2	Volný pád 6.3.5.3	Další pády 6.3.5.3.6.3			
	Plast	Ost.	Počet vz.	Počet vz.	Poč.vz	Počet vz.	Poč. vz.	Počet vz.	
Lepen. bedna	x		5	5	10	Požaduje se jeden vzorek, když obsahuje suchý led	2	požadují se 3 vz. když se zkouší na "U" značku jak je uvedeno v 6.3.5.1.6 pro special. požadavky	
		x	5	0	5		2		
Lepenkový sud	x		3	3	6		2		
		x	3	0	3		2		
Plastová bedna	x		0	5	5		2		
		x	0	5	5		2		
Plast.sud / kanystr	x		0	3	3		2		
		x	0	3	3		2		
Bedny z ostat. materiálů	x		0	5	5		2		
		x	0	3	5		2		
Sudy a kanystry z ostat. mater.	x		0	3	3	2			
		x	0	0	3	2			

^a "Typ obalu" kategorizuje obaly pro účely zkoušek podle druhu obalů a jejich materiálových vlastností.

POZNÁMKA 1 : V případech, kdy je primární nádoba vyrobena ze dvou nebo více materiálů, musí být odpovídající zkoušce podroben materiál, který je nejvíce náchylný k poškození.

POZNÁMKA 2: Materiál sekundárních obalů se nebere v úvahu při výběru zkoušky nebo kondicionování pro zkoušku.

Vysvětlení pro používání tabulky:

Jestliže se obal, který má být zkoušen, skládá z vnější lepenkové bedny s primární nádobou z plastu, musí zkoušku zkrápěním vodou (viz 6.3.5.3.6.1) podstoupit pět vzorků ještě před zkouškou volným pádem a dalších pět vzorků musí být kondicionováno při -18 °C (viz 6.3.5.3.6.2) před zkouškou volným pádem. Jestliže je obal určen pro suchý led, potom další jeden vzorek musí být podroben pětkrát zkoušce volným pádem po kondicionování podle 6.3.5.3.6.3.

Obaly připravené jako pro přepravu musí být podrobeny zkouškám podle 6.3.5.3 a 6.3.5.4. Pro vnější obaly se záhlaví tabulky vztahuje na lepenku nebo podobné materiály, jejichž odolnost může být rychle ovlivněna vlhkostí, plasty, které mohou při nízkých teplotách křehnout a jiné materiály, jako kovy, jejichž odolnost není vlhkostí nebo teplotou ovlivněna.

6.3.5.3 Zkouška volným pádem

6.3.5.3.1 Vzorky musí být podrobeny zkoušce volným pádem z výšky 9 m na nepružnou, vodorovnou, hladkou a tuhou plochu podle 6.1.5.3.4.

6.3.5.3.2 Když jsou vzorky tvaru bedny, musí být zkoušeno pět vzorků podle následujících orientací:

- naplocho na základnu
- naplocho na vrchní část
- naplocho na nejdelší stranu
- naplocho na nejkratší stranu
- na roh

6.3.5.3.3 Tam, kde mají vzorky tvar sudu, budou zkoušeny tři vzorky podle jedné z následujících orientací

- diagonálně na horní hranu sudu, s centrem gravitace přímo nad bodem nárazu:
- diagonálně na spodní hranu.
- na plochu pláště

- 6.3.5.3.4** Když byly vzorky uvolněny v požadované orientaci, přijímá se, že z aerodynamických důvodů nemusí být náraz v této orientaci.
- 6.3.5.3.5** Po příslušné sekvenci pádů nesmí dojít k úniku z primární nádoby (nádob), která musí zůstat chráněna fixačním/absorpčním materiálem v sekundárním obalu.
- 6.3.5.3.6** Speciální příprava zkušební vzorku na zkoušku volným pádem.
- 6.3.5.3.6.1** Lepenka – zkouška zkrápěním vodou
Vnější obaly z lepenky: Vzorek musí být podroben kroupení vodou, které simuluje vystavení dešti o intenzitě přibližně 5 cm za hodinu po dobu nejméně jedné hodiny. Potom bude podroben zkoušce popsané v 6.3.5.3.1.
- 6.3.5.3.6.2** Plastové materiály – kondicionování za studena
Primární nádoby z plastu nebo vnější obaly : Teplota zkušební vzorku a jeho obsah musí být redukována na teplotu – 18 °C nebo nižší po dobu nejméně 24 hodin a v rozmezí 15 minut po vyjmutí z tohoto prostředí musí být zkušební vzorek podroben zkoušce popsané v 6.3.5.3.1. Pokud vzorek obsahuje suchý led, doba kondicionování se sníží na 4 hodiny.
- 6.3.5.3.6.3** Obaly určené pro suchý led – Dodatečná zkouška volným pádem
Pokud je obal určen pro suchý led, musí být provedena dodatečná pádová zkouška ke zkoušce volným pádem uvedené v 6.3.5.3.1, a pokud je to nutné dle 6.3.5.3.6.1 nebo 6.3.5.3.6.2. Jeden vzorek musí být uložen tak, aby veškerý suchý led vysublimoval a potom je tento vzorek podroben zkoušce pádem v jedné z orientací popsaných v 6.3.5.3.2. Zvolí se ta, kde je nejvyšší pravděpodobnost poškození obalu.

6.3.5.4 Zkouška průrazem

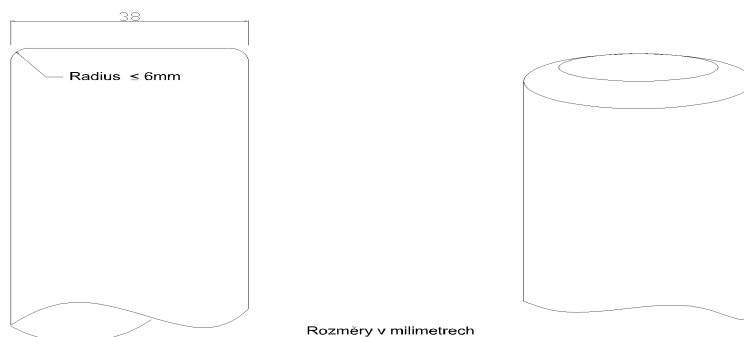
6.3.5.4.1 *Obaly s celkovou (brutto) hmotností 7 kg nebo méně*

Vzorky musí být umístěny na rovný tvrdý povrch. Kulatá ocelová tyč o hmotnosti nejméně 7 kg, průměru z 38 mm a jejíž radius nepřekračuje 6 mm viz obrázek 6.3.5.4.2, musí být spouštěna volným pádem svisle z výšky 1 m, měřeno od jejího nárazového konce k místu nárazu na povrch vzorku. Jeden vzorek musí být umístěn na svou základnu. Druhý vzorek musí být umístěn v kolmém směru ke směru použitému při předchozí zkoušce. V každém případě ocelová tyč musí být zaměřena tak, aby udeřila do primární nádoby. Proražení sekundárního obalu je po každém následujícím úderu přijatelné, pokud nedojde k úniku z primární(ch) nádob(y).

6.3.5.4.2 *Obaly s celkovou (brutto) hmotností převyšující 7 kg*

Vzorky musí být spouštěny na konec válcové ocelové tyče. Tyč musí být nastavena svisle na rovný tvrdý povrch. Musí mít průměr 38 mm a hrany vrchního konce musí mít poloměr nepřekračující 6 mm viz obrázek 6.3.5.4.2. Tyč musí vyčnívat z povrchu na vzdálenost nejméně rovnou vzdálenosti mezi středem primární nádoby (nádob) a vnějším povrchem vnějšího obalu o nejméně 200 mm. Jeden vzorek musí být spouštěn se svou nejnižší horní plochou svislým volným pádem z výšky 1 m měřené od vrcholu ocelové tyče. Druhý vzorek musí být spouštěn ze stejné výšky ve směru kolmém na směr, který byl použit poprvé. V každém případě obal musí být nasměrován tak, že by ocelová trubka měla proniknout do primární(ch) nádob(y). Při každém dalším nárazu, proniknutí sekundárního obalu je přijatelné za předpokladu, že nedojde k úniku.

Obrázek 6.3.5.4.2



6.3.5.5 Protokol o zkoušce

6.3.5.5.1 O provedených zkouškách musí být sepsán protokol o zkoušce, obsahující minimálně následující podrobnosti a musí být k dispozici uživatelům obalů

1. Název a adresa zkušebny;
2. Jméno a adresa žadatele, pokud je to vhodné;
3. Jednoznačná identifikace protokolu o zkoušce (např. číslo);
11. Datum zkoušky a protokolu o zkoušce;
12. Výrobce obalu;
13. Popis konstrukčního typu obalu (např. rozměry, materiály, uzávěry, tloušťka atd.) včetně způsobu výroby (např. vyfukování lisování, atd.), který může zahrnovat výkres(y) a/nebo fotografií(e);
14. Nejvyšší vnitřní objem;
15. Obsah zkoušek;
16. Popis zkoušky a výsledky;
17. Protokol o zkoušce musí být podepsán s uvedením jména a funkce podepsaného.

6.3.5.5.2 Protokol o zkoušce musí obsahovat prohlášení, že obal určený pro přepravu byl odzkoušen podle příslušných požadavků tohoto odstavce a že použití jiných metod balení nebo komponent, může mít za následek jeho neplatnost. Kopie protokolu o zkoušce musí být dána k dispozici příslušnému orgánu.

KAPITOLA 6.4

POŽADAVKY NA KONSTRUKCI, ZKOUŠENÍ A SCHVALOVÁNÍ KUSŮ A LÁTEK TŘÍDY 7

- 6.4.1** (Vyhrazeno)
- 6.4.2** **Všeobecné požadavky**
- 6.4.2.1** Kus musí být tak konstruován vzhledem ke své hmotnosti, objemu a tvaru, aby mohl být snadno a bezpečně přepravován. Kromě toho kus musí být tak konstruován, aby mohl být vhodně zajištěn ve nebo na vozidle během přepravy.
- 6.4.2.2** Konstrukční vzor musí být takový, aby jakékoli úchyty pro zvedání na kusu neselhaly, pokud jsou používány zamýšleným způsobem, a takový, pokud by k poruše těchto úchytů došlo, aby schopnost kusu splnit jiné požadavky této přílohy nebyla snížena. Konstrukční vzor musí brát v úvahu odpovídající bezpečnostní koeficienty pro případ zvedání třem.
- 6.4.2.3** Úchyty a jakékoli přídavné příslušenství na vnějším povrchu kusu, které může být používáno pro zvedání, musí být konstruováno buď jako odpovídající jeho hmotnosti podle požadavků uvedených v 6.4.2.2 nebo musí být snímatelné nebo musí být jinak vyřaditelné z použití během přepravy.
- 6.4.2.4** Pokud je to prakticky možné musí být obal konstruován a povrchově opracován tak, aby jeho vnější povrchy byly bez výčnělků a mohly být snadno dekontaminovány.
- 6.4.2.5** Pokud je to prakticky možné musí být kus konstruován tak, aby zabránil sběru a zadržování vody.
- 6.4.2.6** Jakákoli zařízení připojená ke kusu v době jeho přepravy, která nejsou částí kusu, nesmějí snižovat jeho bezpečnost.
- 6.4.2.7** Kus musí být schopen odolat účinku jakéhokoli zrychlení, vibrace a vibrační rezonance, které mohou nastat v průběhu běžných podmínek přepravy bez snížení účinnosti uzavíracích zařízení na jeho různých nádobách nebo celistvosti kusu. Zejména šrouby, matice a jiná upevňovací zařízení musí být konstruovány tak, aby se zabránilo jejich ztrátě nebo neočekávanému uvolnění dokonce i po opakovaném použití.
- 6.4.2.8** Materiály obalu a jakýchkoli částí a celků musí být fyzikálně a chemicky snášenlivé, a to navzájem i vůči radioaktivnímu obsahu. Musí se vzít v úvahu jejich chování po ozáření.
- 6.4.2.9** Všechny ventily, jimiž by mohl radioaktivní obsah uniknout, musí být chráněny proti neoprávněné manipulaci.
- 6.4.2.10** Konstrukční vzor kusu musí brát v úvahu okolní teploty a tlaky, se kterými se pravděpodobně setkává v běžných podmínkách přepravy.
- 6.4.2.11** Pro radioaktivní látku mající jiné nebezpečné vlastnosti musí být kus konstruován s přihlédnutím k těmto vlastnostem, viz 2.1.3.5.3 a 4.1.9.1.5.
- 6.4.2.12** Výrobci a následní distributoři obalů musí poskytnout informaci o postupu při jejich uzavírání a popis typů a rozměrů uzávěrů (včetně požadovaných gaskets) a všech dalších částí nezbytných k zajištění, že kusy tak, jak jsou připraveny k přepravě, jsou schopné absolvovat příslušné testy této kapitoly.
- 6.4.3** (Vyhrazeno)

6.4.4 Požadavky na kusy vyňaté z platnosti

Kus vyňatý z platnosti musí být konstruován tak, aby splnil požadavky uvedené v oddílu 6.4.2.

6.4.5 Požadavky na průmyslové kusy

6.4.5.1 Kusy typů IP-1, IP-2 a IP-3 musí splňovat požadavky uvedené v oddílu 6.4.2 a pododdílu 6.4.7.2.

6.4.5.2 Kus typu IP-2, pokud podléhá zkouškám uvedeným v 6.4.15.4 a 6.4.15.5, musí zabránit:

- (a) ztrátě nebo rozptýlení radioaktivních obsahů; a
- (b) více než 20% nárůstu maximální dávkové intenzity na jakémkoli místě vnějšího povrchu kusu.

6.4.5.3 Kus typu IP-3 musí splňovat všechny požadavky uvedené v oddílech 6.4.7.2 až 6.4.7.15.

6.4.5.4 *Alternativní požadavky na kusy typů IP-2 a IP-3*

6.4.5.4.1 Kusy mohou být používány jako kusy typu IP-2, pokud:

- (a) splňují požadavky uvedené v 6.4.5.1;
- (b) jsou navrženy tak, aby splňovaly požadavky předepsané pro obalovou skupinu I nebo II v kapitole 6.1, a
- (c) po provedení zkoušek požadovaných pro obalovou skupinu I nebo II v kapitole 6.1 zabrání:
 - (i) ztrátě nebo rozptýlení radioaktivních obsahů; a
 - (ii) více než 20% nárůstu maximální dávkové intenzity na jakémkoli místě vnějšího povrchu kusu.

6.4.5.4.2 Přemístitelné cisterny mohou být používány jako kus typů IP-2 nebo IP-3 pokud:

- (a) splňují požadavky uvedené v 6.4.5.1;
- (b) jsou zkonstruovány tak, aby splňovaly požadavky předepsané v kapitole 6.7 a aby byly způsobilé odolávat zkušebnímu tlaku 265 kPa; a
- (c) jsou konstruovány tak, aby jakékoli dodatečné stínění, pokud je provedeno, bylo schopno odolat statickým a dynamickým namáháním způsobeným manipulacemi a běžnými podmínkami přepravy a zabránilo zvýšení maximální dávkové intenzity o více než 20 % na jakémkoli místě vnějšího povrchu přemístitelných cisteren.

6.4.5.4.3 Cisterny, kromě přemístitelných cisteren, mohou být též používány jako kus typů IP-2 nebo IP-3 pro přepravu kapalin a plynů LSA-I a LSA-II, jak je předepsáno v tabulce 4.1.9.2.4, pokud:

- (a) odpovídají požadavkům 6.4.5.1;
- (b) jsou zkonstruovány tak, aby splňovaly požadavky předepsané v kapitole 6.8; a
- (c) jsou navrženy tak, aby jakékoliv dodatečné stínění, které je použito, bylo schopné odolávat statickému a dynamickému zatížení vyplývajícím z manipulačních a běžných přepravních podmínek přepravy a zamezovalo více než 20 % zvýšení maximálního příkonu dávkového ekvivalentu na jakémkoliv vnějším povrchu cisterny.

6.4.5.4.4 Kontejnery s povahou trvalého uzavření mohou být používány jako kus typů IP-2 nebo IP-3 pokud:

- (a) radioaktivní obsahy jsou omezeny na tuhé materiály;
- (b) splňují požadavky uvedené v 6.4.5.1; a

(c) jsou konstruovány podle mezinárodní normy ISO 1496-1:1990: Série 1 Kontejnery – Specifikace a zkoušení – Část 1: Všeobecné nákladní kontejnery a pozdějších změn 1:1993, 2:1998, 3:2005, 4:2006 a 5:2006 kromě rozměrů a charakteristik. Musí být konstruovány tak, aby po provedení zkoušek předepsaných v tomto dokumentu a zrychlením vyskytujícím se v běžných podmínkách přepravy zabránily:

- (i) ztrátě nebo rozptýlení radioaktivních obsahů; a
- (ii) více než 20% nárůstu maximální dávkové intenzity na jakémkoli místě vnějšího povrchu kontejneru.

6.4.5.4.5 Kovové velké nádoby pro volně ložené látky mohou být používány jako kus typů IP-2 nebo IP-3 pokud:

- (a) splňují požadavky uvedené v 6.4.5.1; a
- (b) jsou konstruovány podle norem a zkoušek předepsaných v kapitole 6.5 pro obalové skupiny I nebo II, ale se zkouškou pádem provedenou v nejvíce poškozujícím směru, a zabrání:
 - (i) ztrátě nebo rozptýlení radioaktivních obsahů; a
 - (ii) více než 20% nárůstu maximální dávkové intenzity na jakémkoli místě vnějšího povrchu IBC.

6.4.6 Požadavky na kusy obsahující hexafluorid uranu

6.4.6.1 Kusy projektované na obsah hexafluoridu uranu musí splňovat požadavky předepsané jinde v ADR, které se vztahují na radioaktivní a štěpné vlastnosti tohoto materiálu S výjimkou povolenou v 6.4.6.4 musí hexafluorid uranu o hmotnosti 0,1 kg a více být také plněn do obalů a přepravován podle ustanovení mezinárodní normy ISO 7195:2005 „Atomová energie - Balení hexafluoridu uranu (UF₆) pro přepravu a požadavků uvedených v 6.4.6.2 a 6.4.6.3.

6.4.6.2 Každý kus konstruovaný na obsah 0,1 kg nebo více hexafluoridu uranu musí být konstruován tak, aby splňoval následující požadavky:

- (a) odolat bez úniku a bez nepřijatelného napětí, jak je uvedeno ISO 7195:2005, zkoušce pevnosti uvedené v 6.4.21.5;
- (b) odolat beze ztráty nebo rozptýlu hexafluoridu uranu zkoušce volným pádem uvedené v 6.4.15.4; a
- (c) odolat bez porušení kontejmentového systému tepelné zkoušce uvedené v 6.4.17.3.

6.4.6.3 Kusy konstruované na obsah 0,1 kg nebo více hexafluoridu uranu nesmějí být vybaveny zařízením pro snižování tlaku.

6.4.6.4 Pouze na základě schválení příslušným orgánem mohou být přepravovány kusy konstruované na obsah 0,1 kg nebo více hexafluoridu uranu, které:

- (a) jsou projektovány podle mezinárodních nebo národních norem jiných než ISO 7195:2005, za předpokladu, že je dodržena stejná úroveň bezpečnosti;
- (b) jsou konstruovány tak, aby odolaly bez úniku a bez nepřijatelného napětí zkušebnímu tlaku 2,76 MPa, jak je uvedeno v 6.4.21.5; nebo
- (c) jsou konstruovány na obsah 9000 kg nebo více hexafluoridu uranu a nesplňují požadavky uvedené v 6.4.6.2 (c)

Požadavky popsané v 6.4.6.1 až 6.4.6.3 musí být ve všech ostatních ohledech splněny.

6.4.7 Požadavky na kusy typu A

- 6.4.7.1** Kusy typu A musí být konstruovány tak, aby splňovaly všeobecné požadavky uvedené v oddílu 6.4.2 a v 6.4.7.2 až 6.4.7.17.
- 6.4.7.2** Nejmenší vnější celkový rozměr kusu nesmí být menší než 10 cm.
- 6.4.7.3** Na vnější straně kusu musí být zařízení, jako např. pečeť (plomba), které se nemůže snadno poškodit a jehož neporušený stav dokazuje, že kus nebyl otevřen.
- 6.4.7.4** Jakákoli připojená úchytná zařízení na kusu musí být konstruována tak, aby síly vznikající při normálních a nehodových podmínkách přepravy v těchto zařízeních nenarušily schopnost kusu plnit požadavky ADR.
- 6.4.7.5** Konstrukční vzor kusu musí brát v úvahu rozsah teplot -40 °C až $+70\text{ °C}$ pro části obalu. Pozornost musí být věnována teplotám tuhnutí kapalin a možnému zhoršování materiálů obalu v mezích uvedeného rozsahu teplot.
- 6.4.7.6** Konstrukce a výrobní technologie musí odpovídat národním a mezinárodním normám nebo jiným požadavkům uznaným příslušným orgánem.
- 6.4.7.7** Konstrukční vzor musí zahrnovat kontejmentový systém bezpečně uzavíratelný spolehlivým uzavíracím zařízením, které nemůže být otevřeno neúmyslně, nebo tlakem, který může vzniknout uvnitř kusu.
- 6.4.7.8** Radioaktivní látka zvláštní formy může být považována za součást kontejmentového systému.
- 6.4.7.9** Jestliže je kontejmentový systém oddělenou jednotkou kusu, musí být uzavíratelný spolehlivým uzavíracím zařízením, které je nezávislé na jakékoli jiné části obalu.
- 6.4.7.10** Konstrukce jakékoli části kontejmentového systému musí brát v úvahu, pokud je to vhodné, radiolytický rozklad kapalin a jiných nestálých materiálů a vývoj plynů při chemické reakci a radiolýze.
- 6.4.7.11** Kontejmentový systém musí svůj radioaktivní obsah udržet při snížení vnějšího okolního tlaku do 60 kPa.
- 6.4.7.12** Všechny ventily, kromě zařízení pro vyrovnávání tlaku, musí být provedeny s uzávěrem zamezujícím jakémukoliv úniku z ventilu.
- 6.4.7.13** Radiační stínění, které uzavírá součást kusu specifikovanou jako část kontejmentového systému, musí být konstruováno tak, aby zabránilo neúmyslnému oddělení této součásti od stínění. Kde radiační stínění a taková součást tvoří oddělenou jednotku, musí být tato jednotka uzavíratelná spolehlivým uzavíracím zařízením, které je nezávislé na jakékoli jiné části obalu.
- 6.4.7.14** Kus musí být konstruován tak, aby, je-li je podroben zkouškám stanoveným v oddílu 6.4.15, zabránil:
- (a) ztrátě nebo rozptýlení radioaktivních obsahů; a
 - (b) více než 20% nárůstu maximální dávkové intenzity na jakémkoli místě vnějšího povrchu kusu.
- 6.4.7.15** Konstrukční vzor kusu určeného pro kapalnou radioaktivní látku musí odpovídat ustanovení o úbytku obsahu a volného prostoru vlivem změn teploty obsahu, dynamických účinků a dynamik plnění.
- Kus typu A určený pro kapaliny*
- 6.4.7.16** Kus typu A konstruovaný pro kapalnou radioaktivní látku musí kromě uvedených požadavků navíc:

- (a) dostatečně splňovat podmínky uvedené v 6.4.7.14 (a) výše, pokud kus byl podroben zkouškám uvedeným v oddílu 6.4.16; a
- (b) buď
 - (i) obsahovat dostatečně absorpčního materiálu schopného absorbovat dvojnásobek objemu kapalného obsahu. Takový absorpční materiál musí být vhodně umístěn co nejbližší ke kapalině pro případ jejího úniku; nebo
 - (ii) být opatřen kontejmentovým systémem tvořeným primárními vnitřními a sekundárními vnějšími kontejmentovými částmi konstruovanými ke kompletnímu uzavření kapalných obsahů a zajištění jejich zadržení uvnitř sekundárních vnějších kontejmentových částí, i když primární vnitřní části jsou netěsné.

Kus typu A určený pro plyny

6.4.7.17 Kus konstruovaný pro plyny musí zabránit ztrátě nebo rozptýlení radioaktivních obsahů, pokud kus byl podroben zkouškám uvedeným v oddílu 6.4.16. Kus typu A konstruovaný pro plyn tritium nebo pro vzácné plyny musí být vyňat z tohoto požadavku.

6.4.8 Požadavky na kusy typu B(U)

6.4.8.1 Kusy typu B(U) musí být konstruovány tak, aby splnily požadavky uvedené v oddílu 6.4.2 a v 6.4.7.2 až 6.4.7.15, kromě uvedených v 6.4.7.14 (a), a kromě toho požadavky uvedené v 6.4.8.2 až 6.4.8.15.

6.4.8.2 Kus musí být konstruován tak, aby při okolních podmínkách uvedených v 6.4.8.5 a 6.4.8.6 teplo vyvíjené uvnitř kusu jeho radioaktivním obsahem za normálních podmínek přepravy, jak jsou představovány zkouškami uvedenými v oddílu 6.4.15, nepříznivě neovlivnilo kus takovým způsobem, že by mohlo být negativně ovlivněno plnění relevantních požadavků na kontejment a stínění, jestliže byl ponechán bez dozoru po dobu jednoho týdne. Zvláštní pozornost musí být věnována účinkům tepla, které mohou:

- (a) změnit uspořádání, geometrický tvar nebo fyzikální stav radioaktivního obsahu nebo, pokud radioaktivní látka je uzavřena v plechovce nebo nádobě (např. zapouzdřené palivové články), způsobit, že se plechovka, nádoba nebo látka zdeformují nebo roztaví; nebo
- (b) zmenšit účinnost obalu vlivem různé tepelné roztažnosti nebo prasknutí nebo roztavení materiálu radiačního stínění; nebo
- (c) v kombinaci s vlhkostí zrychlit korozi.

6.4.8.3 Kus musí být konstruován tak, že při okolních podmínkách uvedených v 6.4.8.5 a bez vlivu slunečního záření, teplota přístupných povrchů kusu nesmí překročit 50 °C, ledaže je kus přepravován za vylučného použití.

6.4.8.4 Nejvyšší teplota jakéhokoli snadno přístupného povrchu kusu během přepravy za vylučného použití nesmí překročit 85 °C bez izolace za okolních podmínek uvedených v 6.4.8.5. Přitom je možno přihlídnout k přepážkám nebo dělicím stěnám umístěným k ochraně osob, aniž by bylo nutné podrobit tyto přepážky nebo dělicí stěny zkoušce.

6.4.8.5 Musí být uvažována okolní teplota 38 °C.

6.4.8.6 Musí se předpokládat, že podmínky slunečního ozáření jsou takové, jaké jsou uvedeny v tabulce 6.4.8.6.

Tabulka 6.4.8.6: Údaje o ozáření

Stav	Tvar a umístění povrchu	Ozáření sluncem po 12 hodin za den (W/m ²)
1	Ploché povrchy přepravované vodorovně – obrácené dolů	0
2	Ploché povrchy přepravované vodorovně – obrácené vzhůru	800
3	Povrchy přepravované svisle	200 ^a
4	Ostatní povrchy obrácené dolů (nepřepravované vodorovně)	200 ^a
5	Všechny ostatní povrchy	400 ^a

^a Alternativně může být použita sinusová funkce s přijatým absorpčním koeficientem a účinky možného odrazu od sousedních předmětů.

6.4.8.7 Kus, který je vybaven tepelnou ochranou za účelem splnění požadavků uvedených v 6.4.17.3, musí být tak konstruován, že taková ochrana zůstane účinnou, jestliže kus je podroben zkouškám uvedeným v oddílu 6.4.15 a v 6.4.17.2 (a) a (b) nebo 6.4.17.2 (b) a (c), jak je to vhodné. Jakákoli taková ochrana vnějšku kusu nesmí mít sníženou účinnost porušením povrchu protržením, proříznutím, smyknutím, otěrem nebo hrubou manipulací.

6.4.8.8 Kus musí být tak konstruován, že, pokud byl podroben:

- (a) zkouškám uvedeným v oddílu 6.4.15, omezil by ztrátu radioaktivních obsahů tak, aby nepřevýšila $10^{-6} A_2$ za hodinu; a
- (b) zkouškám uvedeným v 6.4.17.1, 6.4.17.2 (b), 6.4.17.3 a 6.4.17.4 a zkouškám uvedeným v
 - (i) 6.4.17.2 (c), když kus má hmotnost nejvýše 500 kg a celkovou hustotu vypočtenou z vnějších rozměrů nejvýše 1000 kg/m^3 a radioaktivní obsah větší než $1000 A_2$, ne však jako radioaktivní látka zvláštní formy; nebo
 - (ii) 6.4.17.2 (a) pro všechny jiné kusy
 splnil by následující požadavky:
 - zachovat si dostatečné stínění zajišťující, že dávková intenzita ve vzdálenosti 1 m od povrchu kusu nepřekročí 10 mSv/h při maximálním radioaktivním obsahu, pro který byl kus konstruován; a
 - omezit celkovou ztrátu radioaktivního obsahu po dobu jednoho týdne nejvýše na $10 A_2$ pro krypton-85 a nejvýše na A_2 pro všechny ostatní radionuklidy.

Jedná-li se o směsi různých radionuklidů, vztahují se na ně ustanovení uvedená v 2.2.7.2.2.4 až 2.2.7.2.2.6 kromě toho, že pro krypton-85 může být použita efektivní hodnota A_2 (i) rovná $10 A_2$. V případě uvedeném v odstavci (a) výše hodnocení musí brát v úvahu meze vnější kontaminace uvedené v 4.1.9.1.2.

6.4.8.9 Kus pro radioaktivní obsah s aktivitou větší než $10^5 A_2$ musí být tak konstruován, aby, pokud byl podroben rozšířené zkoušce ponořením do vody uvedené v oddílu 6.4.18, nedošlo k porušení kontejmentového systému.

6.4.8.10 Splnění dovolených limitů uvolňování aktivity nesmí být závislé ani na filtrech, ani na strojním chladičím systému.

6.4.8.11 Kus nesmí být vybaven systémem pro vyrovnávání tlaku, který by dovolil únik radioaktivní látky do okolního prostředí za podmínek zkoušek uvedených v oddílech 6.4.15 a 6.4.17.

6.4.8.12 Kus musí být konstruován tak, aby při nejvyšším normálním provozním tlaku a při podrobení se zkouškám uvedeným v oddílech 6.4.15 a 6.4.17 úroveň napětí v kontejmentovém systému

nepřekročila hodnoty, které by nepříznivě ovlivnily kus takovým způsobem, že by neplnil příslušné požadavky.

6.4.8.13 Kus nesmí mít nejvyšší normální provozní tlak převyšující přetlak 700 kPa.

6.4.8.14 Kusy obsahující radioaktivní látku s nízkou rozptýlitelností musí být zkonstruovány tak, aby jakákoliv vlastnost přidaná k radioaktivní látce s nízkou rozptýlitelností, která není její součástí, nebo jakákoliv vnitřní součásti obalu nemohly nepříznivě ovlivnit technické parametry radioaktivní látky s nízkou rozptýlitelností.

6.4.8.15 Kus musí být konstruován pro teplotu okolního prostředí v rozsahu -40 °C až +38 °C.

6.4.9 Požadavky na kusy typu B(M)

6.4.9.1 Kusy typu B(M) musí splňovat požadavky na kusy typu B(M) uvedené v 6.4.8.1, kromě těch požadavků na kusy, které jsou přepravovány výhradně uvnitř dané země nebo výhradně mezi určitými zeměmi. Jiné podmínky, než které jsou uvedeny výše v 6.4.7.5, 6.4.8.4, 6.4.8.5, 6.4.8.6 a 6.4.8.9. až 6.4.8.15 mohou být použity se schválením příslušných orgánů těchto zemí. Nicméně požadavky na kusy typu B(M) uvedené v 6.4.8.8 až 6.4.8.15 musí být splněny, jak je to jen prakticky možné.

6.4.9.2 Periodická ventilace kusů typu B(M) během přepravy může být povolena za podmínky, že provozní kontroly ventilace jsou přijatelné pro všechny zainteresované příslušné orgány.

6.4.10 Požadavky na kusy typu C

6.4.10.1 Kusy typu C musí být konstruovány tak, aby splnily požadavky uvedené v 6.4.2 a v 6.4.7.2 až 6.4.7.15, kromě uvedených v 6.4.7.14 (a), a požadavky uvedené v 6.4.8.2 až 6.4.8.6, 6.4.8.10 až 6.4.8.15 a navíc v 6.4.10.2 až 6.4.10.4.

6.4.10.2 Kus musí být schopen splnit hodnotící kritéria, předepsaná pro zkoušky v 6.4.8.8(b) a 6.4.8.12 po tepelné zkoušce v prostředí, definovaném tepelnou vodivostí $0,33 \text{ W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$ a teplotou 38 °C v ustáleném stavu. Výchozí podmínky hodnocení musí vzít v úvahu, že jakákoliv tepelná izolace kusu zůstává nedotčena, kus je používán při nejvyšším normálním provozním tlaku a okolní teplota je 38 °C.

6.4.10.3 Kus musí být konstruován tak že, pokud byl podroben při nejvyšším normálním provozním tlaku

- (a) zkouškám uvedeným v oddílu 6.4.15, omezil by ztrátu radioaktivních obsahů tak, aby nepřevýšila 10^{-6} A_2 za hodinu; a
- (b) posloupností zkoušek v 6.4.20.1, splnil by následující požadavky:
 - (i) zachovat si dostatečné stínění zajišťující, že dávková intenzita ve vzdálenosti 1 m od povrchu kusu nepřekročí 10 mSv/h při maximálním radioaktivním obsahu, pro který byl kus konstruován; a
 - (ii) omezit celkovou ztrátu radioaktivního obsahu po dobu jednoho týdne nejvýše na 10 A_2 pro krypton-85 a nejvýše na A_2 pro všechny ostatní radionuklidy.

Jedná-li se o směsi různých radionuklidů, vztahují se na ně ustanovení uvedená v 2.2.7.7.2.2.4 až 2.2.7.7.2.2.6 kromě toho, že pro krypton-85 může být použita efektivní hodnota A_2 (i) rovná 10 A_2 . V případě uvedeném v odstavci (a) výše hodnocení musí brát v úvahu meze vnější kontaminace uvedené v 4.1.9.1.2.

6.4.10.4 Kus musí být tak konstruován tak, aby nedošlo k porušení kontejmentového systému, pokud byl podroben rozšířené zkoušce ponořením do vody popsané v 6.4.18.

6.4.11 Požadavky na kusy obsahující štěpné látky

6.4.11.1 Štěpné látky musí být přepravovány tak, aby:

- (a) byl udržen podkritický stav za normálních a nehodových podmínek přepravy; zejména musí být uvažováno s následujícími nahodilostmi:
 - (i) vniknutí vody do kusu nebo únik vody z kusu;
 - (ii) ztráta účinnosti vložených neutronových absorbátorů nebo moderátorů;
 - (iii) změna geometrického uspořádání obsahu buď uvnitř kusu nebo jako důsledek úniku z kusu;
 - (iv) zmenšení prostoru uvnitř nebo mezi kusy;
 - (v) ponoření kusů do vody nebo zasypání sněhem; a
 - (vi) změny teploty; a
- (b) byly splněny požadavky:
 - (i) uvedené v 6.4.7.2 pro kusy obsahující štěpné látky;
 - (ii) předepsané kdekoli v ADR, které se týkají radioaktivních vlastností štěpných látek; a
 - (iii) uvedené v 6.4.11.3 až 6.4.11.12, s výjimkou vyňatých z platnosti podle 6.4.11.2.

6.4.11.2 Štěpná látka splňující jedno z ustanovení (a) až (d) bodu 2.2.7.2.3.5 je vyňata z požadavku být přepravována v kusech, které splňují požadavky uvedené v 6.4.11.3 až 6.4.11.12 jakož i jiné požadavky ADR, které se vztahují na štěpnou látku. Pouze jeden typ výjimky je dovolen pro zásilku.

6.4.11.3 Kde chemická nebo fyzikální forma, izotopové složení, hmotnost nebo koncentrace, moderační poměr či hustota nebo geometrické uspořádání nejsou známy, hodnocení uvedená v 6.4.11.7 až 6.4.11.12 musí být provedena stejným způsobem jako se známými podmínkami a parametry těchto hodnocení s předpokladem, že každý parametr, který není znám, má hodnotu, která vede k maximální multiplikaci neutronů.

6.4.11.4 Pro ozářené jaderné palivo hodnocení uvedené v 6.4.11.7 až 6.4.11.12 musí být založeno na izotopovém složení, které průkazně poskytnou:

- (a) hodnoty maximální multiplikace neutronů během doby ozáření; nebo
- (b) konzervativní odhad multiplikace neutronů pro hodnocení kusu. Po ozáření, ale před odesláním, musí být provedena měření pro potvrzení konzervativnosti odhadu izotopového složení.

6.4.11.5 Kus po provedených zkouškách specifikovaných v 6.4.15, musí:

- a) zachovat minimální vnější celkový rozměr obalu nejméně 10 cm; a
- b) zabránit průniku krychle o hraně 10 cm

6.4.11.6 Kus musí být konstruován pro okolní teplotu v rozsahu $-40\text{ }^{\circ}\text{C}$ až $+38\text{ }^{\circ}\text{C}$, pokud příslušný orgán nestanoví jinak v rozhodnutí o typovém schválení.

6.4.11.7 Pro samostatný kus musí být vzato v úvahu, že voda může proniknout dovnitř nebo ven ze všech prázdných prostorů kusu včetně těch uvnitř kontejmentového systému. Avšak jestliže konstrukce zahrnuje zvláštní prostředky, zabraňující takovému vnikání vody dovnitř nebo její unikání ven z určitých prázdných prostorů, dokonce i v případě chyby obsluhy, nemusí se pro tyto prázdné prostory takové vnikání nebo únik uvažovat. Zvláštní prostředky musí zahrnovat následující:

- (a) Vícenásobné vysoce účinné zábrany proti vodě, nejméně dvě z nich zůstávají vodotěsné, pokud kus byl podroben zkouškám předepsaným v 6.4.11.12 (b), vysoký stupeň kontroly jakosti ve výrobě, údržbě a opravách obalů a zkoušky prokazující uzavření každého kusu před jeho odesláním; nebo
- (b) Pro kusy obsahující pouze hexafluorid uranu s maximálním obohacením na 5% hmotnostních uranu-235
 - (i) kusy, kde po zkouškách předepsaných v 6.4.11.12 (b) není žádný fyzický styk mezi ventilem a jakoukoli částí obalu jinou než jeho původní bod připojení a kde kromě toho po provedení zkoušky předepsané v 6.4.17.3 ventily zůstávají nepropustné; a
 - (ii) vysoký stupeň kontroly jakosti ve výrobě, údržbě a opravách obalů spojený se zkouškami prokazujícími uzavření každého kusu před každým odesláním.

6.4.11.8 Musí být vzato v úvahu a zhodnoceno, že dochází k odrazu způsobenému nejméně 20 cm vrstvou vody nebo většímu, jež může být dodatečně způsoben obklopujícím materiálem obalu. Avšak pokud může být prokázáno, že omezující systém zůstává uvnitř obalu po zkouškách předepsaných v 6.4.11.12 (b), může být v 6.4.11.9 (c) uvažován odraz blízkou vrstvou vody nejméně 20 cm silnou.

6.4.11.9 Kus musí být podkritický za předpokladů uvedených v 6.4.11.7 a 6.4.11.8, které vyúsťují v maximálním multiplikaci neutronů při podmínkách odpovídajících:

- (a) běžným podmínkám přepravy (bez nehod);
- (b) zkouškám uvedeným v 6.4.11.11 (b);
- (c) zkouškám uvedeným v 6.4.11.12 (b).

6.4.11.10 *(Vyhrazeno)*

6.4.11.11 Pro normální podmínky přepravy musí být odvozen počet „N“ tak, že soubor pětikrát „N“ kusů zůstane v podkritickém stavu pro podmínky způsobující maximální multiplikaci neutronů shodně s následujícími:

- (a) nic nesmí být mezi kusy a soubor kusů musí být vystaven odrazu ze všech stran nejméně 20 cm vrstvou vody; a
- (b) stav kusů musí být odpovídat výpočtem stanovené nebo skutečné podmínce, že byly podrobeny zkouškám uvedeným v oddílu 6.4.15.

6.4.11.12 Pro nehodové podmínky musí být odvozen počet „N“ tak, že soubor dvakrát „N“ kusů zůstane v podkritickém stavu pro podmínky způsobující maximální multiplikaci neutronů shodně s následujícími:

- (a) vodíková moderace mezi kusy a soubor kusů je vystaven na všech stranách odrazu nejméně 20 cm vrstvy vody; a
- (b) zkoušky uvedené v oddílu 6.4.15 následované jakýmkoli z dále uvedených, které jsou více omezující:
 - (i) zkoušky uvedené v 6.4.17.2 (b) a uvedené buď v 6.4.17.2 (c) pro kusy s hmotností nejvýše 500 kg a celkovou hustotou nejvýše 1000 kg/m³ stanovené z vnějších rozměrů, nebo uvedené v 6.4.17.2 (a) pro všechny jiné kusy; následované zkouškou uvedenou v 6.4.17.3 a zakončenou zkouškami uvedenými v 6.4.19.1 až 6.4.19.3; nebo
 - (ii) zkoušky uvedené v 6.4.17.4; a
- (c) kde jakákoli část štěpné látky uniká z kontejmentového systému po zkoušce uvedené v 6.4.11.12 (b), musí se předpokládat, že štěpná látka uniká z každého kusu v souboru a že všechny štěpné látky budou v takovém uspořádání a za takové moderace, které mají

za následek maximální multiplikaci neutronů při odrazu blízkou vrstvou vody nejméně 20 cm silnou.

6.4.11.13 Index bezpečné podkritičnosti (CSI) pro radioaktivní zásilky obsahující štěpné materiály se získá dělením čísla 50 menší ze dvou hodnot „N“, získaných postupem uvedeným v 6.4.11.11 a 6.4.11.12 (tj. $CSI = 50/N$). Hodnota přepravního indexu z hlediska zachování podkritického stavu může být nula za předpokladu, že neomezený počet radioaktivních zásilek je podkritický (tj., že „N“ se prakticky rovná nekonečnu v obou případech).

6.4.12 Zkušební postupy a důkaz shodnosti

6.4.12.1 Důkaz shodnosti provedení s normami požadovanými v 2.2.7.2.3.1.3, 2.2.7.2.3.1.4, 2.2.7.2.3.3.1, 2.2.7.2.3.3.2, 2.2.7.2.3.4.1, 2.2.7.2.3.4.2 a 6.4.2 až 6.4.11 musí být proveden jakoukoli metodou níže uvedenou nebo jejich kombinací:

- (a) Provedení zkoušek se vzorky představující látku LSA-III nebo radioaktivní látku zvláštní formy nebo radioaktivní látky s nízkou rozptýlitelností nebo s prototypy nebo vzorky obalu, kde obsah vzorku nebo obalu pro zkoušky musí simulovat co nejpřesněji, jak je to jen prakticky možné, očekávaný rozsah radioaktivních obsahů a vzorky nebo obaly, které mají být zkoušeny, musí být připraveny tak, jak budou předány k přepravě;
- (b) Odkaz na předchozí uspokojivé důkazy dostatečně podobné povahy;
- (c) Provedení zkoušek s modely vhodného měřítka s vlastnostmi, které jsou významné z hlediska tohoto zkoumání, pokud inženýrská praxe prokázala, že výsledky takových zkoušek jsou přijatelné pro konstrukční účely. Pokud je použit model v měřítku, musí být vzata v úvahu potřeba úpravy určitých zkušebních parametrů, jako je průměr průrazové tyčky nebo tlakové zatížení.
- (d) Výpočet nebo zdůvodněný důkaz, pokud výpočetní metody a parametry jsou všeobecně považovány za spolehlivé nebo konzervativní.

6.4.12.2 Po provedení zkoušek vzorku nebo prototypu musí být použity vhodné metody hodnocení pro potvrzení toho, že požadavky na zkušební postupy byly splněny v souladu s normami na provedení a přijatelnost předepsanými v 2.2.7.2.3.1.3, 2.2.7.2.3.1.4, 2.2.7.2.3.3.1, 2.2.7.2.3.3.2, 2.2.7.2.3.4.1, 2.2.7.2.3.4.2 a 6.4.2 až 6.4.11.

6.4.12.3 Všechny vzorky musí být zkontrolovány před zkoušením, aby byly zjištěny a zaznamenány vady a poškození včetně těchto:

- (a) odchylky od konstrukčního vzoru;
- (b) výrobní vady;
- (c) koroze nebo jiné zhoršení; a
- (d) deformace.

Kontejnmentový systém musí být zřetelně specifikován. Vnější charakteristiky vzorku musí být zřetelně identifikovány tak, aby bylo možno jednoduše a zřetelně provést odkaz na jakékoli části vzorku.

6.4.13 Zkoušení celistvosti kontejnmentového systému a stínění a zhodnocení podkritičnosti

Po každé z relevantních zkoušek uvedených v oddílech 6.4.15 až 6.4.21:

- (a) musí být zjištěny a zaznamenány vady a poškození;
- (b) musí být stanoveno, zda celistvost kontejnmentového systému a stínění zůstaly zachovány v rozsahu požadovaném v oddílech 6.4.2 až 6.4.11 pro zkoušený kus; a

- (c) pro kusy obsahující štěpnou látku musí být zjištěno, zda jsou splněny předpoklady a podmínky použité v hodnoceních požadovaných v 6.4.11.1 až 6.4.11.13 pro jeden nebo více kusů.

6.4.14 Terč pro zkoušky pádem

Terč pro zkoušky pádem specifikovaný v 2.2.7.2.3.3.5 (a), 6.4.15.4, 6.4.16 (a), 6.4.17.2 a 6.4.20.2 musí mít plochý vodorovný povrch takového charakteru, aby jakékoli zvýšení jeho odolnosti proti změně polohy nebo deformaci úderem vzorku nezvýšilo významně poškození vzorku.

6.4.15 Zkoušky pro prokázání schopnosti odolat normálním podmínkám přepravy

6.4.15.1 Zkoušky jsou: zkouška postřikem vodou, zkouška volným pádem, zkouška tlakovým zatížením a zkouška průrazem. Vzorky kusu musí být podrobeny zkoušce volným pádem, zkoušce tlakovým zatížením a zkoušce průrazem, kterým v každém případě předchází zkouška postřikem vodou. Jeden vzorek může být použit pro všechny zkoušky, pokud požadavky uvedené v 6.4.15.2 jsou splněny.

6.4.15.2 Časový interval mezi ukončením zkoušky postřikem vodou a následující zkouškou musí být takový, aby voda prosákla v maximální míře bez patrného sušení vnějšku vzorku. Nejeví-li se zřejmý opak, tento interval musí trvat dvě hodiny, pokud postřik vodou je směřován současně ze čtyř směrů. Avšak žádný časový interval nesmí uplynout, jestliže postřik vodou je směřován z každého ze čtyř směrů následně.

6.1.15.3 Zkouška postřikem vodou: Vzorek musí být podroben zkoušce postřikem vodou, která simuluje jeho vystavení dešti o srážkové intenzitě přibližně odpovídající hodnotě 5 cm za hodinu po dobu nejméně jedné hodiny.

6.4.15.4 Zkouška volným pádem: Vzorek musí padat na plochu terče tak, aby došlo k jeho maximálnímu poškození z hlediska jeho zkoušených bezpečnostních vlastností.

- (a) Výška pádu měřená od nejnižšího bodu vzorku k hornímu povrchu terče nesmí být menší než vzdálenost uvedená v tabulce 6.4.15.4 pro příslušnou hmotnost. Terč musí být takový, jaký je uveden v oddílu 6.4.14;
- (b) Pro pravoúhlé lepenkové nebo dřevěné kusy s hmotností nejvýše 50 kg jednotlivý vzorek musí být podroben volnému pádu na každý roh z výšky 0,3 m;
- (c) Pro lepenkové kusy válcovitého tvaru s hmotností nepřevyšující 100 kg jednotlivý vzorek musí být podroben volnému pádu na každou čtvrtinu každé hrany z výšky 0,3 m.

Tabulka 6.4.15.4: Výška volného pádu při zkoušení kusů pro normální podmínky přepravy

Hmotnost kusu (kg)		Výška volného pádu (m)
	Hmotnost kusu < 5000	1.2
5000 ≤	Hmotnost kusu < 10000	0.9
10000 ≤	Hmotnost kusu < 15000	0.6
15000 ≤	Hmotnost kusu	0.3

6.4.15.5 Zkouška tlakovým zatížením: Pokud tvar obalu nezabraňuje účinně stohování, vzorek musí být podroben po dobu 24 hodin tlakovému zatížení rovnající se většímu z následujících:

- (a) celková hmotnost rovna 5 násobku maximální hmotnosti kusu; a
- (b) ekvivalent 13kPa násobený půdorysnou plochou kusu.

Zatížení musí být rovnoměrně vystaveny dvě protilehlé strany vzorku, z nichž jedna musí být základna, na které kus zůstává normálně uložen.

6.4.15.6 Zkouška průrazem: Vzorek musí být uložen na tvrdý, plochý, vodorovný povrch, který se nebude znatelně pohybovat po dobu provádění zkoušky.

- (a) Tyčka o průměru 3,2 cm s půlkulovým koncem a hmotností 6 kg musí být spuštěna a přímo dopadnout svou podélnou osou svisle na střed nejslabší části vzorku tak, že, pokud pronikne dostatečně daleko, narazí na kontejnmentový systém. Tyčka se nesmí znatelně deformovat při provádění zkoušky;
- (b) Výška pádu tyčky měřená od jejího nejnižšího konce k předpokládanému bodu nárazu na horní povrch vzorku musí být 1m.

6.4.16 Dodatečné zkoušky kusů typu A konstruované pro kapaliny a plyny

Jeden vzorek nebo další vzorky musí být podrobeny každé z následujících zkoušek, pokud nemůže být prokázáno, že jedna zkouška je pro dotyčný vzorek náročnější, než druhá, ve kterémžto případě jeden vzorek musí být podroben té náročnější zkoušce.

- (a) Zkouška volným pádem: Vzorek musí být spuštěn na plochu terče tak, aby došlo k jeho maximálnímu poškození z hlediska kontejnmentového systému. Výška pádu měřená od nejnižší části vzorku k hornímu povrchu plochy terče musí být 9 m. Terč musí být takový, jak je definován v oddílu 6.4.14;
- (b) Zkouška průrazem: Vzorek musí být podroben zkoušce uvedené v 6.4.15.6, s tím, že výška pádu musí být zvýšena na 1,7 m z 1 m uvedené v 6.4.15.6 (b).

6.4.17 Zkoušky pro prokázání schopnosti odolat nehodovým podmínkám při přepravě

6.4.17.1 Jeden vzorek musí být podroben společným účinkům zkoušek uvedeným v 6.4.17.2 a 6.4.17.3 v tomto pořadí. Po provedení těchto zkoušek musí být buď tento vzorek nebo další vzorek podroben účinku(ům) zkoušky(ek) ponoření do vody, jak je uvedeno v 6.4.17.4 a pokud je to vhodné, v 6.4.18.

6.4.17.2 Mechanická zkouška: Mechanickou zkoušku tvoří tři různé zkoušky pádem. Každý vzorek musí být podroben vhodným pádům uvedeným v 6.4.8.8 nebo 6.4.11.12. Pořadí, ve kterém je vzorek podrobován pádům, musí být takové, že po dokončení mechanické zkoušky vzorek musí utrpět poškození vedoucí k maximálnímu poškození při tepelné zkoušce, která následuje.

- (a) Pro pád I, vzorek musí padat na plochu terče tak, aby utrpěl maximální poškození a výška pádu měřená od nejnižšího bodu vzorku k hornímu povrchu plochy terče musí být 9 m. Terč musí být takový, jak je definován v oddílu 6.4.14;
- (b) Pro pád II, vzorek musí být spuštěn tak, aby utrpěl maximální poškození tyčí pevně připevněnou kolmo na plochu terče. Výška pádu měřená od předpokládaného bodu nárazu vzorku na horní povrch tyčky musí být 1 m. Tyč musí být z pevné měkké oceli kruhového průřezu, průměru $15,0 \pm 0,5$ cm a délky 20 cm, ledaže by delší tyč způsobila větší poškození. V tomto případě může být použita tyč dostatečné délky způsobující maximální poškození. Horní konec tyče musí být plochý a vodorovný s hranou zaoblenou o poloměru nejvýše 6 mm. Terč, ke kterému je tyč připevněna, musí být takový, jak je popsán v oddílu 6.4.14;
- (c) Pro pád III, musí být vzorek podroben dynamické zkoušce drcením umístěním vzorku na plochu terče tak, aby utrpěl maximální poškození pádem hmotnosti 500 kg na vzorek z výšky 9 m. Padající sondu musí tvořit pevná deska z měkké oceli 1m x 1m a musí dopadnout ve vodorovné poloze. Výška pádu musí být měřena od spodní strany desky k nejvyššímu bodu vzorku. Terč, na kterém vzorek zůstává, musí být takový, jak je definován v oddílu 6.4.14.

6.4.17.3 Tepelná zkouška: Vzorek musí být v tepelné rovnováze v podmínkách okolní teploty 38 °C odpovídající podmínkám slunečního ozáření uvedeným v tabulce 6.4.8.6 a maximálnímu projektovanému výkonu vnitřního tepla uvnitř kusu z radioaktivních obsahů. Alternativně je dovoleno,

aby jakýkoli z těchto parametrů měl různé hodnoty před a během zkoušky, pokud na ně je vzat zřetel v následných hodnoceních odezvy kusu.

Tepelnou zkoušku musí tvořit:

- (a) Vystavení vzorku pod dobu 30 minut tepelnému prostředí, které zajišťuje tepelný tok nejméně rovnocenný tepelnému toku hořícího uhlovodíkového paliva se vzduchem v dostatečně stabilních okolních podmínkách dosahujícího průměrný koeficient emise 0,9 a průměrnou teplotu nejméně 800 °C, plně obklopující vzorek s povrchem majícím absorpční koeficient 0,8 nebo hodnotu, kterou kus prokazatelně může mít, jestliže je vystaven uvedenému ohni, následovanému,
- (b) Vystavení vzorku okolní teplotě 38 °C odpovídající podmínkám slunečního ozáření uvedeným v tabulce 6.4.8.6 a maximálnímu projektovanému vývinu vnitřního tepla uvnitř kusu z radioaktivních obsahů po dostatečnou dobu pro zajištění, že teploty ve vzorku jsou všude klesající a/nebo blíží se podmínkám prvotního stálého stavu. Alternativně je dovoleno, aby jakýkoli z těchto parametrů měl různé hodnoty po přerušení zahřívání, pokud na ně je vzat zřetel v následných hodnoceních odezvy kusu.

V průběhu zkoušky a po zkoušce vzorek nesmí být uměle ochlazován a jakékoli hoření materiálů vzorku musí být ponecháno přirozenému průběhu.

6.4.17.4 Zkouška ponořením do vody: Vzorek musí být ponořen pod hladinu vody nejméně 15 m po dobu nejméně osm hodin v poloze, která povede k maximálnímu poškození. Pro účely důkazu musí se za splnění těchto podmínek považovat vnější tlak 150 kPa.

6.4.18 Rozšířená zkouška ponořením do vody pro kusy typu B(U) a typu B(M) obsahující výše než 10^5 A₂ a typu C

Rozšířená zkouška ponořením do vody: Vzorek musí být ponořen pod hladinu vody nejméně 200 m po dobu nejméně jedné hodiny. Pro účely důkazu musí se za splnění těchto podmínek považovat vnější tlak 2 MPa.

6.4.19 Zkouška úniku vody pro kus obsahující štěpnou látku

6.4.19.1 Kusy, pro které bylo oceněno pro účely hodnocení podle 6.4.11.7 až 6.4.11.12 vniknutí nebo únik vody v rozsahu, který má za následek nejvyšší reaktivitu, jsou vyjmuty z této zkoušky.

6.4.19.2 Vzorek, před podrobením se zkoušce vniknutí anebo úniku vody uvedené níže, musí být podroben zkouškám uvedeným v 6.4.17.2 (b) a buď 6.4.17.2 (a) nebo (c), jak je požadováno v 6.4.11.12, a zkoušce uvedené v 6.4.17.3.

6.4.19.3 Vzorek musí být ponořen pod hladinu vody nejméně 0,9 m po dobu nejméně 8 hodin v poloze, ve které se předpokládá největší vniknutí anebo únik.

6.4.20 Zkoušky pro kusy typu C

6.4.20.1 Vzorky musí být v uvedeném pořadí podrobeny účinkům každé z následujících zkoušek:

- (a) Zkoušky popsané v 6.4.17.2(a), 6.4.17.2(c), 6.4.20.2 a 6.4.20.3; a
- (b) Zkouška popsaná v 6.4.20.4.

Pro posloupnost zkoušek dle (a) a (b) je povoleno používat zvláštní vzorky.

6.4.20.2 Zkouška průrazem/roztržením: Vzorek musí být podroben ničivému účinku sondy ze střední oceli. Orientace sondy vůči povrchu vzorku musí být taková, aby na konci pořadí zkoušek popsáných v 6.4.20.1(a) způsobila maximální poškození vzorku.

- (a) Vzorek reprezentující kus o hmotnosti menší než 250 kg, musí být umístěn na terč a vystaven pádu sondy o hmotnosti 250 kg, padající z výše 3 m nad zamýšleným bodem dopadu. Sonda pro tuto zkoušku musí být válcová tyč o průměru 20 cm s koncem (který bude narážet na vzorek) ve tvaru komolého kužele s následujícími rozměry: 30 cm výška a 2,5 cm průměr koncové části, na konci s hranou zaoblenou na poloměr ne větší než 6 mm. Terč, ke kterému je vzorek připevněn musí odpovídat popisu v 6.4.14.
- (b) Pro kusy o hmotnosti větší než 250 kg musí být upevněna na terč sonda a vzorek padá na sondu. Výška pádu, měřená od bodu dopadu k vnějšímu povrchu sondy musí činit 3 m. Pro tuto zkoušku musí mít sonda stejný tvar a rozměry jako je popsáno v (a) výše, s výjimkou toho, když by větší délka a hmotnost sondy mohla přivodit větší poškození vzorku. Terč, ke kterému je tyč připevněna musí odpovídat popisu v 6.4.14.

6.4.20.3 Rozšířená tepelná zkouška: Podmínky pro tuto zkoušku musí být stejné jako podmínky popsané v 6.4.17.3, s výjimkou toho, že vystavení teplemu musí trvat 60 minut.

6.4.20.4 Nárazová zkouška: Vzorek musí být podroben nárazu na terč rychlostí ne menší než 90 m/s, a to tak orientován, aby utrpěl maximální poškození. Terč musí odpovídat popisu v 6.4.14, s výjimkou, že jeho povrch může být v libovolné orientaci, pokud je kolmý ke dráze vzorku.

6.4.21 Prohlídky obalů konstruovaných pro obsah 0,1 kg nebo více hexafluoridu uranu

6.4.21.1 Každý vyrobený obal a jeho provozní a konstrukční výstroj musí být podroben buď společně nebo každá tato část zvlášť první prohlídce před uvedením do provozu a následně periodicky. Tyto prohlídky musí být prováděny a osvědčovány po dohodě s příslušným orgánem.

6.4.21.2 První prohlídku musí tvořit kontrola konstrukčních charakteristik, zkouška pevnosti, zkouška těsnosti, zkouška vnitřního objemu vodou a kontrola správného provozu provozní výstroje.

6.4.21.3 Periodické prohlídky musí tvořit vizuální prohlídka, zkouška pevnosti, zkouška těsnosti a kontrola správného provozu provozní výstroje. Nejdelší lhůty pro periodické prohlídky musí být pět let. Obaly, které nebyly podrobeny prohlídce v průběhu pětileté lhůty, musí být zkoušeny před přepravou podle programu schváleného příslušným orgánem. Tyto obaly nesmějí být znovu plněny před dokončením plného programu periodických prohlídek.

6.4.21.4 Kontrola konstrukčních charakteristik musí prokázat shodu se specifikacemi konstrukčního vzoru a výrobním programem.

6.4.21.5 Pro první zkoušku pevnosti obaly konstruované pro obsah 0,1 kg nebo více hexafluoridu uranu musí být zkoušeny hydraulicky vnitřním tlakem nejméně 1,38 MPa (13,8 bar), ale pokud je zkušební tlak menší 2,76 MPa (27,6 bar), typové schválení musí být vícestranné. Pro opětovné zkoušení obalů smí být podkladem jakékoli jiné rovnocenné nedestruktivní zkoušení, za podmínky vícestranného schválení.

6.4.21.6 Zkouška těsnosti musí být provedena v souladu s postupem, který je schopen měřit úniky z kontejmentového systému s citlivostí 0,1 Pa.l/s (10^{-6} bar/s).

6.4.21.7 Zkouška vnitřního objemu vodou se provádí s přesností $\pm 0,25$ % při referenční teplotě 15 °C. Obsah musí být uveden na štítku popsaném v 6.4.21.8.

6.4.21.8 Štítek vyrobený z nekorodujícího kovu musí být trvale upevněn na každý obal na snadno přístupném místě. Způsob upevnění štítku nesmí snižovat pevnost obalu. Na štítku musí být vyznačeny vyražením nebo jakýmkoli jiným rovnocenným způsobem nejméně tyto údaje:

- Identifikační označení rozhodnutí o typovém schválení;
- Sériové číslo výrobce;
- Nejvyšší provozní tlak (přetlak);

- Zkušební tlak (přetlak);
- Obsah: hexafluorid uranu;
- Vnitřní objem v litrech;
- Nejvyšší dovolená hmotnost náplně hexafluoridu uranu;
- Hmotnost obalu;
- Datum (měsíc, rok) první zkoušky a poslední periodické zkoušky;
- Razítko znalce, který provedl zkoušky.

6.4.22 Typové schválení kusu a materiálů

6.4.22.1 Typové schválení kusů obsahujících 0,1 kg nebo více hexafluoridu uranu vyžaduje, aby:

- (a) Každý konstrukční vzor, který splňuje požadavky uvedené v 6.4.6.4, byl vícestranně schválen;
- (b) Po 31. prosinci 2003 každý konstrukční vzor, který splňuje požadavky uvedené v pododílech 6.4.6.1 až 6.4.6.3, musí být jednostranně schválen příslušným orgánem země původu konstrukčního typu, není-li z jiných důvodů vyžadováno vícestranné schválení dle (dohody) ADR.

6.4.22.2 Každý konstrukční vzor kusu typu B(U) a kusu typu C vyžaduje jednostranné schválení, kromě:

- (a) konstrukčního vzoru kusu pro štěpnou látku, který je též uveden v 6.4.22.4, 6.4.23.7 a 5.1.5.2.1, vyžadující vícestranné schválení; a
- (b) konstrukční vzoru kusu typu B(U) pro radioaktivní látku s malou rozptýlitelností vyžadující vícestranné schválení.

6.4.22.3 Každý konstrukční vzor kusu typu B(U), včetně těch pro štěpnou látku, které jsou též předmětem požadavků uvedených v 6.4.22.4, 6.4.23.7 a 5.1.5.2.1, a těch pro radioaktivní látku s malou rozptýlitelností vyžaduje vícestranné schválení.

6.4.22.4 Každý konstrukční vzor kusu pro štěpnou látku, která není vyjmuta podle 6.4.11.2 z požadavků, které se vztahují zvlášť na kusy obsahující štěpnou látku, vyžaduje vícestranné schválení.

6.4.22.5 Konstrukční vzor radioaktivní látky zvláštní formy vyžaduje jednostranné schválení. Konstrukční typ pro radioaktivní látku s malou rozptýlitelností vyžaduje vícestranné schválení (viz též 6.4.23.8).

6.4.22.6 Jakýkoli konstrukční vzor, který vyžaduje jednostranné schválení země původu, která je smluvní stranou dohody ADR, musí být typově schválen příslušným orgánem této země; jestliže země, kde byl kus zkonstruován není smluvní stranou dohody ADR, přeprava je možná pouze za těchto podmínek:

- (a) rozhodnutí nebo osvědčení o typovém schválení bylo dodáno touto zemí, dokazující, že typ kusu splňuje technické požadavky ADR a že toto rozhodnutí nebo osvědčení je společně podepsáno příslušným orgánem první smluvní strany ADR, do které zásilka vstupuje;
- (b) jestliže nebylo žádné osvědčení a žádné typové schválení konstrukčního typu kusu smluvní straně ADR dodáno, konstrukční typ kusu je typově schválen příslušným orgánem první smluvní strany ADR, do které zásilka vstupuje.

6.4.22.7 Pro konstrukční vzor typově schválené podle přechodných ustanovení viz oddíl 1.6.6.

6.4.23 Žádosti a povolení přepravy radioaktivní látky**6.4.23.1** (Vyhrazeno)**6.4.23.2** Žádost o povolení přepravy musí obsahovat:

- (a) Dobu týkající se přepravy, na kterou se povolení požaduje;
- (b) Skutečný radioaktivní obsah, očekávané způsoby přepravy, typ vozidla a pravděpodobná nebo navrhovaná trasa; a
- (c) Podrobnosti, jak budou uvedeny v účinnost preventivní a administrativní nebo provozní opatření uvedené v rozhodnutích o typovém schválení kusu vydaných podle 5.1.5.2.1.

6.4.23.3 Žádost o povolení přepravy za zvláštních podmínek musí obsahovat všechny údaje nezbytné pro uspokojení požadavku příslušného orgánu, že celková úroveň bezpečnosti při přepravě je nejméně rovnocenná úrovni, které by bylo dosaženo, kdyby všechny příslušné požadavky ADR byly splněny.

Žádost musí též obsahovat:

- (a) Prohlášení o důvodech, proč odeslání nemůže být v plném souladu s příslušnými požadavky ADR; a
- (b) Výčet zvláštních opatření nebo zvláštních administrativních nebo provozních opatření, která mají být použita během přepravy, aby se tak kompenzovaly nedostatky při plnění příslušných požadavků ADR.

6.4.23.4 Žádost o typové schválení kusu typu B(U) nebo typu C musí obsahovat:

- (a) Podrobný popis navrhovaného radioaktivního obsahu s odkazem na jeho fyzikální a chemický stav a povahu vyzářovaného záření;
- (b) Podrobný popis konstrukčního vzoru, včetně kompletních technických výkresů a přehledů materiálů a výrobních metod;
- (c) Zpráva o zkouškách, které byly provedeny a jejich výsledky nebo důkaz založený na výpočtových metodách nebo jiný důkaz, že konstrukční vzor splňuje příslušné požadavky;
- (d) Navrhované pokyny pro provoz a údržbu při používání obalu;
- (e) Jestliže kus je konstruován pro nejvyšší normální provozní tlak překračující 100 kPa, specifikace materiálů pro výrobu kontejmentového systému, vzorky, které se mají použít, a zkoušky, které se mají provést;
- (f) Pokud navrhovaný radioaktivní obsah je ozářené palivo, popis a zdůvodnění předpokladů v bezpečnostní analýze vztahující se k charakteristikám paliva a popis opatření před odesláním vyžadovaných v 6.4.11.4 (b);
- (g) Zvláštní ustanovení o umístování pro přepravu, nezbytná pro zajištění bezpečného odvodu tepla z kusu beroucí v úvahu použité různé druhy přepravy a typ vozidla nebo kontejneru;
- (h) Reprodukovatelné vyobrazení ne větší než 21 cm x 30 cm ilustrující provedení kusu; a
- (i) Specifikaci vhodného programu zajištění kvality požadovaného v 1.7.3.

6.4.23.5 Žádost o typové schválení kusu typu B(M) musí obsahovat kromě informací, požadovaných pro typové schválení kusu v 6.4.23.4 pro kusy typu B(U):

- (a) Seznam požadavků uvedených v 6.4.7.5, 6.4.8.4, 6.4.8.5, 6.4.8.6 a 6.4.8.9 až 6.4.8.15, kterým kus nevyhovuje;

- (b) Navrhovaná dodatečná provozní opatření, která mají být provedena během přepravy pravidelně neprováděná podle této přílohy, ale která jsou nezbytná pro zajištění bezpečnosti kusu nebo která kompenzují nesplněné požadavky uvedené v odstavci (a) výše;
- (c) Výčet jakýchkoli omezení způsobu přepravy a jakýchkoli zvláštních postupů nakládky, přepravy, vykládky nebo manipulace; a
- (d) Rozsah okolních podmínek (teplota, sluneční záření), které jsou očekávány během přepravy a které byly vzaty v úvahu při projektování konstrukčního vzoru.

6.4.23.6 Žádost o typové schválení kusů obsahujících 0,1 kg nebo více hexafluoridu uranu musí obsahovat všechny údaje potřebné k dokázání příslušnému orgánu, že konstrukční typ splňuje příslušné požadavky uvedené v 6.4.6.1, a popis vhodného programu zajištění jakosti, jak se požaduje v oddílu 1.7.3.

6.4.23.7 Žádost o typové schválení kusu pro štěpné látky musí obsahovat všechny údaje k dokázání příslušnému orgánu, že konstrukční typ splňuje příslušné požadavky uvedené v 6.4.11.1 a popis vhodného programu zajištění jakosti, jak se požaduje v oddílu 1.7.3.

6.4.23.8 Žádost o typové schválení radioaktivní látky zvláštní formy a radioaktivní látky s malou rozptýlitelností musí obsahovat:

- (a) Podrobný popis radioaktivní látky nebo, pokud je v pouzdru, obsahu; musí být uveden zejména odkaz jak na fyzikální tak i chemický stav;
- (b) Podrobný popis konstrukčního typu použitého pouzdra;
- (c) Zpráva o provedených zkouškách a jejich výsledcích nebo důkaz na základě výpočtových metod ukazující, že radioaktivní látka je schopna vyhovět předepsaným zkouškám nebo jiný důkaz, že radioaktivní látka zvláštní formy nebo radioaktivní látka s malou rozptýlitelností splňuje příslušné požadavky ADR;
- (d) Popis programu zajištění jakosti, jak se požaduje v oddílu 1.7.3.
- (e) Navrhovaná opatření, která se mají provést před odesláním zásilky s radioaktivní látkou zvláštní formy nebo radioaktivní látky s malou rozptýlitelností.

6.4.23.9 Každé rozhodnutí o typovém schválení nebo o povolení vydané příslušným orgánem musí být označeno identifikační značkou. Identifikační značka musí být následujícího všeobecného typu:

VRI/Číslo/Kód typu

- (a) Kromě uvedeného v 6.4.23.10 (b), VRI představuje mezinárodní rozlišovací značku vozidla země vydávající rozhodnutí nebo osvědčení¹;
- (b) Číslo musí být přiděleno příslušným orgánem a musí být jednoznačné a specifické se zřetelem ke konstrukčnímu vzoru nebo přepravě. Identifikační značka povolení přepravy musí být jednoznačně ve vztahu k identifikační značce o typovém schválení;
- (c) Následující kódy typu musí být použity v uvedeném pořadí pro označení typů vydaných rozhodnutí o typovém schválení nebo povolení přepravy:

AF	Konstrukční vzor kusu Typ A pro štěpnou látku
B(U)	Konstrukční vzor kusu Typ B(U) [B(U) F pro štěpnou látku]
B(M)	Konstrukční vzor kusu Typ B(M) [B(M) F pro štěpnou látku]
C	Konstrukční vzor kusu Typ C [CF pro štěpnou látku]
IF	Konstrukční vzor průmyslového kusu pro štěpnou látku
S	Radioaktivní látka zvláštní formy
LD	Radioaktivní látka s malou rozptýlitelností
T	Přeprava

¹ Viz mezinárodní rozlišovací značka státu předepsaná v Úmluvě o silničním provozu, Vídeň (1968).

X Zvláštní podmínky

V případě konstrukčních vzorů kusu obsahujících hexafluorid uranu, který není štěpnou látkou nebo je vyjmutou štěpnou látkou, a na který se žádný z výše uvedených kódů nevztahuje, pak se musí použít následující typy kódů:

H(U) Jednostranné schválení
H(M) Mnohostranné schválení

- (d) Rozhodnutí o typovém schválení kusu a radioaktivní látky zvláštní formy, kromě vydaných podle přechodných ustanovení pododdílu 1.6.6.2 a 1.6.6.3, a rozhodnutí o typovém schválení radioaktivní látky s malou rozptýlitelností, musí být ke kódu připojeny znaky „-96“.

6.4.23.10

Tyto kódy typu musí být uvedeny takto:

- (a) Každé rozhodnutí a každý kus musí být označeny příslušnou identifikační značkou obsahující znaky předepsané v 6.4.23.9 a), b), c) a d) výše, kromě toho, že za druhou závorkou musí být kusy opatřeny pouze příslušným kódem typu, případně včetně znaku „-96“, tj., že „T“ nebo „X“ se nesmějí uvádět v identifikačním nápisu na kusu. Kde rozhodnutí o typovém schválení a povolení přepravy jsou kombinována, příslušné kódy typu není třeba opakovat. Například:

A/132/B(M)F-96:A Konstruktivní vzor kusu typu B(M) schválený pro štěpnou látku, vyžadující mnohostranné schválení, pro který příslušný orgán Rakouska přidělil číslo konstrukčního typu 132 (pro označení kusu i pro rozhodnutí o typovém schválení);

A/132B(M)F-96T Povolení přepravy vydané pro kus označený identifikační značkou uvedenou výše (pro označení pouze na rozhodnutí);

A/137/X: Povolení přepravy za zvláštních podmínek, vydané příslušným orgánem Rakouska, kterému bylo přiděleno číslo 137 (pro označení pouze na rozhodnutí);

A/139/IF-96: Typové schválení průmyslového kusu pro štěpnou látku vydané příslušným orgánem Rakouska, kterému bylo přiděleno číslo 139 (pro označení kusu i rozhodnutí o typovém schválení kusu); a

A/145/H(U)-96: Typové schválení kusu obsahujícího hexafluorid uranu, který je vyjmutou štěpnou látkou, vydané příslušným orgánem Rakouska, kterému bylo přiděleno číslo 145 (pro označení kusu i rozhodnutí o typovém schválení kusu);

- (b) Pokud je mnohostranné schválení provedeno validací podle 6.4.23.16, musí být použita pouze identifikační značka vydaná zemí původu konstrukčního typu nebo odeslání. Pokud je mnohostranné schválení provedeno vydáním rozhodnutí nebo osvědčení následnými zeměmi, musí být označeno příslušnou identifikační značkou a kus, jehož konstrukční byl takto schválen, musí být označen všemi příslušnými identifikačními značkami.

Například:

A/132/B(M)F-96
CH/28/B(M)F-96

byly by identifikační značky kusů, které byly původně schváleny Rakouskem a následně byly schváleny odděleným osvědčením Švýcarskem. Dodatečné identifikační značky byly by uvedeny na kusu podobným způsobem;

- (c) Revize rozhodnutí nebo osvědčení musí být vyznačena zápisem uvedeným v závorkách za identifikační značkou. Například A/132/B(M)F-96 (Rev. 2) by značilo druhou revizi rakouského osvědčení o typovém schválení kusu; nebo A/132/B(M)F-96 (Rev. 0) by označovalo původní vydání rakouského osvědčení o typovém schválení kusu. Pro původní vydání zápis v závorkách je nepovinný a jiná slova, jako „Původní vydání“ mohou být též použita místo „Rev 0“. Číslo revizí rozhodnutí nebo osvědčení smějí být vydávána pouze zemí, která vydala původní rozhodnutí nebo osvědčení o schválení.

- (d) Dodatečné znaky (které mohou být nezbytné podle národních předpisů) mohou být doplněny v závorkách na konec identifikační značky; například A/132/B(M)F-96(SP503);
- (e) Není nutno měnit identifikační značku na obalu pokaždé, kdy je provedena revize rozhodnutí o typovém schválení. Takové opětné označení musí být provedeno pouze v těch případech, kdy revize rozhodnutí o typovém schválení kusu má za následek změnu písmena kódu typu, uvedeného za druhou závorkou.

6.4.23.11

Každé rozhodnutí o typovém schválení vydané příslušným orgánem pro radioaktivní látku zvláštní formy nebo radioaktivní látku s malou rozptýlitelností musí obsahovat tyto údaje:

- (a) Typ rozhodnutí nebo osvědčení;
- (b) Identifikační značka vydaná příslušným orgánem;
- (c) Datum vydání a datum skončení platnosti;
- (d) Seznam příslušných národních a mezinárodních předpisů včetně vydání IAEA Regulations for the Safe Transport of Radioactive Material (MAAE Pravidla pro bezpečnou dopravu radioaktivních látek), podle kterých byla radioaktivní látka zvláštní formy nebo radioaktivní látka schválena;
- (e) Identifikace radioaktivní látky zvláštní formy nebo radioaktivní látky s malou rozptýlitelností;
- (f) Popis radioaktivní látky zvláštní formy nebo radioaktivní látky s malou rozptýlitelností;
- (g) Specifikace konstrukčního typu pro radioaktivní látku zvláštní formy nebo radioaktivní látku s malou rozptýlitelností, která může zahrnovat odkazy na výkresy;
- (h) Specifikace radioaktivního obsahu, která zahrnuje obsažené aktivity a která může zahrnovat fyzikální a chemickou formu;
- (i) Specifikace příslušného programu zajištění jakosti, jak je požadováno v oddílu 1.7.3;
- (j) Odkaz na pokyny zpracované žadatelem týkající se zvláštních činností, které mají být provedeny před odesláním;
- (k) Odkaz na totožnost žadatele, pokud to bude považovat příslušný orgán za vhodné;
- (l) Podpis a identifikace organizace vydávajícího rozhodnutí nebo osvědčení.

6.4.23.12

Každé rozhodnutí o povolení přepravy za zvláštních podmínek, vydané příslušným orgánem musí obsahovat tyto údaje:

- (a) Typ rozhodnutí nebo osvědčení;
- (b) Identifikační značka vydaná příslušným orgánem;
- (c) Datum vydání a datum skončení platnosti;
- (d) Způsob(y) přepravy;
- (e) Jakékoli omezení způsobu přepravy, typ vozidla, kontejneru a jakékoli pokyny pro dopravní trasu,
- (f) Seznam příslušných národních a mezinárodních předpisů včetně vydání IAEA Regulations for the Safe Transport of Radioactive Material (MAAE Pravidla pro bezpečnou dopravu radioaktivních látek), podle kterých byla zvláštní dohoda schválena;
- (g) Následující prohlášení:

„Toto rozhodnutí nezbavuje odesílatele odpovědnosti za plnění jakýchkoli požadavků vlády jakékoli země, kterou bude kus procházet nebo do které bude přepraven.“

- (h) Odkazy na rozhodnutí pro alternativní radioaktivní obsahy, na schválení provedené validací jinými příslušnými orgány, nebo jiné doplňkové technické údaje, které příslušný orgán považuje za vhodné;
- (i) Popis obalu s odkazem na výkresy nebo specifikaci konstrukčního vzoru. Pokud to příslušný orgán považuje za vhodné, musí být též uvedeno reprodukovatelné vyobrazení ne větší než 21 cm x 30 cm ilustrující provedení kusu doprovázené stručným popisem obalu, včetně materiálů, z něhož byl vyroben, celková hmotnost, vnější rozměry a vzhled;
- (j) Specifikace schválených radioaktivních obsahů, včetně jakýchkoli omezení radioaktivních obsahů, které by nemohly být zřejmé z povahy obalu. Musí být též uvedeny fyzikální a chemické formy, obsažené aktivity (pokud je to vhodné, včetně aktivit jednotlivých izotopů), množství v gramech (pro štěpnou látku nebo v případě potřeby pro každý štěpných nuklid) a, pokud je to vhodné, údaj, že se jedná o radioaktivní látku zvláštní formy nebo radioaktivní látku s malou rozptýlitelností;
- (k) Dodatečně pro kusy obsahující štěpnou látku:
 - (i) podrobný popis schváleného radioaktivního obsahu;
 - (ii) hodnota indexu bezpečné podkritičnosti;
 - (iii) odkaz na doklad prokazující zachování podkritického stavu obsahu;
 - (iv) jakékoli zvláštní prostředky, na jejichž základě se uvažovala nepřítomnost vody v určitých prázdných prostorech při hodnocení podkritičnosti;
 - (v) jakákoli dovolená odchylka (na základě 6.4.11.4 (b)) pro změnu multiplikace neutronů předpokládané v hodnocení podkritičnosti jako důsledek; skutečných hodnot ozáření a
 - (vi) rozsah okolní teploty, pro kterou byla přeprava za zvláštních podmínek povolena;
- (l) Podrobný seznam jakýchkoli dodatečných provozních opatření požadovaných pro přípravu, nakládku, přepravu, vykládku a manipulaci se zásilkou a jakákoli ustanovení o umístování na dopravním prostředku k bezpečnému odvodu tepla;
- (m) Důvody pro přepravu za zvláštních podmínek, pokud to vyžaduje příslušný orgán;
- (n) Popis kompenzačních opatření, která mají být provedena jako důsledek přepravy za zvláštních podmínek;
- (o) Odkaz na pokyny vypracované žadatelem vztahující se na použití obalu nebo zvláštní činnosti, které musí být provedeny před odesláním;
- (p) Popis okolních podmínek uvažovaných při projekci konstrukčního typu, pokud neodpovídají podmínkám uvedeným v 6.4.8.5, 6.4.8.6 a 6.4.8.15, pokud je to vhodné;
- (q) Jakákoli nouzová opatření považovaná příslušným orgánem za nezbytná;
- (r) Specifikace vhodného programu zajištění jakosti, jak je požadováno v oddílu 1.7.3;
- (s) Odkaz na totožnost žadatele a na totožnost dopravce, pokud to bude považovat příslušný orgán za vhodné;
- (t) Podpis a identifikace orgánu vydávajícího rozhodnutí nebo osvědčení.

6.4.23.13

Každé rozhodnutí nebo osvědčení o povolení přepravy vydané příslušným orgánem musí obsahovat tyto údaje:

- (a) Typ rozhodnutí nebo osvědčení;
- (b) Identifikační značka(y) vydaná(é) příslušným orgánem;

- (c) Datum vydání a datum skončení platnosti;
- (d) Seznam příslušných národních a mezinárodních předpisů včetně vydání IAEA Regulations for the Safe Transport of Radioactive Material (MAAE Pravidla pro bezpečnou dopravu radioaktivních látek), podle kterých bylo odeslání schváleno;
- (e) Jakékoli omezení způsobu přepravy, typu vozidla, kontejneru a jakékoli pokyny pro trasu přepravy,
- (f) Následující prohlášení:
„Toto rozhodnutí nebo osvědčení nezbavuje odesílatele odpovědnosti za plnění jakýchkoli požadavků vlády jakékoli země, kterou bude kus procházet nebo do které bude přepraven.“
- (g) Podrobný seznam jakýchkoli dodatečných provozních opatření požadovaných pro přípravu, nakládku, přepravu, vykládku a manipulaci se zásilkou a jakákoli ustanovení o umístování na dopravním prostředku k bezpečnému odvodu tepla nebo udržení podkritického stavu;
- (h) Odkaz na pokyny zpracované žadatelem týkající se zvláštních činností, které mají být provedeny před odesláním;
- (i) Odkaz na příslušné (á) rozhodnutí nebo osvědčení o typovém schválení;
- (j) Specifikace schválených radioaktivních obsahů, včetně jakýchkoli omezení radioaktivních obsahů, které by nemohly být zřejmé z povahy obalu. Musí být též uvedeny fyzikální a chemické formy, obsažené aktivity (pokud je to vhodné, včetně aktivit různých izotopů), množství v gramech (pro štěpnou látku nebo v případě potřeby pro každý štěpných nuklid) a, pokud je to vhodné, údaj, že se jedná o radioaktivní látku zvláštní formy nebo radioaktivní látku s malou rozptýlitelností;
- (k) Jakákoli nouzová opatření považovaná příslušným orgánem za nezbytná;
- (l) Specifikace vhodného programu zajištění jakosti, jak je požadováno v oddílu 1.7.3;
- (m) Odkaz na totožnost žadatele, pokud to bude považovat příslušný orgán za vhodné;
- (n) Podpis a identifikace orgánu vydávajícího rozhodnutí nebo osvědčení.

6.4.23.14

Každé rozhodnutí nebo osvědčení o typovém schválení kusu vydané příslušným orgánem musí obsahovat tyto údaje:

- (a) Typ rozhodnutí nebo osvědčení;
- (b) Identifikační značka vydaná příslušným orgánem;
- (c) Datum vydání a datum skončení platnosti;
- (d) Jakékoli omezení způsobu přepravy, pokud je to vhodné;
- (e) Seznam příslušných národních a mezinárodních předpisů včetně vydání IAEA Regulations for the Safe Transport of Radioactive Material (MAAE Pravidla pro bezpečnou dopravu radioaktivních látek), podle kterých byl kus typově schválen;
- (f) Následující prohlášení:
„Toto rozhodnutí nebo osvědčení nezbavuje odesílatele odpovědnosti za plnění jakýchkoli požadavků vlády jakékoli země, kterou bude kus procházet nebo do které bude přepraven.“;
- (g) Odkazy na rozhodnutí nebo osvědčení pro alternativní radioaktivní obsahy, na schválení provedené validací jinými příslušnými orgány, nebo jiné doplňkové technické údaje, které příslušný orgán považuje za vhodné;
- (h) Prohlášení o rozhodnutí nebo osvědčení o povolení přepravy, pokud je povolení přepravy podle 5.1.5.1.2 vyžadováno;
- (i) Identifikace obalu;

- (j) Popis obalu s odkazem na výkresy nebo specifikaci konstrukčního typu. Pokud to příslušný orgán považuje za vhodné, musí být též uvedeno reprodukovatelné vyobrazení ne větší než 21 cm x 30 cm ilustrující provedení kusu doprovázené stručným popisem obalu, včetně materiálů, z něhož byl vyroben, celková hmotnost, vnější rozměry a vzhled;
- (k) Specifikace konstrukčního typu odkazem na výkresy;
- (l) Specifikace schválených radioaktivních obsahů, včetně jakýchkoli omezení radioaktivních obsahů, které by nemohly být zřejmé z povahy obalu. Musí být též uvedeny fyzikální a chemické formy, obsažené aktivity (pokud je to vhodné, včetně aktivit různých izotopů), množství v gramech (pro štěpnou látku nebo v případě potřeby pro každý štěpných nuklid) a, pokud je to vhodné, údaj, že se jedná o radioaktivní látku zvláštní formy nebo radioaktivní látku s malou rozptýlitelností;
- (m) Popis kontejmentového (zádržného) systému;
- (n) Dodatečně pro kusy obsahující štěpnou látku:
 - (i) podrobný popis schváleného radioaktivního obsahu;
 - (ii) Popis kontejmentového (omezujícího) systému;
 - (iii) hodnota indexu bezpečné podkritičnosti;
 - (iv) odkaz na doklad prokazující zachování podkritického stavu obsahu;
 - (v) jakékoli zvláštní prostředky, na jejichž základě se uvažovala nepřítomnost vody v určitých prázdných prostorech při hodnocení podkritičnosti;
 - (vi) jakákoli dovolená odchylka (na základě 6.4.11.4 (b)) pro změnu multiplikace neutronů předpokládané v hodnocení podkritičnosti jako důsledek skutečných hodnot ozáření; a
 - (vii) rozsah okolní teploty, pro kterou byl kus typově schválen;
- (o) Pro kusy typu B(M) výčet uvádějící ty požadavky uvedené v 6.4.7.5, 6.4.8.4, 6.4.8.5, 6.4.8.6 a 6.4.8.9 až 6.4.8.15, které kus nesplňuje, a jakékoli rozšiřující informace, které mohou být užitečné pro jiné příslušné orgány;
- (p) Pro kusy obsahující více než 0,1 kg hexafluoridu uranu výčet uvádějící ta ustanovení, pododdílu 6.4.6.4, kterých bylo využito, pokud tomu tak bylo, a jakékoli doplňující informace, které mohou být užitečné pro jiné příslušné orgány;
- (q) Podrobný seznam jakýchkoli dodatečných provozních opatření požadovaných pro přípravu, nakládku, přepravu, vykládku a manipulaci se zásilkou a jakákoli ustanovení o umístění na dopravním prostředku k bezpečnému odvodu tepla;
- (r) Odkaz na pokyny zpracované žadatelem týkající se použití obalu nebo zvláštních činností, které mají být provedeny před odesláním;
- (s) Výčet okolních podmínek předpokládaných při projektování konstrukčního typu, pokud neodpovídají podmínkám uvedeným v 6.4.8.5, 6.4.8.6 a 6.4.8.15, pokud je to vhodné;
- (t) Specifikace vhodného programu zajištění jakosti, jak je požadováno v oddílu 1.7.3;
- (u) Jakákoli nouzová opatření považovaná příslušným orgánem za nezbytná;
- (v) Odkaz na totožnost žadatele, pokud to bude považovat příslušný orgán za vhodné;
- (w) Podpis a identifikace orgánu vydávajícího rozhodnutí nebo osvědčení.

6.4.23.15

Příslušný orgán musí být informován o sériovém čísle každého obalu vyrobeného podle jím typově schváleného konstrukčního vzoru podle 1.6.6.2.1, 1.6.6.2.2, 6.4.22.2, 6.4.22.3 a 6.4.22.4.

- 6.4.23.16** Mnohostranné schválení může být provedeno validací původního rozhodnutí nebo osvědčení vydaného příslušným orgánem země původu konstrukčního typu nebo odesláním. Taková validace může mít formu rubopisu na původním rozhodnutí nebo osvědčení nebo může být provedena vydáním odděleného rubopisu, přílohy, dodatku atd. příslušným orgánem země, kterou zásilka prochází nebo do které zásilka přichází.

KAPITOLA 6.5

POŽADAVKY NA KONSTRUKCI A ZKOUŠENÍ VELKÝCH NÁDOB PRO VOLNĚ LOŽENÉ LÁTKY (IBC)

6.5.1 Obecné požadavky

6.5.1.1 Rozsah

6.5.1.1.1 Požadavky této kapitoly se vztahují na IBC - velké nádoby pro volně ložené látky (jejichž používání je výslovně dovoleno pro přepravu určitých nebezpečných látek podle pokynů pro balení uvedených ve sloupci (8) kapitoly 3.2. Přemístitelné cisterny, cisternové kontejnery, které odpovídají požadavkům kapitoly 6.7, nebo 6.8, se nepovažují za IBC. IBC, které splňují požadavky této kapitoly, se pro účely ADR nepovažují za kontejnery.

6.5.1.1.2 IBC a jejich provozní výstroj neodpovídající přesně těmto požadavkům, ale mající přijatelné alternativy, mohou být příslušným orgánem považovány za přijatelné pro schválení. Kromě toho s ohledem na vědecký a technický pokrok může být používání alternativních uspořádání, která nabízejí nejméně stejnou bezpečnost používání z hlediska snášenlivosti s vlastnostmi přepravovaných látek a stejnou nebo vyšší odolnost proti nárazu, zatížení a ohni, povoleno příslušným orgánem.

6.5.1.1.3 Konstrukce, výstroj, zkoušení, značení a provoz IBC musí být uznány příslušným orgánem země, ve které byla IBC schválena.

POZNÁMKA: Strany provádějící kontroly a zkoušky v jiných zemích po uvedení IBC do provozu, nemusí být schváleny příslušným orgánem země, ve které byla IBC schválena, ale prohlídky a zkoušky se musí provádět v souladu s pravidly uvedenými ve schválení IBC.

6.5.1.1.4 Výrobci a následní distributoři IBC musí poskytnout informace týkající se postupů, které je nutno dodržovat a popis typů a rozměrů uzávěrů (zahrnujíc v to požadovaná těsnění) a jakékoliv další komponenty potřebné k tomu, aby se zajistilo, že IBC, jak jsou podávány k přepravě jsou schopné projít konstrukčními zkouškami předepsanými v této kapitole.

6.5.1.2 (Vyhrazeno)

6.5.1.3 (Vyhrazeno)

6.5.1.4 Kódovací systém pro značení IBC

6.5.1.4.1 Kód konstrukčního typu tvoří dvě arabské číslice, jak je uvedeno v odstavci (a), následované velkým(i) písmenem(ny), jak je uvedeno v odstavci (b), následované, pokud je to stanoveno v jednotlivých oddílech, arabskou číslicí označující kategorii IBC.

(a)

Typ	Pro tuhé látky, plněné nebo vyprazdňované		Pro kapaliny
	Samospádem	pod tlakem vyšším než 10 kPa (0,1 baru)	
Tuhý	11	21	31
Flexibilní	13	-	-

(b) Materiály: A. Ocel (všechny typy a povrchové úpravy)
B. Hliník
C. Přírodní dřevo
D. Překližka

- F. Rekonstituované dřevo (dřevo vláknité a třískové materiály)
- G. Lepenka
- H. Plast
- L. Textilní tkaniny
- M. Papír, vícevrstvý
- N. Kov (mimo ocel a hliník)

6.5.1.4.2 Pro kompozitní IBC musí být použity v druhém pořadí kódu dvě velká písmena latinské abecedy. První udává materiál vnitřní nádoby IBC a druhé vnějšího pláště IBC.

6.5.1.4.3 Dále jsou uvedeny typy a kódy IBC:

Materiál	Kategorie	Kód	Pododdíl
Kov			
A. Ocel	pro tuhé látky, plněné a vyprazdňované samospádem pro tuhé látky, plněné a vyprazdňované pod tlakem pro kapaliny	11A 21A 31A	6.5.5.1
B. Hliník	pro tuhé látky, plněné a vyprazdňované samospádem pro tuhé látky, plněné a vyprazdňované pod tlakem pro kapaliny	11B 21B 31B	
N. Ostatní kovy	pro tuhé látky, plněné a vyprazdňované samospádem pro tuhé látky, plněné a vyprazdňované pod tlakem pro kapaliny	11N 21N 31N	
Flexibilní			
H. Plasty	tkané plasty bez povlaku nebo vložky tkané plasty s povlakem tkané plasty s vložkou tkané plasty s povlakem a s vložkou plastová fólie	13H1 13H2 13H3 13H4 13H5	6.5.5.2

Materiál	Kategorie	Kód	Pododdíl
Flexibilní			
L. Textilní tkanina	bez povlaku nebo vložky s povlakem s vložkou s povlakem a s vložkou	13L1 13L2 13L3 13L4	6.5.5.2
M. Papír	Vícevrstvý vícevrstvý, vodovzdorný	13M1 13M2	
H. Tuhé plasty	pro tuhé látky, plněné a vyprazdňované samospádem, vybavené provozní výstrojí pro tuhé látky, plněné a vyprazdňované samospádem, samonosné pro tuhé látky, plněné a vyprazdňované pod tlakem, vybavené provozní výstrojí pro tuhé látky, plněné a vyprazdňované pod tlakem, samonosné pro kapaliny, vybavené provozní výstrojí pro kapaliny, samonosné	11H1 11H2 21H1 21H2 31H1 31H2	6.5.5.3
HZ. Kompozitní s plastovou vnitřní nádobou ^a	pro tuhé látky, plněné a vyprazdňované samospádem, s nádobou z tuhého plastu pro tuhé látky, plněné a vyprazdňované samospádem, s nádobou z flexibilního plastu pro tuhé látky, plněné a vyprazdňované pod tlakem, s nádobou z tuhého plastu pro tuhé látky, plněné a vyprazdňované pod tlakem, s nádobou z flexibilního plastu pro kapaliny, s nádobou z tuhého plastu pro kapaliny, s nádobou z flexibilního plastu	11HZ1 11HZ2 21HZ1 21HZ2 31HZ1 31HZ2	6.5.5.4
G. Lepenka	pro tuhé látky, plněné a vyprazdňované samospádem	11G	6.5.5.5

Dřevo			
C. Přírodní dřevo	pro tuhé látky, plněné a vyprazdňované samospádem, s vnitřní vložkou	11C	6.5.5.6
D. Překližka	pro tuhé látky, plněné a vyprazdňované samospádem, s vnitřní vložkou	11D	
F. Rekonstituované dřevo	pro tuhé látky, plněné a vyprazdňované samospádem, s vnitřní vložkou	11F	


^a *Tento kód musí být doplněn nahrazením písmena Z velkým písmenem podle 6.5.1.4.1 b) označujícím použitý materiál pro vnější obal.*

6.5.1.4.4 Písmeno „W“ může být uvedeno za kódem IBC. Písmeno „W“ označuje, že IBC, ačkoli je stejného typu uvedeného kódem, je vyrobena podle specifikace odlišné od specifikace uvedené v 6.5.5 a je považována za rovnocennou podle požadavků uvedených v 6.5.1.1.2.

6.5.2 Značení UN kódem

6.5.2.1 Základní značení

6.5.2.1.1 Každá IBC vyrobená a určená pro používání podle ADR musí mít značení, které je trvalé, čitelné a umístěné tak, aby bylo zřetelně viditelné. Písmena, číslice a znaky musí být nejméně 12 mm vysoké a musí uvádět :

(a) Znak OSN pro obaly 

Tento znak nesmí být použit pro jiné účely než pro osvědčení, že obal, přemístitelná cisterna nebo MEGC splňuje příslušné požadavky kapitoly 6.1, 6.2, 6.3, 6.5, 6.6 nebo 6.7¹.

U kovových IBC, na kterých se značení provádí vyražením nebo vytlačněním, smí být použita místo znaku písmena UN;

- (b) Kód udávající typ IBC podle 6.5.1.4;
- (c) Velká písmena, která udávají obalovou skupinu(y), pro kterou(é) je konstrukční typ schválen:
- (i) X pro obalové skupiny I, II a III (IBC pouze pro tuhé látky)
 - (ii) Y pro obalové skupiny II a III;
 - (iii) Z pouze pro obalovou skupinu III;
- (d) Měsíc a rok (vždy poslední dvě číslice) výroby.
- (e) Stát povolující přidělení značení UN kódem; uvedený rozlišovací značkou pro motorová vozidla v mezinárodním provozu²;
- (f) Jméno nebo značka výrobce nebo jiné označení IBC stanovené příslušným orgánem;
- (g) Zkušební zatížení při zkoušce stohováním v kg. Číslicí „0“ musí být označena IBC, která nejsou konstruována pro stohování;
- (h) Nejvyšší dovolená celková (btto) hmotnost v kg.

Shora předepsané základní značení musí být vyznačeno v pořadí pododstavců uvedených níže. Značení podle 6.5.2.2, jakož i všechna další značení schválená příslušným orgánem, je nutno umístit tak, aby jednotlivé části značení byly správně identifikovatelné.

Každý prvek UN kódu podle (a) až (h) a 6.5.2.2 musí být jasně oddělen, např. lomítkem, nebo mezerou, tak aby byl snadno identifikovatelný

¹ Tento symbol se také používá k potvrzení, že flexibilní objemové vaky schválené pro ostatní druhy dopravy jsou v souladu s požadavky uvedenými v kapitole 6.8 UN Modelového Regulativu.

² Rozlišovací značky pro motorová vozidla v mezinárodní dopravě podle Vídeňské konvence o silničním provozu (1968).

6.5.2.1.2 Příklady značení pro různé typy IBC v souladu s 6.5.2.1.1, písmeny (a) až (h) uvedenými výše:

<p>Ⓢ 11A/Y/02 99 NL/Mulder 007/5500/1500</p> <p>Ⓢ 13H3/Z/03 01 F/Meunier 1713/0/1500</p> <p>Ⓢ 31H1/Y/04 99 GB/9099/10800/1200</p> <p>Ⓢ 31HA1/Y/05 01 D/Müller/1683/10800 1200</p> <p>Ⓢ 11C/X/01 02 S/Aurigny/9876/3000 910</p>	<p>Kovové IBC z oceli pro přepravu tuhých látek, které se vyprazdňují např. samospádem pro obalové skupiny II a III, vyrobená v únoru 1999, schválená v Nizozemsku, vyrobená firmou Mulder podle konstrukčního typu, pro který příslušný orgán přidělil kód 007, použité zatížení při zkoušce stohováním v kg, nejvyšší celková (bto) hmotnost v kg.</p> <p>Flexibilní IBC pro přepravu tuhých látek, vyprazdňované samospádem, vyrobená z plastové tkaniny s vložkou, neurčené pro stohování.</p> <p>IBC z tuhého plastu pro přepravu kapalných látek s konstrukčním vybavením, uzpůsobeným ke stohování.</p> <p>Kompozitní-IBC pro přepravu kapalin s vnitřní nádobou z tuhého plastu s vnějším pláštěm z oceli.</p> <p>IBC z přírodního dřeva pro přepravu tuhých látek s vnitřní vložkou, schválené pro tuhé látky obalové skupiny I.</p>
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6.5.2.2 Doplnkové značení

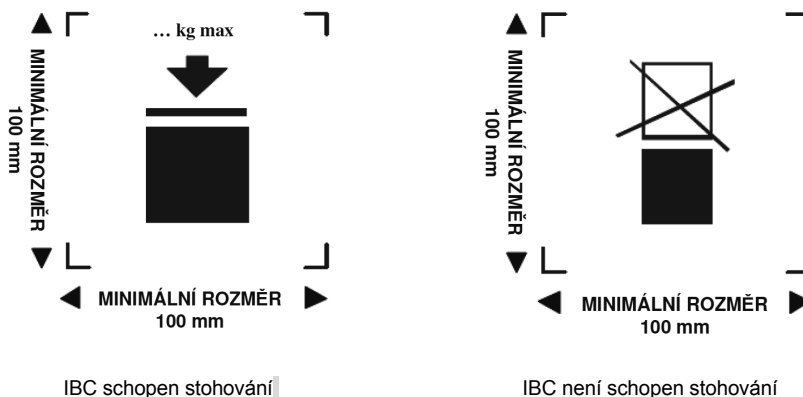
6.5.2.2.1 Každá IBC musí mít značení požadované v 6.5.2.1 a kromě toho následující informace, které mohou být uvedeny na korozi odolném štítku trvale připevněném na místě snadno dostupném pro kontrolu.

Doplnkové značení	Kategorie IBC				
	Kovové	Z tuhého plastu	Kompozitní	Lepenkové	Dřevěné
Vnitřní objem v litrech ^a při 20 °C	X	X	X		
Vlastní hmotnost v kg ^a	X	X	X	X	X
Zkušební (pře)tlak v kPa nebo barech ^a , pokud se na něj vztahuje		X	X		
Nejvýše přípustný plnicí/ vyprazdňovací tlak v kPa nebo barech ^a , pokud se na něj vztahuje	X	X	X		
Materiál tělesa a jeho minimální tloušťka v mm	X				
Datum poslední zkoušky těsnosti, pokud se na něj vztahuje (měsíc a rok)	X	X	X		
Datum poslední inspekce (měsíc a rok)	X	X	X		
Číslo výrobní série	X				
Maximální povolená stohovací zátěž ^b	X	X	X	X	X

^a Používaná jednotka musí být uvedena.

^b Viz 6.5.2.2.2. Toto dodatečné značení se musí použít pro všechny IBC vyrobené, opravené nebo zrekonstruované od 1. ledna 2011 (viz rovněž 1.6.1.15)

6.5.2.2.2 Maximální povolená stohovací zátěž použitelná , pokud je IBC v užívání, musí být znázorněna na znaku následujícím způsobem:



IBC schopen stohování

IBC není schopen stohování

Znak nesmí být menší než 100 mm x 100 mm a musí být trvanlivý a jasně čitelný. Písmena a číslice udávající hmotnost musí být nejméně 12 mm vysoké.

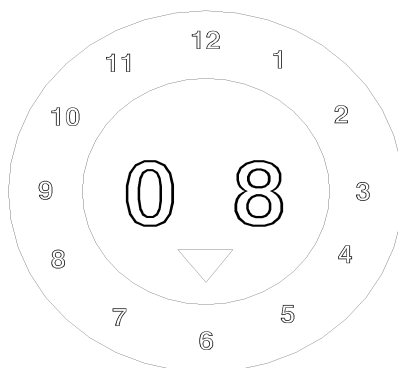
Hmotnost vyznačená nad znakem nesmí překročit zatížení použité při zkoušce konstrukčního typu stohováním (viz 6.5.6.6.4) dělené 1.8.

POZNÁMKA : Ustanovení 6.5.2.2.2 se musí použít pro všechny IBC vyrobené, opravené nebo rekonstruované od 1 ledna 2011 (viz rovněž 1.6.1.15)."

6.5.2.2.3 Kromě označení uvedených v 6.5.2.1 mohou mít flexibilní IBC piktogram označující doporučené zdvihací metody.

6.5.2.2.4 Vnitřní nádoba kompozitních IBC vyrobená po 1. lednu 2011 musí nést označení uvedené v 6.5.2.1.1 (b), (c), (d) kde toto datum udává výrobu vnitřní plastové nádoby, (e) a (f). UN kód obalu nemusí být použit. Značení musí být použito v pořadí uvedeném v 6.5.2.1.1. Musí být trvanlivé, čitelné a umístěno tak, aby bylo dobře viditelné pokud je vnitřní nádoba umístěna uvnitř vnějšího obalu.

Datum výroby vnitřní plastové nádoby může být alternativně označeno na vnitřní nádobě přilehlé k ostatnímu značení. Příklad vhodného způsobu označení je:



6.5.2.2.5 Pokud jsou kompozitní IBC konstruovány takovým způsobem, že vnější plášť je určen k sejmutí při přepravě prázdných IBC (takové jako zpětná přeprava IBC pro opětovné použití původním odesilatelem), každá z odnímatelných částí musí být označena měsícem a rokem výroby a jménem nebo znakem výrobce a dalšími identifikačními údaji IBC stanovenými příslušným orgánem (6.5.2.1.1(f)).

6.5.2.3 Shodnost s konstrukčním typem

Označení IBC UN kódem potvrzuje, že IBC odpovídá s úspěchem ozkoušenému konstrukčnímu typu a že požadavky uvedené v osvědčení byly splněny.

6.5.2.4 Značení rekonstruovaných kompozitních IBC (31HZ1)

Značení specifikované v 6.5.2.1.1 a 6.5.2.2 musí být odstraněno z původního IBC nebo trvale znečitelněno a nové značení musí použito na IBC rekonstruované v souladu s ADR.

6.5.3 Požadavky na konstrukci

6.5.3.1 Obecné požadavky

6.5.3.1.1 IBC musí být odolné, nebo vhodným způsobem chráněny proti degradaci, způsobované okolním prostředím.

6.5.3.1.2 IBC musí být vyrobeny a uzavřeny tak, aby nemohlo dojít k úniku obsahu při normálních podmínkách přepravy, včetně účinku vibrací nebo změn teploty, vlhkosti nebo tlaku.

6.5.3.1.3 IBC a jejich uzávěry musí být zhotoveny z materiálů, snášenlivých s obsahem nebo být zevnitř chráněny, aby nenastalo nebezpečí:

- (a) že budou napadeny obsahem takovým způsobem, který by jejich použitím učinil rizikovým;
- (b) že dojde k reakci nebo rozkladu obsahu, popř. k vytvoření zdraví škodlivých nebo nebezpečných sloučenin, působením obsahu na materiály IBC.

6.5.3.1.4 Byla-li použita těsnění, musí být z materiálu, který nemůže být obsahem IBC napaden.

6.5.3.1.5 Veškerá provozní výstroj musí být umístěna nebo chráněna tak, aby riziko úniku obsahu z důvodu jejího poškození při manipulaci a přepravě bylo minimalizováno.

6.5.3.1.6 IBC, jejich příslušenství a jejich provozní a konstrukční výstroj musí být uzpůsobeny tak, aby odolávaly vnitřnímu přetlaku obsahu bez jeho ztráty a namáhání normální manipulace a přepravy. IBC určené ke stohování musí být pro tento účel konstrukčně přizpůsobeny. Zvedací a bezpečnostní prvky IBC musí být dostatečně pevné, aby odolaly normálním podmínkám manipulace a přepravy bez podstatné deformace nebo poškození; musí být umístěny tak, aby v žádné části IBC nevznikalo nadměrné namáhání.

6.5.3.1.7 Je-li IBC tvořena tělesem nádoby uvnitř rámu, musí být konstruována tak, aby:

- (a) se těleso nádoby netřelo či nedřelo o rám, které by způsobovalo poškození tělesa nádoby,
- (b) těleso nádoby zůstávalo stále zajištěno v rámu,
- (c) části výstroje byly fixovány tak, aby nemohly být poškozeny, jestliže spojení mezi tělesem nádoby a rámem umožňuje rozpínání nebo vzájemný pohyb.

6.5.3.1.8 Je-li použit spodní vypouštěcí ventil, musí být zabezpečen v uzavřené poloze a celý vyprazdňovací systém musí být vhodným způsobem chráněn proti poškození. Ventily s pákovými uzávěry musí být chráněny proti náhodnému otevření, přičemž musí být poloha otevřeno – zavřeno lehce zjištělná. U IBC obsahujících kapalnou látku musí být též dodatkově zařízení k utěsnění vypustního otvoru, např. slepá příruba nebo stejně účinné zařízení.

6.5.4 Zkoušení, certifikace a inspekce

6.5.4.1

Zajištění kvality: IBC musí být vyrobeny, rekonstruovány, opraveny a odzkoušeny podle systému zajištění kvality uznaného příslušným orgánem, aby bylo zajištěno, že každá vyrobená, rekonstruovaná nebo opravená IBC splňuje požadavky této kapitoly.

POZNÁMKA: Norma ISO 16106:2006 "Obaly - Přepravní obaly pro nebezpečné věci - Obaly pro nebezpečné věci, velké nádoby pro volně ložené látky (IBC) a velké obaly - Návody pro aplikaci normy ISO 9001" - poskytuje přijatelný návod pro předepsané postupy.

6.5.4.2

Zkušební požadavky: IBC musí být podrobeny zkouškám konstrukčního typu a prvními a periodickými inspekcemi a zkouškami podle 6.5.4.4, pokud se na ně vztahují.

6.5.4.3

Certifikace: ke každému konstrukčnímu typu IBC musí být vydán atest s povolením označování sériových výrobků UN kódem (jak je uvedeno v 6.5.2.) prokazujícím, že konstrukční typ, včetně své výstroje, splňuje zkušební požadavky.

6.5.4.4

Inspekce a zkouška:

POZNÁMKA: Viz též pododdíl 6.5.4.5. pro prohlídky a zkoušky na opravených IBC

6.5.4.4.1

Aby bylo vyhověno požadavkům příslušného orgánu, musí být každá kovová IBC, IBC z tuhého plastu kompozitní IBC podrobena inspekci.

(a) před uvedením do provozu (jakož i po rekonstrukci) a potom v intervalech nepřekračujících pět let z hlediska:

- (i) shodnosti s konstrukčním typem, včetně značení
- (ii) vnitřního a vnějšího stavu
- (iii) provozuschopnosti provozního výstroje

Pokud je IBC opatřena tepelnou izolací, je třeba ji sejmuti pouze v míře nezbytné. Pro řádné přezkoumání tělesa IBC.

(b) V intervalech nejvýše dvou a půl let z hlediska:

- (i) vnějšího stavu
- (ii) provozuschopnosti provozního výstroje.

Každá IBC musí odpovídat ve všech ohledech svému konstrukčnímu typu.

6.5.4.4.2

Každá kovová IBC, IBC z tuhého plastu a kompozitní IBC určená pro kapaliny nebo určená pro pevné látky plněné nebo vyprazdňované pod tlakem, se musí podrobit vhodné zkoušce těsnosti nejméně stejně účinné jako zkoušce předepsané v 6.5.6.7.3 a musí být schopna splnit úroveň zkoušek Uvedených v 6.5.6.7.3

- (a) předtím nežli je poprvé použit k přepravě
- (b) v intervalech ne více nežli dva a půl roku

Pro tuto zkoušku musí být IBC vybaven primárním uzávěrem dna. Vnitřní nádoba kompozitní IBC může být zkoušena bez vnějšího obalu za předpokladu, že výsledky zkoušek tím nejsou ovlivněny.

6.5.4.4.3

Zpráva o každé inspekci a zkoušce musí být uložena držitelem IBC nejméně do příští inspekce nebo zkoušky. Zpráva musí obsahovat výsledky inspekce a zkoušky a identifikaci subjektu provádějícího inspekci a zkoušku (viz také požadavky na označení v 6.5.2.2.1).

6.5.4.4.4

Příslušný orgán na důkaz, že IBC splňuje požadavky zkoušek konstrukčního typu, může kdykoli požádat přezkoušení IBC zkouškami dle této kapitoly.

6.5.4.5 **Opravené IBC**

6.5.4.5.1 Pokud je IBC poškozena následkem nárazu (např. při nehodě) nebo z jiné příčiny, musí být opravena nebo jinak ošetřena (viz definice „Běžné opravy a údržba IBC“ v 1.2.1), v souladu s konstrukčním typem. Tělesa tuhých plastových IBC a vnitřní nádoby kompozitních IBC, pokud jsou poškozena, musí být nahrazena.

6.5.4.5.2 Navíc k jiným zkouškám a inspekcím, které předepisuje ADR, musí být IBC podrobeny všem zkouškám a inspekcím dle požadavků uvedených v 6.5.4.4 a kdykoli je IBC opravena, musí být vypracován požadovaný protokol.

6.5.4.5.3 Subjekt provádějící zkoušky a inspekce musí IBC po opravě označit trvanlivým způsobem poblíž výrobcem umístěného UN kódu konstrukčního typu, aby byly zřejmé informace:

- (a) stát, ve kterém byly provedeny a inspekce
- (b) název nebo autorizovaný znak subjektu provádějícího zkoušky a inspekce
- (c) datum (měsíc, rok) provedení zkoušek a inspekcí

6.5.4.5.4 Zkoušky a inspekce provedené v souladu s 6.5.4.5.2 mohou být považovány za vyhovující požadavkům pro 2,5 leté a 5 leté periodické zkoušky a inspekce.

6.5.5 **Zvláštní požadavky na IBC**

6.5.5.1 **Zvláštní požadavky na kovové IBC**

6.5.5.1.1 Tyto požadavky se vztahují na kovové IBC určené pro přepravu tuhých látek a kapalin. Existují tři kategorie kovových IBC:

- (a) IBC pro tuhé látky, které jsou plněny a vyprazdňovány samospádem (11A, 11B, 11N);
- (b) IBC pro tuhé látky, které jsou plněny a vyprazdňovány přetlakem větším než 10 kPa (0,1 baru) (21A, 21B, 21N); a
- (c) IBC pro kapaliny (31A, 31B, 31N).

6.5.5.1.2 Tělesa IBC musí být zhotovena z vhodných tvárných kovových materiálů s prokázanou svařitelností. Svary musí být provedeny odborně a musí poskytovat dokonalou bezpečnost. Musí se brát v úvahu provedení pro nízkou teplotu, pokud je to vhodné.

6.5.5.1.3 Musí se dbát na to, aby se zabránilo poškození galvanickým účinkem, vyvolaným těsným stykem různých kovů.

6.5.5.1.4 IBC z hliníku pro přepravu hořlavých kapalných látek nesmějí mít žádné pohyblivé části, jako víka, uzávěry atd., z nechráněné - rezavějící oceli, které by mohly vyvolat nebezpečnou reakci při styku s hliníkem třením nebo nárazem.

6.5.5.1.5 Kovové IBC musí být zhotoveny z kovů vyhovujících těmto požadavkům:

- (a) u oceli nesmí prodloužení po přetržení v procentech činit méně než

$$\frac{10000}{R_m} \text{ s absolutním minimem } 20 \%$$

kde R_m = zaručená minimální pevnost v tahu použité oceli v N/mm^2 .

- (b) u hliníku a jeho slitin nesmí prodloužení po přetržení v procentech činit méně než

$$\frac{10000}{6R_m} \text{ s absolutním minimem } 8 \%$$

Zkušební vzorky použité pro stanovení prodloužení po přetržení musí být odebrány kolmo ke směru válcování a být upevněny tak, aby

$$L_0 = 5d \quad \text{nebo}$$

$$L_0 = 5,65 \sqrt{A},$$

kde: L_0 = měřená délka zkušební vzorku před zkouškou

d = průměr

A = plocha průřezu zkušební vzorku

6.5.5.1.6 Nejmenší tloušťka stěny

- (a) u referenční oceli se součinem $R_m \times A_0 = 10\,000$ nesmí tloušťka stěn činit méně než:

Vnitřní objem (C) v litrech	Tloušťka stěny (T) v mm			
	Typy 11A, 11B, 11N		Typy 21A, 21B, 21N, 31A, 31B, 31N	
	Nechráněná	Chráněná	Nechráněná	Chráněná
$C \leq 1000$	2,0	1,5	2,5	2,0
$1000 < C \leq 2000$	$T = C/2000 + 1,5$	$T = C/2000 + 1,0$	$T = C/2000 + 2,0$	$T = C/2000 + 1,5$
$2000 < C \leq 3000$	$T = C/2000 + 1,5$	$T = C/2000 + 1,0$	$T = C/1000 + 1,0$	$T = C/2000 + 1,5$

kde: A_0 = minimální prodloužení (v procentech) použité referenční oceli při přetržení při namáhání v tahu (viz 6.5.5.1.5);

- (b) u jiných kovů než u referenční oceli uvedené pod bodem (a) se nejmenší tloušťka stěny vypočítá podle tohoto vzorce:

$$e_1 = \frac{21,4 \times e_0}{\sqrt[3]{R_{m1} \times A_1}}$$

kde e_1 = požadovaná ekvivalentní tloušťka stěny použitého kovu (v mm);

e_0 = požadovaná nejmenší tloušťka stěny pro referenční ocel (v mm);

R_{m1} = zaručená minimální pevnost v tahu použitého kovu (v N/mm^2) (viz (c))

A_1 = minimální prodloužení (v procentech) použitého kovu při přetržení při namáhání v tahu (viz 6.5.5.1.5).

Tloušťka stěny však v žádném případě nesmí činit méně než 1,5 mm.

- (c) Pro účely výpočtu uvedeného v odstavci b) zaručená minimální pevnost v tahu použitého kovu (R_{m1}) musí mít minimální hodnotu podle národních a mezinárodních materiálových norem. Avšak pro austenitické oceli může být stanovená hodnota pro R_m zvýšena až o 15 %, jestliže je v materiálovém kontrolním osvědčení ověřena vyšší hodnota. Pokud neexistuje žádná materiálová norma pro dotčený materiál, hodnota R_m musí být minimální hodnotou ověřenou v materiálovém kontrolním osvědčení.

6.5.5.1.7

Zařízení pro vyrovnávání tlaku: IBC určené k přepravě kapalných látek musí umožňovat odvádění dostatečného množství par, aby tím bylo zajištěno, že při působení ohně nedojde k prasknutí tělesa nádoby. Toho může být dosaženo běžnými zařízeními pro vyrovnání tlaku nebo jinými konstrukčními prostředky. Spouštěcí tlak nesmí být vyšší než 65 kPa (0,65 baru) a ne nižší než zjištěný celkový přetlak v IBC (tzn. součet tenze par plněné látky a parciálního tlaku vzduchu nebo jiných inertních plynů zmenšený o 100 kPa (1 bar) zjištěný na základě nejvyššího stupně plnění při 55 °C

uvedeného v 4.1.1.4. Potřebná zařízení pro zajištění vyrovnání tlaku musí být umístěna v části nádoby, kde zůstává plynná fáze.

6.5.5.2 Zvláštní ustanovení pro flexibilní IBC

6.5.5.2.1 Tyto požadavky se vztahují na flexibilní IBC těchto typů:

- 13H1 plastová tkanina bez vnitřního povlaku nebo vnitřní vložky
- 13H2 plastová tkanina s vnitřním povlakem
- 13H3 plastová tkanina s vnitřní vložkou
- 13H4 plastová tkanina s vnitřním povlakem a vnitřní vložkou
- 13H5 plastová fólie
- 13L1 textilní tkanina bez vnitřního povlaku nebo vnitřní vložky
- 13L2 textilní tkanina s vnitřním povlakem
- 13L3 textilní tkanina s vnitřní vložkou
- 13L4 textilní tkanina s vnitřním povlakem a vnitřní vložkou
- 13M1 papír, vícevrstvý
- 13M2 papír, vícevrstvý, vodovzdorný

Flexibilní IBC jsou určeny pouze pro přepravu tuhých látek.

6.5.5.2.2 Tělesa musí být zhotovena z vhodných materiálů. Pevnost materiálů a konstrukce flexibilní IBC musí být přizpůsobena vnitřnímu objemu flexibilní IBC a jejímu předpokládanému použití.

6.5.5.2.3 Všechny materiály použité při výrobě flexibilních IBC typu 13M1 a 13M2 si musí po úplném ponoření do vody po dobu nejméně 24 hodin zachovat ještě nejméně 85 % pevnosti v tahu, měřené původně po kondicionování materiálu do rovnovážného stavu při relativní vlhkosti rovnající se nebo menší než 67 %.

6.5.5.2.4 Spoje musí být šité, tepelně svařené, lepené nebo provedeny jiným rovnocenným postupem. Všechny konce šitých spojů musí být zabezpečeny (před uvolněním švu).

6.5.5.2.5 Flexibilní IBC musí mít dostatečnou odolnost proti stárnutí a poklesu pevnosti, způsobené ultrafialovými paprsky, klimatickými podmínkami nebo plněnými látkami, aby byly vhodné pro předpokládané použití.

6.5.5.2.6 U flexibilních plastových IBC z plastu, který musí být chráněn proti ultrafialovému záření, musí být tato ochrana provedena přidáním sazí nebo jiných vhodných pigmentů nebo inhibitorů do materiálu. Tyto přísady musí být snášitelné s obsahem a musí si zachovat svoji účinnost po celou dobu životnosti nádoby. Při použití sazí, pigmentů nebo inhibitorů, které se liší od těch, které byly použity pro výrobu zkoušeného konstrukčního typu, může být od opakování zkoušek upuštěno, nebude-li mít změněný obsah sazí, pigmentů nebo inhibitorů nepříznivý vliv na fyzikální vlastnosti konstrukčního materiálu.

6.5.5.2.7 Ke zlepšení odolnosti proti stárnutí nebo pro jiné účely, mohou být do materiálu tělesa přimíseny přísady za předpokladu, že tyto přísady nebudou mít nepříznivý vliv na fyzikálně-chemické vlastnosti materiálu.

6.5.5.2.8 Při výrobě těles nádob IBC nesmí být použit materiál z již použitých nádob. Zbytky při výrobě nebo odpady ze stejného výrobního procesu však smějí být použity. Toto však nemá vyloučit opětné použití jednotlivých částí, jako např. upevňovacích částí a podstavců palet za předpokladu, že tyto části nebyly při svém předchozím použití žádným způsobem poškozeny.

6.5.5.2.9 V naplněném stavu nesmí poměr výšky k šířce činit více než 2:1.

6.5.5.2.10 Vnitřní vložka musí být zhotovena z vhodného materiálu. Pevnost použitého materiálu a konstrukce vnitřní vložky musí být přiměřená vnitřnímu objemu IBC a předpokládanému použití. Spoje a uzávěry musejí být prachotěsné a schopné odolat tlaku a nárazům, které vznikají za normálních podmínek manipulace a přepravy.

6.5.5.3 Zvláštní ustanovení pro IBC z tuhého plastu

6.5.5.3.1 Tyto požadavky se vztahují na IBC z tuhého plastu pro přepravu tuhých látek nebo kapalin. IBC jsou těchto typů:

- 11H1 opatřené konstrukční výstrojí (rámem) odolávající plnému zatížení při stohování, pro tuhé látky, plněné a vyprazdňované samospádem
- 11H2 samonosné, pro tuhé látky, plněné a vyprazdňované samospádem
- 21H1 opatřené konstrukční výstrojí (rámem) odolávající plnému zatížení při stohování, pro tuhé látky, plněné a vyprazdňované pod tlakem
- 21H2 samonosné, pro tuhé látky, plněné a vyprazdňované pod tlakem
- 31H1 opatřené konstrukční výstrojí (rámem) odolávající plnému zatížení při stohování, pro kapaliny.
- 31H2 samonosné, pro kapaliny.

6.5.5.3.2 Těleso nádoby musí být zhotoveno z vhodného plastu známé specifikace. Pevnost materiálu a konstrukce musí být přizpůsobeny vnitřnímu objemu IBC a jejímu předpokládanému použití. Materiál musí být přiměřeným způsobem odolný proti stárnutí a ovlivnění plněnými látkami a popřípadě také odolávat ultrafialovému záření. Odolnost vůči nízké teplotě je nutno vzít v úvahu pokud je to účelné. Za normálních přepravních podmínek nesmí docházet k propouštění obsahu.

6.5.5.3.3 Je-li nutná ochrana proti ultrafialovým paprskům, musí se provést přidáním sazí nebo jiných vhodných pigmentů nebo inhibitorů. Tyto přísady musí být snášitelné s obsahem a musí si zachovat svoji účinnost po celou dobu životnosti tělesa nádoby. Při použití sazí, pigmentů nebo inhibitorů, které se liší od těch, které byly použity pro výrobu zkoušeného konstrukčního typu, může být od opakování zkoušek upuštěno, nebude-li mít změněný obsah sazí, pigmentů nebo inhibitorů nepříznivý vliv na fyzikálně - chemické vlastnosti materiálu.

6.5.5.3.4 Ke zlepšení odolnosti proti stárnutí nebo pro jiné účely mohou být do materiálu tělesa nádoby přimíseny přísady za předpokladu, že tyto přísady nebudou mít nepříznivý vliv na fyzikálně-chemické vlastnosti materiálu.

6.5.5.3.5 Pro výrobu IBC z tuhého plastu nesmí být použit odpadní materiál jiný než rozemleté zbytky z téhož výrobního procesu.

6.5.5.4 Zvláštní ustanovení pro kompozitní IBC s vnitřní plastovou nádobou

6.5.5.4.1 Tyto požadavky se vztahují na kompozitní IBC pro přepravu tuhých látek nebo kapalin těchto typů:

- 11HZ1 kompozitní IBC s tuhou plastovou vnitřní nádobou pro tuhé látky plněné a vyprazdňované samospádem
- 11HZ2 kompozitní IBC s flexibilní plastovou vnitřní nádobou, pro tuhé látky plněné a vyprazdňované samospádem
- 21HZ1 kompozitní IBC s tuhou plastovou vnitřní nádobou, pro tuhé látky plněné a vyprazdňované pod tlakem
- 21HZ2 kompozitní IBC s flexibilní plastovou vnitřní nádobou, pro tuhé látky plněné a vyprazdňované pod tlakem
- 31HZ1 kompozitní IBC s tuhou plastovou vnitřní nádobou pro kapaliny
- 31HZ2 kompozitní IBC s flexibilní plastovou vnitřní nádobou pro kapaliny.

Tento kód musí být upraven nahrazením písmene Z velkým písmenem podle 6.5.1.4.1 b) k vyznačení druhu materiálu vnějšího pláště.

6.5.5.4.2 Vnitřní nádoba bez svého vnějšího pláště není určena k tomu, aby vykonávala obalovou funkci. „Tuhá“ vnitřní nádoba je nádoba, které zůstává její tvar, pokud je prázdná s umístěnými uzávěry a bez podpory vnějšího zajištění. Jakákoli vnitřní nádoba, pokud není „tuhá“, je považována za „flexibilní“.

6.5.5.4.3 Vnější plášť sestává zpravidla z tuhého materiálu formovaného tak, aby chránil vnitřní nádobu před fyzickým poškozením při manipulaci a přepravě, avšak není určen k tomu, aby zastával funkci obalu. Pokud je to vhodné, zahrnuje vnější plášť základní paletu.

6.5.5.4.4 Kompozitní IBC s plně uzavřeným vnějším pláštěm je nutno konstruovat tak, aby bylo možno snadno posoudit stav vnitřní nádoby ve spojení se zkouškami těsnosti a hydraulickými tlakovými zkouškami.

- 6.5.5.4.5** Nejvyšší vnitřní objem IBC typu 31HZ2 smí být nejvýše 1250 litrů.
- 6.5.5.4.6** Vnitřní nádoba musí být vyrobena z vhodného plastu známé specifikace. Pevnost materiálu a konstrukce musí být přizpůsobeny vnitřnímu objemu IBC a jejímu předpokládanému použití. Materiál musí být přiměřeně odolný proti stárnutí a ovlivnění plněnými látkami a popřípadě také odolávat ultrafialovým paprskům. Musí se brát v úvahu provedení pro nízkou teplotu, pokud je to vhodné. Za normálních přepravních podmínek nesmí docházet k propouštění obsahu.
- 6.5.5.4.7** Je-li nutná ochrana proti ultrafialovým paprskům, musí se provést přidáním sazí nebo jiných vhodných pigmentů nebo inhibitorů. Tyto přísady musí být snášitelné s obsahem a musí si zachovat svoji účinnost po celou dobu životnosti tělesa nádoby. Při použití sazí, pigmentů nebo inhibitorů, které se liší od těch, které byly použity pro výrobu odzkoušeného konstrukčního typu, může být od opakování zkoušek upuštěno, nebude-li mít změněný obsah sazí, pigmentů nebo inhibitorů nepříznivý vliv na fyzikální vlastnosti materiálu.
- 6.5.5.4.8** Ke zlepšení odolnosti proti stárnutí nebo pro jiné účely mohou být do materiálu tělesa nádoby přimíseny přísady za předpokladu, že tyto přísady nebudou mít nepříznivý vliv na fyzikální - chemické vlastnosti materiálu.
- 6.5.5.4.9** Pro výrobu vnitřních nádob nesmí být použit odpadní materiál jiný než rozemleté zbytky z téhož výrobního procesu.
- 6.5.5.4.10** Vnitřní nádoba IBC typu 31HZ2 musí být tvořena nejméně třemi vrstvami.
- 6.5.5.4.11** Pevnost materiálu a konstrukce vnějšího zajištění (obalu) musí být přizpůsobeny vnitřnímu objemu kompozitní IBC a jejímu použití.
- 6.5.5.4.12** Vnější plášť nesmí mít žádné vyčnívající části, které by mohly poškodit vnitřní nádobu.
- 6.5.5.4.13** Kovový vnější plášť musí být vyroben z vhodného materiálu odpovídající tloušťky.
- 6.5.5.4.14** Vnější plášť z přírodního dřeva musí být z vyzrálého, suchého a bezvadného dřeva, aby se zabránilo tomu, že bude ovlivněna pevnost jeho částí. Horní a spodní části mohou být z vodovzdorných materiálů rekonstituovaného dřeva, jako dřevovláknitých desek, dřevotřískových desek nebo z jiných vhodných materiálů.
- 6.5.5.4.15** Vnější plášť z překližky musí být vyroben z dobře vyzrálé loupáné nebo řezané dýhy, suché a bez vad, které by mohly podstatně ovlivnit pevnost pláště. Jednotlivé vrstvy musí být dobře slepeny vodovzdorným lepidlem. Při výrobě vnějšího pláště mohou být spolu s překližkou použity také jiné vhodné materiály. Vnější plášť musí být pevně spojen hřebíky nebo díly, musí být upevněny na rohových sloupcích nebo zakončeních nebo kompletován jinými rovnocennými prostředky.
- 6.5.5.4.16** Stěny vnějšího pláště z rekonstituovaného dřeva musí být z vodovzdorných materiálů, jako dřevotřískových nebo dřevovláknitých desek nebo jiných vhodných materiálů stejného druhu. Ostatní části pláště smí být vyrobeny z jiných vhodných materiálů.
- 6.5.5.4.17** Lepenkový vnější plášť musí být vyroben z hladké lepenky nebo ze tří a vícevrstvé vlnité lepenky dobré kvality, odpovídající vnitřnímu objemu a účelu použití. Odolnost vnějšího povrchu proti vodě musí být taková, aby zvýšení hmotnosti po dobu 30 minut trvajících zkoušky na absorpci vody dle metody Cobb nečinila více než 155 g/m^2 (viz ISO 535:1991). Lepenka musí mít vhodnou pevnost v ohybu. Lepenka musí být formátována bez narušení a rylována tak, aby se při sestavení nelámala, její povrch se nenarušil a aby se příliš neprohýbal. Vlny vlnité lepenky musejí být pevně slepeny s vnější vrstvou.
- 6.5.5.4.18** Vnější hrany lepenkového pláště mohou mít dřevěný rám nebo být úplně ze dřeva. Pro zesílení mohou být použity dřevěné lišty.
- 6.5.5.4.19** Tovární hrany lepenkového vnějšího pláště musí být spojeny lepící páskou, přeplátovány a slepeny nebo sešity kovovými sponami. U přeplátovaných spojů musí být přesah přiměřeně široký. Jestliže uzávěr je proveden slepením nebo lepící páskou, musí být lepidlo vodovzdorné.
- 6.5.5.4.20** Jestliže je vnější plášť z plastu, vztahují se na něj odpovídající požadavky uvedené v 6.5.5.4.6 až 6.5.5.4.9, přičemž v tomto případě se požadavky na vnitřní nádoby vztahují i na vnější plášť kompozitních IBC.

- 6.5.5.4.21** Vnější plášť IBC typu 31HZ2 musí plně obklopotvat vnitřní nádobu ze všech stran.
- 6.5.5.4.22** Každé integrální paletové dno, které patří k IBC, nebo odnímatelná paleta musí umožňovat mechanickou manipulaci IBC s náplní na nejvyšší dovolenou celkovou (břto) hmotnost).
- 6.5.5.4.23** Paletu nebo integrální dno je nutno konstruovat tak, aby byly bez výčnělků, které by mohly při manipulaci způsobit porušení spodku nádoby IBC.
- 6.5.5.4.24** Vnější plášť s odnímatelnou paletou musí být bezpečně spojeny, aby byla zajištěna stabilita při manipulaci a přepravě. Použije-li se odnímatelná paleta musí být její povrch zbaven ostrých, vyčnívajících částí, které by mohly IBC poškodit.
- 6.5.5.4.25** Zesilovací prvky pro zvýšení stohovací pevnosti, jako dřevěné podpěry, musí být umístěny vně vnitřní nádoby.
- 6.5.5.4.26** Pokud jsou IBC určeny ke stohování, musí být nosná plocha vytvořena tak, aby zatížení bylo bezpečně rozloženo. Tyto IBC musí být konstruovány tak, aby zátěž nebyla nesena vnitřní nádobou.
- 6.5.5.5** ***Zvláštní ustanovení pro lepenkové IBC***
- 6.5.5.5.1** Tyto požadavky se vztahují na IBC z lepenky pro přepravu tuhých látek, které se plní a vyprazdňují samospádem. IBC z lepenky jsou typu 11G.
- 6.5.5.5.2** IBC z lepenky nesmějí být opatřeny úchyty pro zvedání shora.
- 6.5.5.5.3** Těleso nádoby musí být vyrobeno ze silné hladké lepenky nebo tří a vícevrstvé vlnité lepenky (s jednou nebo více zvlněnými vrstvami) dobré jakosti, přizpůsobených vnitřnímu objemu IBC a předpokládanému použití. Odolnost vnější plochy proti vodě musí být taková, aby zvětšení hmotnosti během 30 minut trvajících zkoušky absorpce vody podle metody Cobb nečinilo více než 155 g/m² (viz ISO 535:1991). Lepenka musí mít vhodnou pevnost v ohybu. Lepenka musí být formátována bez porušení a rolována tak, aby se při sestavení nelámala, její povrch nepraskal a aby se nepatříčně neprohýbala. Vlny vlnité lepenky musí být pevně slepeny s vnější vrstvou.
- 6.5.5.5.4** Stěny včetně víka a dna musí mít minimální pevnost proti proražení 15 J, měřenou podle ISO 3036:1975.
- 6.5.5.5.5** Výrobní hrany tělesa nádoby je nutno opatřit vhodným přeplátováním a spojit použitím lepicí pásky, zalepením, sešitím kovovými sponami nebo jinými spojovacími systémy s minimálně stejnou účinností. Jestliže se spojení provádí zalepením nebo použitím lepicí pásky, musí se použít vodovzdorné lepidlo. Kovové spony musí prošívat všechny spojované díly a musí se použít ochrana tak, aby vnitřní vložka jimi nemohla být podřena či propíchnuta.
- 6.5.5.5.6** Vnitřní vložka musí být vyrobena z vhodného materiálu. Odolnost použitého materiálu a konstrukce vložky musí být přizpůsobena vnitřnímu objemu IBC a předpokládanému použití. Spoje a uzávěry musí být prachotěsné a schopné odolávat tlakům a nárazům, které mohou nastat za normálních manipulačních a přepravních podmínek.
- 6.5.5.5.7** Jakýkoliv integrální paletový podstavec, který patří k IBC, nebo odnímatelná paleta musí být uzpůsobené pro mechanickou manipulaci IBC po naplnění na nejvyšší dovolenou celkovou hmotnost.
- 6.5.5.5.8** Paletu nebo integrální podstavec je nutno konstruovat tak, aby styčná plocha s nádobou IBC byla bez výčnělků, které by při manipulaci mohly způsobit škody.
- 6.5.5.5.9** Těleso nádoby je nutno spojit s jakoukoliv odnímatelnou paletou tak, aby byla zajištěna stabilita při manipulaci a přepravě. Horní povrch odnímatelné palety, musí být zbaven ostrých vyčnívajících částí, které by mohly IBC poškodit.
- 6.5.5.5.10** Zesilovací prvky ke zvýšení stohovací odolnosti, jako dřevěné podpěry, smějí být použity, ale musí být umístěny vně vnitřní vložky.
- 6.5.5.5.11** Pokud jsou IBC určeny pro stohování, musí být nosná plocha vytvořena tak, aby zatížení bylo bezpečně rozděleno.

6.5.5.6 Zvláštní ustanovení pro dřevěné IBC

6.5.5.6.1 Tyto požadavky se vztahují na IBC ze dřeva pro přepravu tuhých látek, plněných a vyprazdňovaných samospádem. IBC ze dřeva jsou těchto typů:

- 11C Přírodní dřevo s vnitřní vložkou
- 11D Překližka s vnitřní vložkou
- 11F Rekonstituované dřevo s vnitřní vložkou

6.5.5.6.2 IBC ze dřeva nesmějí být opatřeny úchyty pro zvedání shora.

6.5.5.6.3 Odolnost použitých materiálů a druh konstrukce musí být přizpůsobeny vnitřnímu objemu a účelu použití IBC.

6.5.5.6.4 Přírodní dřevo musí být dobře vyztřelé, suché a bez vad, aby se zabránilo snížení odolnosti každého jednotlivého dílu IBC. Každý díl IBC musí sestávat z jednoho kusu (plnostěnný) nebo mu být rovnocenný. Díly (z přířezů) se považují za rovnocenné jednomu kusu, použije-li se vhodná metoda lepených spojů (jako např. Lindermanovo spojení - rybinový spoj, na pero a drážku, spojení na polodrážku nebo na tupý spoj s nejméně dvěma zvlněnými kovovými upevňovacími prvky pro každý spoj, nebo jiné nejméně stejně účinné metody.

6.5.5.6.5 Překližková tělesa nádob musí být minimálně z třívrstvé překližky. Musí být vyrobena z dobře vyztřelé rotačně loupané, nebo řezané dýhy, suché a bez vad, které by mohly podstatně ovlivnit pevnost tělesa nádoby. Jednotlivé vrstvy musí být slepeny vodovzdorným lepidlem. Při výrobě těles nádob mohou být spolu s překližkou použity také jiné vhodné materiály.

6.5.5.6.6 Tělesa nádob z rekonstituovaného dřeva musí být z vodovzdorných materiálů jako např. dřevotřískových nebo dřevovláknitých desek nebo jiných vhodných materiálů stejného typu.

6.5.5.6.7 Díly IBC musí být v hranových a rohových spojech pevně sbity hřebíky nebo kompletovány jiným vhodným způsobem.

6.5.5.6.8 Vnitřní vložka musí být zhotovena z vhodného materiálu. Pevnost použitého materiálu a konstrukce vnitřní vložky musí být přiměřena vnitřnímu objemu IBC a předpokládanému použití. Spoje a uzávěry musejí být prachotěsné a schopné odolat tlaku a nárazům, které vznikají za normálních podmínek manipulace a přepravy.

6.5.5.6.9 Integrovaný paletový podstavec, který patří k IBC, nebo odnímatelná paleta musí být uzpůsobeny k mechanické manipulaci IBC po naplnění na nejvyšší dovolenou celkovou hmotnost.

6.5.5.6.10 Paletu nebo integrovaný podstavec je nutno konstruovat tak, aby spodek IBC byl bez výčnělků, které by mohly při manipulaci způsobit poškození.

6.5.5.6.11 Těleso musí být spojeno s odnímatelnou paletou, aby byla zajištěna stabilita při manipulaci a přepravě. Použije-li se odnímatelná paleta, musí být její povrch zbaven ostrých, vyčnívajících částí, které by mohly IBC poškodit.

6.5.5.6.12 Zesilovací přípravky pro zvýšení stohovací pevnosti, jako dřevěné podpěry, mohou být použity, musí být ale umístěny vně vnitřní vložky.

6.5.5.6.13 Pokud je IBC určena pro stohování, musí být nosná plocha utvořena tak, aby zatížení bylo bezpečně rozloženo.

6.5.6 Požadavky na zkoušky IBC

6.5.6.1 Provedení a četnost zkoušek

6.5.6.1.1 Každý konstrukční typ IBC musí úspěšně vyhovět zkouškám předepsaným v této Kapitole před jeho použitím a před schválením příslušným orgánem povolujícím umístění značky. Konstrukční typ IBC je určen konstrukcí, velikostí, materiálem a tloušťkou stěn, způsobem výroby a plnicím a vyprazdňovacím zařízením; může mít ale různé povrchové úpravy. Zahnutý jsou rovněž IBC, které se od konstrukčního typu liší pouze menšími vnějšími rozměry.

6.5.6.1.2 Zkoušky musí být prováděny na IBC připravených k přepravě. IBC musí být plněny podle údajů pro různé zkoušky. Látky, určené k přepravě mohou být nahrazeny náhradní náplní, pokud se tím nezkrusí výsledek zkoušek. Jestliže tuhé látky budou nahrazeny jinými látkami, musí mít tyto stejné fyzikální vlastnosti (hmotnost, velikost zrna a pod.) jako látky určené k přepravě. Je přípustné použít dodatečná závaží, jako sáčky s olověným šrotem, aby bylo dosaženo potřebné celkové hmotnosti kusů, pokud jsou vloženy tak, aby neovlivnily výsledek zkoušek.

6.5.6.2 Zkoušky konstrukčního typu

6.5.6.2.1 Jedna IBC každého konstrukčního typu, rozměru, tloušťky stěny a způsobu konstrukce musí být podrobena zkouškám v pořadí uvedeném v 6.5.6.3.7 a jak je uvedeno v 6.5.6.4 až 6.5.6.13. Tyto zkoušky konstrukčního typu musí být provedeny podle požadavku příslušného orgánu.

6.5.6.2.2 Aby se prokázala dostatečná chemická snášenlivost s obsaženými věcmi nebo se standardními kapalinami podle 6.5.6.3.3, nebo 6.5.6.3.5 pro IBC z tuhého plastu typu 31H2 a pro kompozitní IBC typů 31HH1 a 31HH2, pokud jsou IBC navrženy pro stohování, může se použít druhá IBC. V tomto případě musí být obě IBC podrobena předchozímu skladování.

6.5.6.2.3 Příslušný orgán může povolit selektivní zkoušení IBC, které se pouze nepatrně liší od již schváleného typu, např. malými zmenšeními vnějších rozměrů.

6.5.6.2.4 Pokud jsou používány odnímatelné palety při těchto zkouškách, zkušební protokol vydaný podle 6.5.6.14 musí zahrnovat technický popis použitých palet.

6.5.6.3 Příprava IBC ke zkouškám

6.5.6.3.1 Papírové a lepenkové IBC a kompozitní IBC s vnějším lepenkovým pláštěm se musí kondicionovat nejméně 24 hodin v atmosféře s řízenou teplotou a relativní vlhkostí. Jsou tři možnosti, z nichž je nutné zvolit jednu. Přednostní atmosféra je 23 ± 2 °C a 50 ± 2 % relativní vlhkosti. Dvě další možnosti jsou 20 ± 2 °C a 65 ± 2 % relativní vlhkosti, nebo 27 ± 2 °C a 65 ± 2 % relativní vlhkosti.

POZNÁMKA: Průměrné hodnoty musí být uvnitř tohoto tolerančního rozmezí. Krátkodobé výkyvy a omezení měření mohou způsobit, že jednotlivá měření se mohou pohybovat v rozmezí ± 5 % relativní vlhkosti bez významného vlivu na zhoršení reprodukovatelnosti zkoušky.

6.5.6.3.2 Dále musí být zjištěno, zda plasty použité při výrobě IBC z tuhého plastu (typů 31H1 a 31H2) a kompozitních IBC (typů 31HZ1 a 31HZ2) odpovídají požadavkům v 6.5.5.3.2 až 6.5.5.3.4 a 6.5.5.4.6 až 6.5.5.4.9.

6.5.6.3.3 Na důkaz dostatečné chemické snášenlivosti s plněnými látkami musí být vzorky IBC po dobu šesti měsíců podrobena předběžnému skladování. Po tuto dobu zůstanou vzorky IBC naplněné látkami, které mají být přepravovány, nebo látkami, které mají nejméně stejné vlivy, a to vlivy způsobující trhliny prnutí, zmenšování odolnosti a degradační vlivy na molekuly plastu, potom se vzorky podrobí vhodným zkouškám uvedeným v tabulce v 6.5.6.3.7.

6.5.6.3.4 V případě, že chování plastů bylo prokázáno nějakým jiným postupem, může být od výše uvedených zkoušek snášenlivosti upuštěno. Takové postupy musí být výše uvedené zkoušky snášenlivosti nejméně rovnocenné a musí být uznány příslušným orgánem.

6.5.6.3.5 Pro polyethylenové IBC z pevného plastu (typy 31H1 a 31H2) v souladu s pododdílem 6.5.5.3 a kompozitní IBC s polyethylenovou vnitřní nádobou (typy 31HZ1 a 31HZ2) v souladu s pododdílem 6.5.5.4 může být chemická snášenlivost s plnicími materiály podle pododdílu 4.1.1.21 prokázána následujícím způsobem se standardními kapalinami (viz oddíl 6.1.6)

Standardní kapaliny jsou představiteli pro procesy zhoršování vlastností polyetylenu protože vlivem bobtnání dochází k měknutí, k popraskání vlivem napětí, k molekulární degradaci a ke kombinaci těchto vlivů.

Dostatečná chemická snášenlivost IBC může být prokázána skladováním požadovaných zkušebních vzorků po dobu tří týdnů při teplotě 40°C s příslušnou standardní kapalinou (kapalinami). Tam kde je standardní kapalinou voda, se skladování podle tohoto postupu nevyžaduje.

Skladováním se vyžaduje buďto pro zkušební vzorky, které se používají pro zkoušku stohováním v případě standardních kapalin smáčecího roztoku a kyseliny octové. Po tomto skladování musí zkušební vzorky podstoupit zkoušky předepsané v 6.5.6.4 až 6.5.6.9.

Zkouška snášenlivosti pro terc.-butylhydroperoxid s obsahem více nežli 40 % peroxidu a kyseliny peroxyoctové třídy 5.2 nesmí být prováděna (s) použitím standardních kapalin. Pro tyto látky musí být poskytnut důkaz o dostatečné chemické snášenlivosti zkušebních vzorků s látkami, které jsou určeny k přepravě během skladování po dobu šesti měsíců při pokojové teplotě.

Výsledky postupu podle tohoto odstavce s IBC z polyetylenu mohou být uznány pro stejný konstrukční typ, jehož vnitřní povrch je fluorován.

6.5.6.3.6 Pro konstrukční typy IBC vyrobené z polyetylenu jak je specifikován v 6.5.6.3.5 může být chemická snášenlivost s plnicími látkami prokázána rovněž laboratorními zkouškami za předpokladu, že vliv těchto plnicích látek na zkušební vzorky je menší, než vliv příslušné standardní kapaliny (kapalin) s přihlédnutím k významným zhoršujícím procesům. Pokud se týká relativní hustoty a tenze par musí se používat stejné podmínky jak je uvedeno v 4.1.1.21.2.

6.5.6.3.7 *Požadované zkoušky konstrukčního typu a jejich pořadí*

Typ IBC	Vibrace ^f	Zdvih zdola	Zdvih shora ^a	Stohování ^b	Těsnost	Hydraulický tlak	Volný pád	Roztržení	Pád z překlopení	Vztyčování
Kovové 11A, 11B, 11N 21A, 21B, 21N 31A, 31B, 31N	- - 1.	1. ^a 1. ^a 2. ^a	2. 2. 3.	3. 3. 4.	- 4. 5.	- 5. 6.	4. ^e 6. ^e 7. ^e	-	-	-
Flexibilní ^d	-	-	x ^c	x	-	-	x	X	x	X
Tuhý plast 11H1, 11H2 21H1, 21H2 31H1, 31H2	- - 1.	1. ^a 1. ^a 2. ^a	2. 2. 3.	3. 3. 4. ^g	- 4. 5.	- 5. 6.	4. 6. 7.	-	-	-
Kompozitní 11HZ1,11HZ2 21HZ1,21HZ2 31HZ1,31HZ2	- - 1.	1. ^a 1. ^a 2. ^a	2. 2. 3.	3. 3. 4. ^g	- 4. 5.	- 5. 6.	4. ^e 6. ^e 7. ^e	-	-	-
Lepenkové		1.	-	2.	-	-	3.	-	-	-
Dřevěné		1.	-	2.	-	-	3.	-	-	-

^a Pokud jsou IBC konstruovány pro tento způsob manipulace.

^b Pokud jsou IBC konstruovány pro stohování.

^c Pokud jsou IBC konstruovány pro zdvih shora nebo ze strany.

^d Požadovaná zkouška označená x; IBC, která prošla jednou zkouškou, může být použita pro další zkoušku v jakémkoli pořadí.

^e Jiná IBC stejné konstrukce může být použita pro zkoušku volným pádem.

^f Pro zkoušku vibrací může být použit jiný IBC stejného konstrukčního typu

^g Druhá IBC podle 6.5.6.2.2 může být použita mimo uvedené pořadí bezprostředně po předběžném skladování.

6.5.6.4 Zkouška zdvihem zdola

6.5.6.4.1 Rozsah použití

Pro všechny lepenkové a dřevěné IBC a pro všechny typy IBC, které jsou opatřeny zařízením pro zdvih zdola (k vidlicové manipulaci), jako zkouška konstrukčního typu.

- 6.5.6.4.2** Příprava IBC pro zkoušku
- IBC musí být naplněna při stejnoměrném rozdělení nákladu do 1,25 násobku své nejvyšší dovolené celkové (btto) hmotnosti.
- 6.5.6.4.3** Postup zkoušky
- IBC musí být dvakrát zdvižena vysokozdvížným vozíkem, a opět spuštěna. Přitom musí být vidlice vozíku nasazeny centrálně a vzdáleny od sebe tak, aby tato vzdálenost odpovídala 3/4 rozměrů strany, na kterou se vidlice zasouvají (leđaže by body pro nasunutí vidlic byly předem dány). Vidlice vysokozdvížného vozíku musí být zasunuty nejméně do 3/4 ve směru zasunutí. Zkouška musí být opakována v každém možném směru zasunutí.
- 6.5.6.4.4** Kritéria pro vyhovění zkoušce
- Žádná trvalá deformace IBC, včetně palety, pokud k ní dojde, nesmí učinit IBC nezpůsobilou k přepravě a nesmí dojít k žádnému úniku naplněné látky.
- 6.5.6.5** **Zkouška zdvihem shora**
- 6.5.6.5.1** Rozsah použití
- Pro všechny typy IBC, které jsou konstruovány pro zdvih shora (k závěsné manipulaci) nebo pro flexibilní IBC konstruované pro zdvih shora nebo ze strany jako zkouška konstrukčního typu.
- 6.5.6.5.2** Příprava IBC pro zkoušku
- Kovové IBC, IBC z tuhého plastu, kompozitní IBC s vnitřní nádobou z plastu musí být naplněny dvojnásobkem své nejvyšší dovolené celkové (btto) hmotnosti. Flexibilní IBC musí být naplněny reprezentativním materiálem a potom musí být zatíženy na šestnásobek své maximální povolené hrubé hmotnosti, zátěž musí být rozložena rovnoměrně.
- 6.5.6.5.3** Postup zkoušky
- Kovové a flexibilní IBC musí být stanoveným způsobem zdviženy, až se nedotýkají země a v této poloze drženy po dobu 5 minut.
- IBC z tuhého plastu a kompozitní IBC musí být zvedány:
- (a) za každou dvojici diagonálně protilehlých zvedacích zařízení tak, aby zdvihací síly působily svisle po dobu 5 minut; a
 - (b) za každou dvojici diagonálně protilehlých zvedacích zařízení tak, aby zdvihací síly působily směrem do středu pod úhlem 45° ke svislici po dobu 5 minut.
- 6.5.6.5.4** Pro flexibilní IBC mohou být pro zkoušku zdvihem shora a pro přípravu ke zkoušce použity jiné postupy, které jsou nejméně stejně účinné.
- 6.5.6.5.5** Kritéria pro vyhovění zkoušce
- (a) IBC kovové, z tuhého plastu a kompozitní: IBC zůstává bezpečný za normálních podmínek přepravy, nevykazuje žádnou zřetelnou deformaci, včetně základní palety, pokud tato existuje, a žádnou ztrátu obsahu;
 - (b) Flexibilní IBC: žádné poškození IBC nebo jejích zvedacích zařízení, které by ji učinilo nezpůsobilou pro přepravu nebo manipulaci. A žádná ztráta obsahu.
- 6.5.6.6** **Zkouška stohováním**
- 6.5.6.6.1** Rozsah použití
- Pro všechny typy IBC, které jsou konstruovány pro stohování na sobě, jako zkouška konstrukčního typu.
- 6.5.6.6.2** Příprava IBC pro zkoušku

IBC musí být naplněna na svou nejvyšší dovolenou celkovou (bttto) hmotnost. Jestliže je pro svou specifickou hmotnost výrobek pro zkoušky nevhodný musí být IBC dodatečně naplněna tak, aby byl odzkoušen na svou nejvyšší dovolenou celkovou (bttto) hmotnost, přičemž zátěž musí být rovnoměrně rozložena.

6.5.6.6.3 Postup zkoušky

- (a) IBC musí být umístěna na své základně na rovném tvrdém podkladu a musí být podrobena působení přídavného zkušebního zatížení (nákladu) rovnoměrně rozloženého (viz 6.5.6.6.4). Pro IBC z tuhého plastu typu 31H2 a kompozitní IBC typů 31HH1 a 31HH2, musí být zkouška stohováním provedena s původními plnicími látkami nebo po ukončení předběžného skladování se standardní kapalinou(viz 6.1.6) podle 6.5.6.3.3 nebo 6.5.6.3.5 použitím druhé IBC podle 6.5.6.2.2. IBC musí být podrobena zkoušce na zatížení po dobu nejméně:
- (i) 5 minut pro kovové IBC;
 - (ii) 28 dní při 40°C pro IBC z tuhého plastu typů 11H2, 21H2 a 31H2 a pro kompozitní s vnějším plastovým pláštěm, které snesou stohovací zatížení (tj. typů 11HH1, 11HH2, 21HH1, 21HH2, 31HH1 a 31HH2);
 - (iii) 24 hodin pro všechny ostatní typy IBC;
- (b) Zatížení musí být aplikováno jednou z následujících metod:
- (i) jedna nebo více IBC stejného typu se naplní na nejvyšší dovolenou celkovou (bttto) hmotnost a uloží se na zkoušenou IBC;
 - (ii) vhodná závaží se uloží na plochou desku nebo na napodobeninu dna IBC, která se pak umístí na zkoušenou IBC.

6.5.6.6.4 Výpočet zkušebního stohovacího zatížení

Zatížení, které se uloží na IBC, musí činit nejméně 1,8 násobek součtové nejvyšší dovolené celkové (bttto) hmotnosti všech stejných IBC, které mohou být během přepravy nastohovány na IBC.

6.5.6.6.5 Kritéria pro vyhovění zkoušce

- (a) Všechny typy IBC, kromě flexibilních IBC: žádná trvalá deformace, která by učinila IBC, včetně základní palety, nezpůsobilou pro přepravu, a žádná ztráta naplněné látky.
- (b) Flexibilní IBC: žádné poškození tělesa nádoby, které by učinilo IBC nezpůsobilou pro přepravu, a žádná ztráta obsahu.

6.5.6.7 **Zkouška těsnosti**

6.5.6.7.1 Rozsah použití

Pro typy IBC používané k přepravě kapalin a tuhých látek plněných nebo vyprazdňovaných pod tlakem jako zkouška konstrukčního typu a periodická zkouška.

6.5.6.7.2 Příprava IBC pro zkoušku

Zkouška musí být prováděna před upevněním jakéhokoli tepelně izolačního vybavení. Odvětrávací ventily se buď musí nahradit uzavřenými, nebo se otvor pro odvětrávání musí utěsnit.

6.5.6.7.3 Postup zkoušky a zkušební tlak

Zkouška musí být prováděna po dobu nejméně 10 minut vzduchem o konstantním přetlaku nejméně 20 kPa (0,2 baru). Vzduchotěsnost IBC musí být určena přiměřenou metodou, jako např. měřením rozdílu tlaku nebo ponořením IBC do vody nebo, pro kovové IBC pokrytím švů a spojů mydlovou pěnou. V případě ponoření do vody musí být použit pro hydrostatický tlak korekční činitel.

6.5.6.7.4 Kritéria pro vyhovění zkoušce

Žádný únik vzduchu.

6.5.6.8 Zkouška vnitřním hydraulickým tlakem**6.5.6.8.1** Rozsah použití

Pro typy IBC používané pro přepravu kapalin a tuhých látek plněných nebo vyprazdňovaných pod tlakem jako zkouška konstrukčního typu.

6.5.6.8.2 Příprava IBC pro zkoušku

Zkouška musí být prováděna před upevněním jakéhokoli tepelné izolačního vybavení. Zařízení pro vyrovnání tlaku musí být vyřazena z provozu nebo odstraněna a vzniklé otvory uzavřeny.

6.5.6.8.3 Postup zkoušky

Zkouška musí být prováděna po dobu nejméně 10 minut hydraulickým tlakem, který nesmí být menší než tlak uvedený v 6.5.6.8.4. IBC nesmějí být během zkoušky mechanicky podpírány.

6.5.6.8.4 Zkušební tlak

6.5.6.8.4.1 Kovové IBC:

- (a) Pro IBC typů 21A, 21B a 21N na tuhé látky obalové skupiny I: 250 kPa (2,5 baru) (přetlak);
- (b) Pro IBC typů 21A, 21B, 21N, 31A, 31B a 31N na látky obalové skupiny II nebo III: 200 kPa (2 bary) (přetlak);
- (c) Kromě toho pro IBC typů 31A, 31B a 31N: zkušební přetlak 65 kPa (0,65 bar). Tato zkouška se musí provést před zkouškou 200 kPa (2 bary).

6.5.6.8.4.2 IBC z tuhého plastu a kompozitní IBC:

- (a) Pro IBC typů 21H1, 21H2, 21HZ1 a 21HZ2: 75 kPa (0,75 baru) (přetlak);
- (b) Pro IBC typů 31H1, 31H2, 31HZ1 a 31HZ2: vždy vyšší ze dvou hodnot, první je stanovena podle jedné z následujících metod:
 - (i) celkový přetlak změřený v IBC (tj. tenze par plněné látky a parciální tlak vzduchu nebo jiných inertních plynů, mínus 100 kPa) při 55 °C, vynásobený koeficientem bezpečnosti 1,5; tento celkový přetlak musí být stanoven na základě nejvyššího stupně plnění podle 4.1.1.4 a teploty plnění 15 °C;
 - (ii) 1,75 násobek tenze par přepravované látky při 50 °C mínus 100 kPa, nejméně však se zkušebním tlakem 100 kPa;
 - (iii) 1,5 násobek tenze par přepravované látky při 55 °C mínus 100 kPa, nejméně však se zkušebním tlakem 100 kPa;a druhá se stanoví následující metodou:
 - (iv) dvojnásobek statického tlaku přepravované látky, nejméně však dvojnásobná hodnota hydrostatického tlaku vody.

6.5.6.8.5 Kritéria pro vyhovění zkoušce(kám)

- (a) Pro IBC typů 21A, 21B, 21N, 31A, 31B a 31N, které byly podrobeny zkušebnímu tlaku stanovenému v 6.5.6.8.4.1 a) nebo b): žádná netěsnost;
- (b) Pro IBC typů 31A, 31B a 31N, které byly podrobeny zkušebnímu tlaku stanovenému v 6.5.6.8.4.1 c): žádná trvalá deformace, která by učinila IBC nezpůsobilou pro přepravu ani žádná netěsnost;
- (c) Pro IBC z tuhého plastu a kompozitní IBC: žádná trvalá deformace, která by učinila IBC nezpůsobilou pro přepravu, ani žádná netěsnost.

6.5.6.9 Zkouška volným pádem**6.5.6.9.1** Rozsah použití

Pro všechny typy IBC jako zkouška konstrukčního typu.

6.5.6.9.2 Příprava IBC pro zkoušku

- (a) Kovové IBC: IBC musí být naplněny nejméně na 95 % své maximální kapacity pro pevné látky nebo na 98 % své maximální kapacity pro kapaliny podle konstrukčního typu. Zařízení pro vyrovnávání tlaku musí být vyřazena z provozu nebo odstraněna a vzniklé otvory uzavřeny;
- (b) Flexibilní IBC: IBC musí být naplněny na maximální povolenou hrubou hmotnost, obsah musí být rovnoměrně rozložen.
- (c) Pevné plastové a kompozitní IBC: IBC musí být naplněny nejméně na 95 % své maximální kapacity pro pevné látky nebo na 98 % maximální kapacity pro kapaliny podle konstrukčního typu. Zařízení pro vyrovnávání tlaku musí být vyřazena z provozu nebo odstraněna a vzniklé otvory uzavřeny. Zkouška musí být provedena, se vzorkem o teplotě včetně obsahu redukováná na minus 18 °C nebo na nižší teplotu. Pokud zkušební vzorky kompozitních IBC jsou připraveny tímto způsobem, může být upuštěno od kondicionování stanoveného v 6.5.6.3.1. Zkušební kapalina musí být udržována v kapalném stavu, v nezbytném případě s příměsí proti zmrznutí. Toto kondicionování se nemusí provádět, pokud dotyčné materiály jsou dostatečně tvárné a pevné v tahu při nízkých teplotách;
- (d) Lepenkové a dřevěné IBC: IBC musí být naplněny na nejméně 95 % svého maximálního vnitřního objemu.

6.5.6.9.3 Postup zkoušky

IBC bude podroben zkoušce volným pádem svou základnou na nepružný, vodorovný, plochý, masivní a tuhý povrch podle požadavků 6.1.5.3.4 takovým způsobem, aby se zajistilo, že bod nárazu je taková část základny IBC, která je považována za nejzranitelnější. IBC o vnitřním objemu 0,45 m³ nebo menším, musí být dále podrobeny pádům:

- (a) Kovové IBC: na nejzranitelnější část jinou, než je základna IBC zkoušená prvním pádem;
- (b) Flexibilní IBC: na nejzranitelnější boční stranu;
- (c) IBC z tuhého plastu, kompozitní, lepenkové a dřevěné IBC: na plochu boční strany, na plochu vrchní části a na roh.

Pády mohou být provedeny s jedním vzorkem nebo různými vzorky od jednoho typu IBC.

6.5.6.9.4 Výška pádu

Pro pevné látky a pro kapaliny, pokud je zkouška provedena s pevnou látkou nebo s kapalinou, které mají být přepravovány nebo s jinou látkou mající zásadně stejné fyzikální charakteristiky

Obalová skupina I	Obalová skupina II	Obalová skupina III
1,8 m	1,2 m	0,8 m

Pro kapaliny se zkouškou provede s vodou

- (a) tam, kde přepravované látky mají relativní hustotu nepřevyšující 1,2:

Obalová skupina II	Obalová skupina III
1,2 m	0,8 m

- (b) tam, kde přepravované látky mají relativní hustotu převyšující hodnotu 1,2 bude výška pádu vypočtena na základě relativní hustoty (d) přepravované látky zaokrouhlené nahoru na první desetinné místo jak vyplývá z:

Obalová skupina II	Obalová skupina III
d x 1,0 m	d x 0,67 m

6.5.6.9.5 Kritéria pro vyhovění zkoušce

- (a) Kovové IBC: žádná ztráta obsahu;
- (b) Flexibilní IBC: žádná ztráta obsahu. Malé unikání např. z uzávěrů nebo místy na švech při nárazu není považováno za vadu IBC, pokud nedochází po jejím postavení na zem k dalšímu úniku;
- (c) IBC z tuhého plastu, kompozitní, lepenkové a dřevěné IBC: žádná ztráta obsahu. Malý unik z uzávěrů při nárazu není považován za vadu IBC, pokud nedochází k následné netěsnosti;
- (d) Všechny IBC : žádné poškození, které sníží bezpečnost a způsobilost IBC ke sběru, nebo nakládání, a nedojde k žádné ztrátě obsahu. Navíc musí být IBC schopen zdvihnout s pomocí vhodných přípravků, pokud zůstane po dobu pěti minut mezi podlahou a IBC volný prostor.

POZNÁMKA: Kritéria v (d) platí pro konstrukční typy IBC vyrobené od 1. ledna 2011.

6.5.6.10 Zkouška roztržením

6.5.6.10.1 Rozsah použití

Pro všechny typy flexibilních IBC jako zkouška konstrukčního typu.

6.5.6.10.2 Příprava IBC pro zkoušku

IBC musí být naplněna nejméně do 95 % svého vnitřního objemu rovnoměrně rozloženým nákladem do své nejvyšší dovolené celkové hmotnosti.

6.5.6.10.3 Postup zkoušky

Když je IBC na zemi, provede se řez nožem v délce 100 mm, který úplně pronikne nejširší z bočních stěn v úhlu 45° k hlavní ose IBC, a to v polovině výšky mezi dnem IBC a horní hladinou naplněné látky. IBC musí být potom vystavena rovnoměrně rozdělenému stohovacímu zatížení odpovídajícímu dvojnásobku nejvyšší dovolené celkové hmotnosti. Zatížení musí působit nejméně po dobu 5 minut. IBC konstruované pro zdvihání shora nebo ze strany, musí být po odstranění stohovacího zatížení zvednuty, až se nedotýkají země, a v této poloze musí být drženy po dobu 5 minut.

6.5.6.10.4 Kritéria pro vyhovění zkoušce

Řez se nesmí prodloužit o více než 25 % své původní délky.

6.5.6.11 Zkouška překlopením (pádem z překlopení)

6.5.6.11.1 Rozsah použití

Pro všechny typy flexibilních IBC jako zkouška konstrukčního typu.

6.5.6.11.2 Příprava IBC pro zkoušku

IBC musí být naplněna nejméně na 95 % svého vnitřního objemu rovnoměrně rozloženým nákladem na nejvyšší dovolenou celkovou hmotnost.

6.5.6.11.3 Postup zkoušky

IBC se musí převrátit tak, aby padla na jakoukoliv část své výšky na pevnou, nepružnou, hladkou, plochou a vodorovnou plochu.

6.5.6.11.4 Výška pádu z překlopení

Obalová skupina I	Obalová skupina II	Obalová skupina III
1,8 m	1,2 m	0,8 m

6.5.6.11.5 Kritéria pro vyhovění zkoušce

Žádná ztráta obsahu. Malé unikání např. z uzávěrů nebo místy na švech při nárazu není považováno za vadu IBC, pokud nedochází k dalšímu úniku;

6.5.6.12 **Zkouška vztyčováním**

6.5.6.12.1 Rozsah použití

Pro všechny flexibilní IBC konstruované pro zvedání shora nebo ze strany jako zkouška konstrukčního typu.

6.5.6.12.2 Příprava IBC pro zkoušku

IBC musí být naplněna nejméně na 95 % svého vnitřního objemu rovnoměrně rozloženým nákladem na nejvyšší dovolenou celkovou hmotnost.

6.5.6.12.3 Postup zkoušky

Na straně ležící IBC musí být zvednuta jedním ze zvedacích zařízení nebo dvěma zvedacími zařízeními, jsou-li k dispozici čtyři, zvednuta rychlostí nejméně 0,1 m/s do svislé polohy tak, aby se už nedotýkala země.

6.5.6.12.4 Kritéria pro vyhovění zkoušce

Žádné poškození IBC nebo jeho zvedacích zařízení, které by IBC učinilo nezpůsobilou pro přepravu nebo manipulaci.

6.5.6.13 **Zkouška vibrací**

6.5.6.13.1 Použitelnost

Pro všechny IBC používané pro kapaliny, jako zkouška konstrukčního typu.

POZNÁMKA: Tato zkouška se použije pro konstrukční typy IBC vyrobené po 31. prosinci 2010 (viz rovněž 1.6.1.14).

6.5.6.13.2 Příprava IBC pro zkoušku

Vzorek IBC bude vybrán náhodně a musí být vybaven a uzavřen jako pro přepravu. IBC musí být naplněn vodou na nejméně 98 % své maximální kapacity.

6.5.6.13.3 Zkušební metoda a doba trvání

6.5.6.13.3.1 IBC musí být umístěn ve středu plošiny zkušebního přístroje s vertikální, sinusoidální, dvojitou amplitudou (posunutí vrchol – vrchol) 25 mm ± 5 %. Je-li to nutné, musí být omezující zařízení k plošině připevněna, aby se zabránilo vodorovnému pohybu vzorku z plošiny bez omezení vertikálního pohybu.

6.5.6.13.3.2 Zkouška musí být provedena po dobu jedné hodiny s frekvencí, která způsobí, že část základny IBC se přechodně zvedne od vibrující plošiny po část každého cyklu o takový stupeň, že může být kovová vložka na ni přerušovaně zcela vložena, mezi nejméně jeden bod základny IBC a zkušební plošinu. Frekvence mohou být upraveny po nastavení počátečního stupně tak, aby se obal nedostal do rezonance. Zkušební frekvence ale musí pokračovat, aby dovolila vložení kovové vložky pod IBC, jak je to shora popsáno. Schopnost vkládat kovovou vložku mezi IBC a vibrační plošinu je pro úspěšné projití testu podstatná. Aby bylo možno zkoušku provést musí být kovová vložka použitá pro

tuto zkoušku nejméně 1.6 mm tlustá, 50 mm široká a musí mít dostatečnou délku, aby mohla být vložena minimálně 100 mm mezi IBC a vibrační plošinu.

6.5.6.13.4 Kriteria pro vyhovění zkoušce

Nesmí být pozorován žádný únik ani popraskání a, navíc žádný zlom nebo poškození strukturálních komponent, jako jsou prasklé sváry nebo poškozená upevnění.

6.5.6.14 ***Protokol o zkoušce***

6.5.6.14.1 O zkoušce musí být sepsán protokol obsahující alespoň následující podrobnosti, který musí být přístupný uživatelům IBC:

1. Název a adresa zkušebny;
2. Jméno (název) a adresa žadatele (kde to je vhodné);
3. Jednoznačné identifikační číslo protokolu o zkoušce;
4. Datum protokolu o zkoušce;
5. Výrobce IBC;
6. Popis konstrukčního typu IBC (např. rozměry, materiály, uzávěry, tloušťky atd.), dále způsob výroby (např. tvarování foukáním), který může zahrnovat výkres(y) nebo/a fotografii(e);
7. Nejvyšší vnitřní objem;
8. Charakteristiky zkoušených náplní (látek), např. viskozita a relativní hustota u kapalin a rozměr zrn u tuhých látek;
9. Popisy zkoušky a výsledky;
10. Zkušební protokol musí být podepsán s uvedením jména a funkce signatáře.

6.5.6.14.2 Protokol o zkoušce musí obsahovat prohlášení, že IBC určená pro přepravu byla odzkoušena podle příslušných ustanovení této kapitoly a že použití jiných obalových postupů nebo komponentů může učinit protokol neplatným. Jedno vyhotovení protokolu o zkoušce se uloží u příslušného orgánu.

KAPITOLA 6.6

POŽADAVKY NA KONSTRUKCI A ZKOUŠENÍ VELKÝCH OBALŮ

6.6.1 Všeobecné

6.6.1.1 Požadavky této kapitoly neplatí pro:

- obaly pro třídu 2, vyjma velkých obalů pro předměty třídy 2, včetně obalů na aerosoly;
- obaly pro třídu 6.2, vyjma velkých obalů pro UN 3291 odpad klinický;
- obaly pro třídu 7 obsahující radioaktivní látky.

6.6.1.2 Velké obaly musí být vyráběny, zkoušeny a rekonstruovány podle programu zajištění kvality uznaného příslušným orgánem, aby bylo zabezpečeno, že každý vyrobený nebo rekonstruovaný velký obal odpovídá požadavkům této kapitoly.

POZNÁMKA: ISO 16106:2006 " Obaly - Převážné obaly pro nebezpečné věci - Obaly pro nebezpečné věci, velké nádoby pro volně ložené látky (IBC) a velké obaly – Návody pro používání ISO 9001" poskytuje přijatelný návod pro postupy, které je nutno sledovat

6.6.1.3 Zvláštní požadavky na velké obaly v 6.6.4 jsou založeny na běžně používaných velkých obalech. S ohledem na vědecký a technický pokrok neexistuje námitka proti použití velkých obalů majících rozdílné specifikace od těch, které jsou uvedeny v 6.6.4, za předpokladu, že jsou stejně účinné, přijatelné pro příslušný orgán a schopné úspěšně absolvovat zkoušky popsané v 6.6.5. Jiné postupy zkoušení nežli jsou ty popsané v ADR jsou přijatelné za předpokladu, že jsou rovnocenné a jsou uznány příslušným orgánem.

6.6.1.4 Výrobci a následní distributoři obalů musí poskytnout informace ohledně následných postupů a popisu typů a rozměrů uzávěrů (zahrnujíc v to požadovaná těsnění) a jakýchkoliv dalších komponent potřebných k zajištění, aby obaly jak jsou předávány k přepravě byly schopné projít příslušnými zkouškami odolnosti dle této kapitoly.

6.6.2 Kód pro označení typu velkých obalů

6.6.2.1 Kódy používané pro velké obaly se skládají z:

- (a) dvou arabských číslic, a sice:
50 pro tuhé velké obaly; nebo
51 pro flexibilní velké obaly; a
- (b) latinské velké písmeno označující povahu materiálu, např. dřevo, ocel atd., podle seznamu v pododdíle 6.1.2.6.

6.6.2.2 Kód velkého obalu může být doplněn písmenem „W“. Písmeno „W“ znamená, že velký obal sice náleží typu označenému kódem, avšak byl vyroben podle rozdílné specifikace než je uvedena v 6.6.4 a podle ustanovení v 6.6.1.3 byl uznán jako ekvivalentní.

6.6.3 Značení

6.6.3.1 Primární značení: Každý velký obal, který je vyroben a určen pro použití podle požadavků ADR, musí být opatřen značením, které je trvanlivé, čitelné a je umístěno na takovém místě, aby bylo ihned viditelné. Písmena, číslice a značky musí být alespoň 12 mm vysoké a musí zobrazovat:

- (a) Znak Spojených národů pro obaly:






Tento znak nesmí být použit pro jiné účely než pro osvědčení, že obal, přemístitelná cisterna nebo MEGC splňuje příslušné požadavky kapitoly 6.1, 6.2, 6.3, 6.5, 6.6 nebo 6.7¹. Pro velké kovové obaly, na kterých je označení provedeno vytačením nebo vyražením, smí být namísto znaku použito písmen "UN";

- (b) Číslo "50" označuje tuhé velké obaly nebo "51" označuje flexibilní velké obaly, následované označením materiálového typu podle seznamu v 6.5.1.4.1(b);
- (c) Velké písmeno, které udává obalové skupiny, pro které je konstrukční typ schválen:
- X pro obalové skupiny I, II, a III;
Y pro obalové skupiny II a III
Z jen pro obalovou skupinu III
- (d) Měsíc a rok (vždy poslední dvě číslice) výroby
- (e) Stát schvalující udělení UN kódu; uvedený rozlišovací značkou pro motorová vozidla v mezinárodním provozu²;
- (f) Jméno nebo znak výrobce a jiné označení pro velký obal podle ustanovení příslušného orgánu;
- (g) Zkušební zátěž při zkoušce stohováním v kg, pro velké obaly, které nejsou určeny pro stohování se uvede "0";
- (h) Nejvyšší dovolená celková (btto) hmotnost v kg.

Výše požadované primární označení, musí být uvedeno v pořadí pododstavců.

Každý prvek značení aplikovaný v souladu s písmeny (a) až (h) musí být jasně oddělen, např. lomítkem nebo mezerou, tak aby byl snadno identifikovatelný.

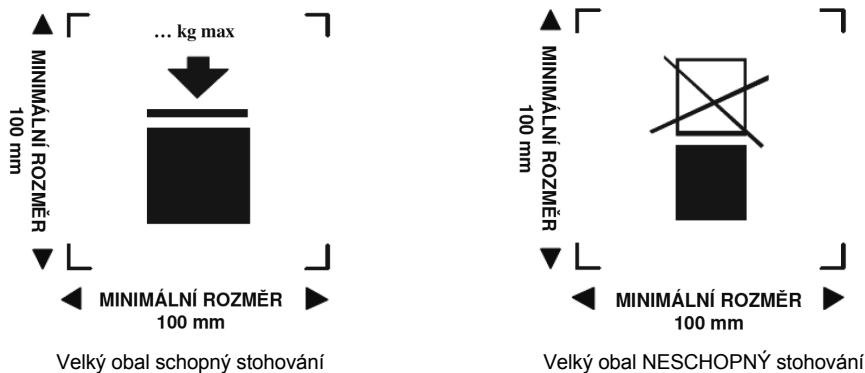
6.6.3.2 Příklady značení

	50A/X/05 01/N/PQRS 2500/1000	Velký obal z ocele, který smí být stohován stohovací zátěž: 2500 kg, nejvýše přípustná hmotnost (btto): 1000 kg.
	50H/Y/04 02/D/ABCD 987 /0/800	Velký obal z plastu, který nesmí být stohován, nejvyšší celková (btto) hmotnost: 800 kg.
	51H/Z/06 01/S/1999 0/500	Flexibilní velký obal, který nesmí být stohován, nejvyšší celková (btto) hmotnost: 500 kg.

¹ Tento symbol se také používá k potvrzení, že flexibilní objemové vaky schválené pro ostatní druhy dopravy jsou v souladu s požadavky uvedenými v kapitole 6.8 UN Modelového Regulativu.

² Rozlišovací značky pro motorová vozidla v mezinárodním provozu podle Vídeňské konvence o silničním provozu (1968).

- 6.6.3.3** Maximální povolená stohovací zátěž použitelná při používání velkého obalu musí být znázorněna na znaku následujícím způsobem:



Znak nesmí být menší než 100 mm x 100 mm a musí být trvanlivý a jasně čitelný. Písmena a číslice udávající hmotnost musí být nejméně 12 mm vysoké.

Hmotnost vyznačená nad znakem nesmí překročit zatížení použité při zkoušce konstrukčního typu (viz 6.6.5.3.3.4) dělené 1.8.

6.6.4 Zvláštní požadavky na velké obaly

6.6.4.1 Zvláštní požadavky na velké kovové obaly

- 50 A z oceli
- 50 B z hliníku
- 50 N z kovu (jiného než ocel nebo hliník)

- 6.6.4.1.1** Velké obaly musí být vyrobeny z přiměřeně tvarovatelného kovu, jehož svařitelnost byla plně prokázána. Svary musí být odborně provedeny a poskytovat plnou bezpečnost. Odolnost vůči nízké teplotě musí být brána v úvahu, když je to vhodné.

- 6.6.4.1.2** Musí se dbát na to, aby bylo zabráněno škodlivému galvanickému působení na základě doteku různých kovů.

6.6.4.2 Zvláštní požadavky na velké obaly z flexibilních materiálů

- 51 H z flexibilního plastu
- 51 M z papíru

- 6.6.4.2.1** Velké obaly musí být vyrobeny z vhodných materiálů. Pevnost materiálu a provedení flexibilních velkých obalů musí být uzpůsobeny vnitřnímu objemu a předpokládanému použití.

- 6.6.4.2.2** U všech flexibilních velkých obalů typu 51 M musí použitý materiál po minimálně 24 hodinovém úplném ponoření do vody vykazovat ještě minimálně 85% hodnoty pevnosti v tahu, která byla původně naměřena u materiálu při kondicionování do rovnovážného stavu při relativní vlhkosti do 67 %.

- 6.6.4.2.3** Spoje musí být provedeny šitím, tepelným svařováním, lepením nebo jiným stejně vhodným postupem. Všechny konce švů musí být zabezpečeny.

- 6.6.4.2.4** Flexibilní velké obaly musí vykazovat přiměřenou odolnost vůči stárnutí a ztrátě pevnosti způsobené ultrafialovým zářením, klimatickými podmínkami nebo obsaženou látkou a tím prokázat vhodnost k jejich předpokládanému použití.

6.6.4.2.5 U flexibilních velkých obalů z plastu, u kterých se vyžaduje ochrana proti ultrafialovému záření, se tato ochrana zajišťuje přidáním sazí nebo jiných vhodných pigmentů nebo inhibitorů (do konstrukčního materiálu). Tyto příměsi se musí snášet s plněným nákladem a musí zůstat funkční během celé doby použití velkého obalu. Při použití sazí, pigmentů nebo inhibitorů, které se odlišují od těch, které byly použity pro výrobu odzkoušeného konstrukčního typu, může být upuštěno od opakování zkoušek, pokud změněný obsah sazí, pigmentů nebo inhibitorů nemá negativní vliv na fyzikální vlastnosti konstrukčních materiálů.

6.6.4.2.6 Do materiálů velkých obalů smějí být přimíchány příměsi, které zlepšují odolnost vůči stárnutí nebo pro jiné účely, za předpokladu, že nepříznivě neovlivní jeho fyzikální nebo chemické vlastnosti.

6.6.4.2.7 Je-li velký obal naplněn, nesmí poměr výšky vůči šířce činit více než 2:1.

6.6.4.3 Zvláštní požadavky na plastové velké obaly

50 H z tuhých plastů

6.6.4.3.1 Velký obal musí být zhotoven z vhodného plastu známé specifikace a jeho pevnost musí odpovídat objemu a předpokládanému používání. Materiál musí být odpovídajícím způsobem odolný vůči stárnutí a ztrátě pevnosti, způsobené obsahem nebo případně působením ultrafialového záření. Chování za nízké teploty musí být bráno v úvahu, pokud je to vhodné. Za normálních přepravních podmínek nesmí dojít k unikání obsahu.

6.6.4.3.2 Je-li potřebná ochrana proti ultrafialovému záření, musí být toto provedeno přidáním sazí nebo jiných vhodných pigmentů nebo inhibitorů. Tyto příměsi se musí snášet s obsahem a musí plnit svoji funkci během životnosti velkého obalu. Při použití sazí, pigmentů nebo inhibitorů, které se odlišují od těch, které byly použity pro výrobu odzkoušeného konstrukčního typu, může být upuštěno od opakování zkoušek, pokud změněný obsah sazí, pigmentů nebo inhibitorů nemá negativní vliv na fyzikální vlastnosti konstrukčního materiálu.

6.6.4.3.3 Aditiva mohou být přidána do materiálu velkého obalu ke zvýšení odolnosti vůči stárnutí, nebo pro jiné účely, pokud nepříznivě neovlivní fyzikální nebo chemické vlastnosti materiálu.

6.6.4.4 Zvláštní požadavky na lepenkové velké obaly

50 G z tuhé lepenky

6.6.4.4.1 Velký obal musí být zhotoven z pevně hladké lepenky nebo tří- a vícevrstvé vlnité lepenky dobré kvality, odpovídající vnitřnímu objemu a předpokládanému použití. Odolnost vnějšího povrchu k absorpci vody podle Cobba 30 min (v režimu Cobb₁₈₀₀) nesmí být vyšší než 155 g/m² (viz norma ISO –535:1991). Lepenka musí mít odpovídající pevnost v ohybu. Lepenka musí být formátována bez trhlin. Lepenka při kompletaci obalu se nesmí v rylování lámat či na povrchu popraskat, nebo se silně vyboulit. Vlny lepenky musí být pevně slepeny s vnější vrstvou.

6.6.4.4.2 Stěny, včetně víka a dna, musí vykazovat odolnost vůči průrazu minimálně 15 J, měřeno podle normy ISO 3036:1975.

6.6.4.4.3 Výrobní spoje lepenkových vnějších obalů musí vykazovat dostatečné překrytí a musí být provedeny lepicí páskou, slepením, sešitím kovovými sponami nebo jiným minimálně stejně vhodným spojovacím prostředkem. Je-li spojení provedeno slepením nebo za použití lepicí pásky, lepidlo musí být vodovzdorné. Kovové spony musí prošívat všechny spojované části obalu a být tvarovány nebo chráněny tak, aby nemohly ohrozit vnitřní vložku prodřením nebo propíchnutím.

6.6.4.4.4 Paletová dna, která tvoří součást velkého obalu, nebo jakékoliv odnímatelné palety musí být uzpůsobeny k mechanické (vidlicové) manipulaci s velkým obalem naplněným na nejvyšší dovolenou celkovou (bto) hmotnost.

6.6.4.4.5 Odnímatelná paleta nebo paletové dno musí být bez výstupků, aby se zabránilo narušení spodku velkého obalu, což by při manipulaci mohlo být příčinou škody.

6.6.4.4.6 U odnímatelné palety musí být těleso obalu pevně spojeno s odnímatelnou paletou, aby se zajistila stabilita při manipulaci a přepravě. Mimo to musí být vrchní povrch odnímatelných palet prost ostrých výstupků, které by mohly poškodit velký obal.

6.6.4.4.7 Ke zvýšení odolnosti při stohování, smějí být používány podpurné prvky jako dřevěné vzpěry, které se však musí umístit vně vnitřní vložky.

6.6.4.4.8 Je-li předpokládáno stohování velkých obalů, musí být nosná plocha zhotovena tak, aby zátěž byla bezpečně rozložena.

6.6.4.5 Zvláštní požadavky na dřevěné velké obaly

50 C z přírodního dřeva
50 D z překližky
50 F z rekonstituovaného dřeva

6.6.4.5.1 Pevnost používaných materiálů a jejich konstrukční aplikace musí odpovídat objemu a předpokládanému použití velkých obalů.

6.6.4.5.2 Je-li velký obal z přírodního dřeva, musí být z dřeva dobře vyzrálého, vyschlého a dřeva bez vad, aby nedošlo k závažnému snížení pevnosti kterékoliv části velkých obalů. Každý díl velkých obalů musí být plnostěnný (z jednoho kusu), nebo tomuto rovnocenný. Díly lze považovat za plnostěnné pokud přířezy dílu jsou spojeny odpovídající metodou např. Lindermanovo spojení (spoj typu vlašťovčího ocasu), spojení na pero a drážku, přeplátováním, na tupý spoj s nejméně 2 vlnovitými kovovými upevňovacími prvky pro každý spoj nebo jiným stejně účinným způsobem.

6.6.4.5.3 Je-li velký obal z překližky, musí se tato skládat nejméně ze tří vrstev. Tyto musí být vyrobeny z dobře vyzrálé loupané nebo po létech řezané dýhy, obchodně obvykle suché a bez vad, které by snížily pevnost velkého obalu. Jednotlivé vrstvy musí být spolu slepeny vodovzdorným lepidlem. Pro výrobu velkých obalů mohou být použity také jiné vhodné materiály společně s překližkou.

6.6.4.5.4 Je-li velký obal z rekonstituovaného dřeva pak musí být materiály jako tvrdé dřevovláknité či dřevotřískové desky nebo jiné vhodné materiály vodovzdorné.

6.6.4.5.5 Velké obaly musí být pevně spojeny hřebíky nebo zabezpečeny s rohovými svlaky nebo konci, nebo musí být kompletovány jinými stejně vhodnými prostředky.

6.6.4.5.6 Paletové dno, které vytváří nedílnou část velkého obalu, nebo odnímatelná paleta musí být vhodná pro mechanickou manipulaci velkého obalu naplněného na nejvyšší přípustnou celkovou (bto) hmotnost.

6.6.4.5.7 Odnímatelná paleta nebo paletové dno musí být navrženy tak, aby se zabránilo možnosti jakýchkoliv výčnělků základny velkého obalu, které by mohly být náchylné k vzniku poškození při manipulaci.

6.6.4.5.8 U odnímatelné palety musí být těleso obalu spojeno pevně s paletou, aby byla zajištěna stabilita při manipulaci a přepravě. Povrch odnímatelné palety musí být prost nerovností, které by mohly velký obal poškodit.

6.6.4.5.9 Zesilovací systémy, jako jsou dřevěné podpěry k zvýšení stohovatelnosti, smí být použity, ale musí být situovány vně vnitřní vložky.

6.6.4.5.10 Je-li předpokládáno, že velké obaly budou stohovány, musí být nosné plochy uzpůsobeny tak, že dojde k bezpečnému rozložení nákladu.

6.6.5 Zkušební požadavky na velké obaly

6.6.5.1 Provádění a četnost zkoušek

6.6.5.1.1 Konstrukční typ každého velkého obalu musí být podroben podle 6.6.5.3 předpokládaným zkouškám a to podle pevně stanovených postupů příslušným orgánem povolujícím umístění značky a musí být tímto příslušným orgánem schválen.

6.6.5.1.2 Každý konstrukční typ velkého obalu musí před použitím úspěšně projít zkouškami předepsanými v této kapitole. Konstrukční typ velkého obalu je určen konstrukcí, rozměrem, použitým materiálem a jeho tloušťkou, způsobem výroby a balení, může však také zahrnovat různé opracování povrchu, včetně velkých obalů, které se od svého konstrukčního typu odlišují pouze nižší konstrukční výškou.

- 6.6.5.1.3** Zkoušky musejí být provedeny se vzorky z výroby v intervalech, které jsou příslušným orgánem pevně stanoveny. Budou-li takovéto zkoušky provedeny na velkých obalech z lepenky, příprava při okolních podmínkách (prostředí) se považuje za rovnocennou podmínkám uvedeným v 6.6.5.2.4.
- 6.6.5.1.4** Zkoušky se musejí opakovat také po každé modifikaci měnící konstrukci, materiál nebo technologii výroby velkých obalů.
- 6.6.5.1.5** Příslušný orgán může povolit selektivní zkoušku velkých obalů, které se jen velmi málo liší od již zkoušeného konstrukčního typu: např. menšími rozměry vnitřních obalů nebo vnitřními obaly s nižší čistou (netto) hmotností, nebo také velké obaly s malými redukcemi vnějšího(-ch) rozměru(-ů).
- 6.6.5.1.6** (vyhrazeno)
- POZNÁMKA** : Pro podmínky sestavování různých vnitřních obalů do velkého obalu a povolených variací vnitřních obalů, viz 4.1.1.5.1.
- 6.6.5.1.7** Příslušný orgán může kdykoliv požadovat důkaz, aby zkouškami podle tohoto oddílu bylo prokázáno, že velké obaly ze sériové výroby splňují požadavky pro zkoušky konstrukčního typu.
- 6.6.5.1.8** Pod podmínkou, že platnost výsledků zkoušky nebude ovlivněna a se souhlasem příslušného orgánu smí být provedeno více zkoušek s jedním vzorkem.

6.6.5.2 Příprava pro zkoušky

- 6.6.5.2.1** Zkoušky se provedou na velkých obalech připravených k přepravě, včetně vnitřních obalů nebo přepravovaných předmětů. Vnitřní obaly pro kapalné látky musí být plněny nejméně na 98 % svého nejvyššího vnitřního objemu, pro tuhé látky na nejméně 95% svého nejvyššího vnitřního objemu. U velkých obalů, jejichž vnitřní obaly jsou určeny pro přepravu kapalných nebo pevných látek, je potřeba provést oddělené zkoušky s kapalným a tuhým obsahem. Látky obsažené ve vnitřních obalech nebo předměty obsažené ve velkých obalech určené k přepravě se smí nahradit jinými látkami nebo předměty, pokud tímto nebudou výsledky zkoušky negativně zkresleny. Jsou-li použity jiné vnitřní obaly nebo předměty, musí mít stejné fyzikální vlastnosti (hmotnost atd.) jako k přepravě určené vnitřní obaly nebo předměty. Je přípustné použít přídatnou zátěž, jako pytle s olověným šrotem, aby se dosáhlo požadované celkové hmotnosti kusu, pokud jsou použity tak, aby tímto neovlivnily výsledky zkoušky.
- 6.6.5.2.2** Použije-li se při zkoušce pádem místo kapaliny jiná látka, musí mít podobnou relativní hustotu a viskozitu jako látka, která se má přepravovat. Voda může být také použita pro zkoušku pádem dle ustanovení 6.6.5.3.4.4.
- 6.6.5.2.3** Velké plastové obaly a velké obaly obsahující vnitřní plastové obaly, vyjma pytlů, které jsou určeny pro pevné látky nebo předměty, je třeba podrobit zkoušce volným pádem, když teplota zkušebního vzorku a jeho obsahu byla redukována na $-18\text{ }^{\circ}\text{C}$ nebo nižší. Od kondicionování může být upuštěno, jestliže materiály obalu vykazují při nízkých teplotách dostatečnou poddajnost a pevnost v tahu. Budou-li zkušební vzorky připraveny tímto způsobem, lze ustoupit od kondicionování podle 6.6.5.2.4. Pro zkoušky použité kapalné látky se musí udržet v kapalném stavu přidáním příměsí proti zmrznutí, pokud je to nutné.
- 6.6.5.2.4** Velké lepenkové obaly musí být minimálně 24 hodin kondicionovány v prostředí, kde je teplota a relativní vlhkost vzduchu řízena. Jsou tři možnosti, z nichž musí být jedna vybrána. Upřednostněné prostředí je $23\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ a $50\text{ } \% \pm 2\text{ } \%$ relativní vlhkost vzduchu. Obě ostatní možnosti jsou $20\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ a $65\text{ } \% \pm 2\text{ } \%$ relativní vlhkosti vzduchu nebo $27\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$ a $65\text{ } \% \pm 2\text{ } \%$ relativní vlhkosti vzduchu.

POZNÁMKA: Střední hodnoty musí ležet uvnitř těchto mezních hodnot. Krátkodobé odchylky a mezní hodnoty mohou vyvolat odchylky jednotlivých měření až o $\pm 5\text{ } \%$ pro relativní vlhkost vzduchu, bez významného zhoršení reprodukovatelnosti zkoušky.

6.6.5.3 Zkušební požadavky

6.6.5.3.1 Zkouška zdvihem zdola

- 6.6.5.3.1.1 Rozsah použití

- Pro všechny druhy velkých obalů, které jsou uzpůsobeny ke zdvihu zdola (vidlicové manipulaci), jako zkouška konstrukčního typu.
- 6.6.5.3.1.2 Příprava velkých obalů pro zkoušku
- Velký obal je plněn až k 1,25 násobku své nejvyšší dovolené celkové (btto) hmotnosti, přičemž je zátěž rovnoměrně rozložena.
- 6.6.5.3.1.3 Postup zkoušení
- Velký obal musí být 2x zvednut vidlicovým vysokozdvížným vozíkem a nechá se potom klesnout, přičemž je třeba vidlice umístit centrálně s odstupem 3/4 od zaváděcího bočního rozměru (pokud nejsou zaváděcí body udány). Vidlice musí být zavedena až do 3/4 zaváděcího směru. Zkouška musí být opakována v každém možném zaváděcím směru.
- 6.6.5.3.1.4 Kritéria pro vyhovění zkoušce
- Žádné trvalé deformace velkého obalu, které ovlivní bezpečnost přepravy a žádná ztráta obsahu.
- 6.6.5.3.2** Zkouška zdvihem shora
- 6.6.5.3.2.1 Rozsah použití
- Pro všechny druhy velkých obalů, které jsou uzpůsobeny pro zdvih shora (závěsnou manipulaci), jako zkouška konstrukčního typu.
- 6.6.5.3.2.2 Příprava velkých obalů pro zkoušku
- Velké obaly musí být naplněny na dvojnásobek jejich nejvyšší dovolené celkové (btto) hmotností. Flexibilní velké obaly musí být naplněny na šestnásobek jejich nejvyšší dovolené celkové (btto) hmotnosti, přičemž zátěž musí být rovnoměrně rozložena.
- 6.6.5.3.2.3 Postup zkoušení
- Velké obaly musí být zvednuty způsobem, pro který jsou vybaveny, až se nacházejí volně nad podlahou a po dobu 5 minut jsou v této poloze drženy.
- 6.6.5.3.2.4 Kritéria pro vyhovění zkoušce
- (a) Kovové velké obaly a velké obaly z plastu nesmějí vykazovat žádné trvalé deformace včetně základny palety, které by velké obaly učinily nezpůsobilé k přepravě, a žádnou ztrátu obsahu.
- (b) Velké flexibilní obaly: žádné poškození velkých obalů nebo jejich zvedacích zařízení, které by ji učinilo nezpůsobilou pro přepravu nebo manipulaci, a žádná ztráta obsahu.
- 6.6.5.3.3** Zkouška stohováním
- 6.6.5.3.3.1 Rozsah použití
- Pro všechny druhy velkých obalů, které jsou uzpůsobeny ke stohování na sobě, jako zkouška konstrukčního typu.
- 6.6.5.3.3.2 Příprava velkých obalů pro zkoušku
- Velký obal musí být naplněn na svou nejvyšší dovolenou celkovou (btto) hmotnost.
- 6.6.5.3.3.3 Způsob provedení zkoušky
- Velký obal musí svým dnem stát na vodorovném tvrdém podkladě a být vystaven působení rovnoměrně rozdělené zkušební zátěži (viz odstavec 6.6.5.3.3.4) po dobu nejméně 5 minut; Velké obaly ze dřeva, lepenky nebo plastu musí být této zátěži vystaveny nejméně 24 hodin.
- 6.6.5.3.3.4 Výpočet zkušební zátěže

Zátěž, kterou se velký obal zatíží, musí být minimálně 1,8 násobkem součtové nejvyšší dovolené celkové (bto) hmotnosti počtu stejných velkých obalů, které mohou být během přepravy na velký obal nastohovány.

6.6.5.3.3.5 Kritéria pro vyhovění zkoušce

- (a) Všechny typy velkých obalů, kromě flexibilních velkých obalů: řádná trvalá deformace, která by učinila velké obaly, včetně základní palety, nezpůsobilou pro přepravu, a žádná ztráta naplněné látky.
- (b) Flexibilní velké obaly: žádné poškození tělesa nádoby, které by učinilo velké obaly nezpůsobilé pro přepravu, a žádná ztráta obsahu.

6.6.5.3.4 Zkouška volným pádem

6.6.5.3.4.1 Rozsah použití

Pro všechny druhy velkých obalů, jako zkoušky konstrukčního typu.

6.6.5.3.4.2 Příprava velkých obalů na zkoušku

Velké obaly musí být naplněny podle 6.6.5.2.1.

6.6.5.3.4.3 Způsob provedení zkoušky

Velký obal musí být spuštěn na nepružný, horizontální, rovný, masivní a tuhý povrch podle požadavků 6.1.5.3.4 takovým způsobem, aby se zajistilo, že bod nárazu je v té části základny velkého obalu, kterou je možno považovat za nejvíce zranitelnou.

6.6.5.3.4.4 Výška pádu

POZNÁMKA: Velké obaly pro látky a předměty třídy 1 musí být zkoušeny podle zkušebních požadavků pro obalovou skupinu II.

- 6.6.5.3.4.4.1 Pro vnitřní obaly obsahující tuhé látky, kapaliny nebo předměty, pokud je zkouška prováděna s tuhou látkou, kapalinou nebo předměty, které se mají přepravovat, nebo s jinou látkou nebo předměty mající v podstatě stejné fyzikální vlastnosti:

Obalová skupina I	Obalová skupina II	Obalová skupina III
1,8 m	1,2 m	0,8 m

- 6.6.5.3.4.4.2 Pro vnitřní obaly obsahující kapaliny, pokud je zkouška prováděna s vodou:

6.6.5.3.4.4.3

- (a) Jestliže látka, která se má přepravovat má relativní hustotu nepřesahující 1.2:

Obalová skupina I	Obalová skupina II	Obalová skupina III
1,8 m	1,2 m	0,8 m

- (b) Jestliže látka, která se má přepravovat má relativní hustotu přesahující 1.2, výška pádu musí být vypočítána na základě relativní hustoty (d) přepravované látky, zaokrouhlena na desetiny, následovně:

Obalová skupina I	Obalová skupina II	Obalová skupina III
d x 1,5 (m)	d x 1,0 (m)	d x 0,67 (m)

6.6.5.3.4.5 Kritéria pro vyhovění zkoušce

- 6.6.5.3.4.5.1 Velké obaly nesmějí vykazat žádné poškození, které by ohrožovalo bezpečnost přepravy. Žádný únik přepravované látky z vnitřního(ch) obalu(ů) nebo předmětu(ů).

6.6.5.3.4.5.2 U velkých obalů pro předměty třídy 1 není povolena žádná trhлина, která by umožnila únik výbušných látek nebo předmětů z velkého obalu.

6.6.5.3.4.5.3 Byl-li velký obal podroben zkoušce volným pádem, zkušební vzorek obstál, jestliže celý obsah zůstal v obalu, i když uzávěr už není prachotěsný.

6.6.5.4 Zkušební protokol

6.6.5.4.1 Na každý konstrukční typ velkého obalu musí být vydán atest s povolením značení (UN kódem dle 6.6.3) osvědčující, že konstrukční typ včetně jeho vybavení splnil požadavky zkoušek.

6.6.5.4.2 O zkoušce musí být sepsán zkušební protokol obsahující minimálně následující údaje a musí být dostupný uživatelům velkého obalu:

1. Jméno a adresa zkušebny;
2. Jméno a adresa objednavatele (pokud je to vhodné);
3. Jednoznačná identifikace protokolu;
4. Datum protokolu;
5. Výrobce velkého obalu;
6. Popis konstrukčního typu velkého obalu (např. rozměry, materiály, uzávěry, tloušťky stěn atd.) a / nebo fotografie;
7. Nejvyšší vnitřní objem / nejvyšší dovolená celková (btto) hmotnost;
8. Charakteristické znaky zkoušeného obsahu, např. druhy a popisy použitých vnitřních obalů nebo předmětů;
9. Popisy a výsledky zkoušek;
10. Zkušební protokol musí být podepsán s uvedením jména a funkce podepisujícího.

6.6.5.4.3 Zkušební protokol musí obsahovat prohlášení, že pro přepravu připravený velký obal byl odzkoušen v souladu s příslušnými požadavky této kapitoly, a že tento zkušební protokol při použití jiných způsobů balení nebo komponent, může být neplatný. Jedno vyhotovení zkušebního protokolu je třeba.

KAPITOLA 6.7

POŽADAVKY NA KONSTRUKCI, VÝROBU, INSPEKCE A ZKOUŠENÍ PŘEMÍSTITELNÝCH CISTEREN A UN VÍCEČLÁNKOVÝCH KONTEJNERŮ NA PLYN (MEGC)

POZNÁMKA: *Pro nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny, cisternové kontejnery a cisternové výměnné nástavby s nádržemi z kovových materiálů, pro bateriová vozidla a více článkové kontejnery na plyn (MEGC) jiné než UN MEGC viz kapitola 6.8; pro cisterny z vyztužených plastů viz kapitola 6.9; pro cisterny pro podtlakové vyčerpávání odpadů viz kapitola 6.10.*

6.7.1 Platnost a všeobecné požadavky

6.7.1.1 Požadavky této kapitoly se vztahují na přemístitelné cisterny určené pro přepravu nebezpečných věcí a na MEGC určené pro přepravu nezchlazených plynů třídy 2 všemi druhy dopravy. Kromě požadavků této kapitoly, pokud není stanoveno jinak, musí každá multimodální přemístitelná cisterna nebo MEGC odpovídající definici "kontejner" splňovat příslušné požadavky Mezinárodní úmluvy o bezpečných kontejnerech (KBK) 1972, se změnami a doplňky. Dodatečné požadavky mohou být uplatněny na přemístitelné cisterny nebo MEGC přicházející na moře, které jsou manipulovány na otevřeném moři.

6.7.1.2 S ohledem na vědecký a technický pokrok mohou být technické požadavky této kapitoly upraveny alternativními ujednáními. Tato alternativní ujednání musí nabízet nejméně takovou úroveň bezpečnosti, která je dána požadavky této kapitoly s ohledem na snášelnivost s přepravovanými látkami, a schopnost přemístitelné cisterny nebo MEGC odolat nárazu, zatížení a požáru. Pro mezinárodní dopravu alternativní ujednání přemístitelných cisteren nebo MEGC musí být schváleny vhodnými příslušnými orgány.

6.7.1.3 Pokud látka není uvedena v pokynech pro přemístitelné cisterny (T1 až T23, T50 nebo T75) ve sloupci (10) tabulky A kapitoly 3.2, může být příslušným orgánem země původu vydáno prozatímní schválení. Schválení musí být uvedeno v dokumentaci k zásilce a musí obsahovat nejméně informace normálně uvedené v pokynech pro přemístitelné cisterny a podmínky, za nichž musí být látka přepravována.

6.7.2 Požadavky na konstrukci, výrobu, inspekce a zkoušení přemístitelných cisteren určených pro přepravu látek třídy 1 a tříd 3 až 9

6.7.2.1 *Definice*

Pro účely tohoto oddílu se následujícími pojmy rozumí:

Alternativní ujednání znamená schválení zaručené příslušným orgánem pro přemístitelnou cisternu nebo MEGC, které byly konstruovány, vyrobeny nebo zkoušeny podle technických požadavků nebo zkušebních metod jiných, než uvedených v této kapitole;

Přemístitelná cisterna znamená multimodální cisternu pro přepravu látek třídy 1 a tříd 3 až 9. Přemístitelná cisterna zahrnuje nádrž s provozní výstrojí a konstrukční výstrojí nezbytnou pro přepravu nebezpečných látek. Přemístitelnou cisternu musí být možno plnit a vyprazdňovat bez sejmutí konstrukční výstroje. Musí mít stabilizační členy vně nádrže a musí ji být možno zvedat v naplněném stavu. Musí být především konstruována pro zdvih na vozidlo, železniční vůz nebo námořní plavidlo nebo plavidlo pro vnitrozemské vodní cesty a musí být vybavena zárážkami, úchyty nebo příslušenstvím umožňujícím mechanickou manipulaci. Silniční cisternová vozidla, železniční

cisternové vozy, nekovové cisterny a velké nádoby pro volně ložené látky (IBC) nespádají pod definici přemístitelných cisteren;

Nádrž znamená část přemístitelné cisterny, která obsahuje látky určené pro přepravu (vlastní cisterna), včetně otvorů a jejich uzávěrů, ale nezahrnuje provozní výstroj a konstrukční výstroj;

Provozní výstroj znamená měřicí přístroje a plnicí, vyprazdňovací, větrací, pojistná, zahřívací, chladičí a tepelné izolační zařízení;

Konstrukční výstroj znamená výztužné, upevňovací, ochranné a stabilizační prvky vně nádrže;

Nejvyšší dovolený provozní tlak (MAWP) znamená tlak, který nesmí být menší než nejvyšší z dále uvedených tlaků měřených na vrcholu nádrže v provozní poloze:

- (a) Nejvyšší dovolený efektivní přetlak v nádrži během plnění nebo vyprazdňování; nebo
- (b) Nejvyšší dovolený efektivní přetlak, pro který je nádrž konstruována, jež nesmí být menší než součet:
 - (i) absolutního tlaku par (v barech) látky při 65 °C, zmenšeného o 1 bar; a
 - (ii) *dílčího tlaku (v barech) vzduchu nebo jiných plynů v prostoru nad látkou vlivem nejvyšší teploty 65 °C v tomto prostoru a roztažnost kapaliny vlivem zvýšení střední teploty látky $t_r - t_f$ (t_f = teplota plnění, obvykle 15 °C, t_r = 50 °C, nejvyšší střední teplota látky);*

Výpočtový tlak znamená tlak používaný pro výpočty a požadovaný schváleným předpisem pro tlakové nádoby. Výpočtový tlak musí být vyšší než nejvyšší z dále uvedených tlaků:

- (a) nejvyšší dovolený efektivní přetlak v nádrži během plnění nebo vyprazdňování; nebo
- (b) součet:
 - (i) absolutní tenze par (v barech) látky při 65 °C, zmenšená o 1 bar;
 - (ii) *dílčího tlaku (v barech) vzduchu nebo jiných plynů v prostoru nad látkou vlivem nejvyšší teploty 65 °C v tomto prostor a roztažnost kapaliny vlivem zvýšení střední teploty látky $t_r - t_f$ (t_r = teplota plnění, obvykle 15 °C, t_f = 50 °C, nejvyšší střední teplota látky); a*
 - (iii) tlaku stanoveného na základě statických sil uvedených v 6.7.2.2.12, ale nejméně 0,35 baru;
- (c) dvě třetiny nejmenšího zkušební tlaku uvedeného v příslušných pokynech pro přemístitelné cisterny ve 4.2.5.2.6;

Zkušební tlak znamená nejvyšší přetlak ve vrcholu nádrže během hydraulické tlakové zkoušky rovný nebo nejméně 1,5 násobku výpočtového tlaku. Nejnižší zkušební tlak pro přemístitelné cisterny určené pro zvláštní látky je uveden v příslušných pokynech pro přemístitelné cisterny ve 4.2.5.2.6.

Zkouška těsnosti znamená zkoušku nádrže a její provozní výstroje používající plyn do vnitřního tlaku nejméně 25 % MAWP;

Nejvyšší dovolená celková hmotnost (MPGM) znamená součet vlastní hmotnosti přemístitelné cisterny a nejvyšší dovolené užitečné hmotnosti;

Referenční ocel znamená ocel s mezí pevností v tahu 370 N/mm² a prodloužením při přetržení 27 %;

Měkká ocel znamená ocel se zaručenou mezí pevností v tahu 360 N/mm² až 440 N/mm² a zaručeným nejmenším prodloužením při přetržení podle 6.7.2.3.3.3;

Projektovaný teplotní rozsah pro nádrž musí být od -40 °C do 50 °C pro látky přepravované za normálních podmínek. Pro látky manipulované za podmínek zvýšené teploty nesmí být projektovaná

teplota nižší než nejvyšší teplota látky během plnění, vyprazdňování nebo přepravy. Přísnější konstrukční teploty musí být uvažovány pro přemístitelné cisterny provozované v tvrdých klimatických podmínkách;

Jemnozrná ocel znamená ocel, která má rozměr feritických zrn 6 nebo menší, pokud je určen podle ASTM E 112-96 nebo definován v normě EN 10028-3, část 3;

Tavný prvek znamená opětne neuzavíratelné zařízení pro vyrovnávání tlaku, které je teplotně ovládáno.

Přemístitelná cisterna pro přepravu v systému offshore znamená přemístitelnou cisternu speciálně konstruovanou pro opětne použití pro přepravu do, z a mezi příbřežními zařízeními. Přemístitelná cisterna pro přepravu v systému offshore je zkonstruována a vyrobena podle pokynů pro schvalování kontejnerů přepravovaných po otevřených mořích stanovených Mezinárodní námořní organizací (International Maritime Organization) v dokumentu MSC/Circ. 860.

6.7.2.2 **Všeobecné konstrukční a výrobní požadavky**

6.7.2.2.1 Nádrže musí být konstruovány a vyrobeny v souladu s požadavky na tlakové nádoby uznávanými příslušným orgánem. Nádrže musí být vyrobeny z kovových materiálů vhodných pro tváření. Materiály musí v zásadě odpovídat národním a mezinárodním materiálovým normám. Pro svařované nádrže musí být použit pouze materiál, jehož svařitelnost byla plně prokázána. Svary musí být odborně provedeny a zaručovat úplnou bezpečnost. Pokud je to pro výrobní proces a materiály nezbytné, musí být nádrže vhodně tepelně zpracovány, aby byla zaručena přiměřená pevnost ve svaru a tepelně ovlivněných zónách. Při volbě materiálu musí být zohledněno riziko křehkého lomu, napětí korozivních trhlin a odolnost proti nárazu. Pokud je použita jemnozrná ocel, zaručená hodnota meze průtažnosti nesmí být vyšší než 460 N/mm² a zaručená hodnota horní meze pevnosti v tahu nesmí být vyšší než 725 N/mm² podle specifikace materiálu. Hliník může být použit jako konstrukční materiál, jen pokud je uveden ve zvláštním ustanovení pro přemístitelnou cisternu pro zvláštní látku v sloupci (11) tabulky A kapitoly 3.2 nebo pokud je to schváleno příslušným orgánem. Pokud je hliník schválen, musí být izolován, aby se zabránilo ztrátě fyzikálních vlastností, pokud je podroben tepelnému zatížení 110 kW/m² po dobu nejvýše 30 minut. Izolace musí zůstat účinná při všech teplotách do 649 °C a musí být potažena materiálem s bodem tavení nejméně 700 °C. Materiály přemístitelných cisteren musí být vhodné pro okolní prostředí, ve kterém mohou být přepravovány.

6.7.2.2.2 Nádrže přemístitelných cisteren, spojovací prvky a potrubí musí být vyrobeny z materiálů, které jsou:

- (a) Podstatně odolné proti působení látky(ek) určené(ých) k přepravě; nebo
- (b) Netečné nebo neutralizované chemickou reakcí; nebo
- (c) Potaženy antikoročním materiálem přímo nataženým na nádrž nebo spojeným rovnocennými prostředky.

6.7.2.2.3 Těsnění musí být vyrobena z materiálů odolných proti látkám určeným k přepravě.

6.7.2.2.4 Pokud jsou nádrže potaženy, potažení musí být dostatečně odolné proti působení látky(ek) určené(ých) k přepravě, homogenní, neporézní, bez trhlin, dostatečně pružné a shodné charakteristiky tepelné roztažnosti nádrže. Potažení každé nádrže, upevnění nádrže a potrubí musí být souvislé a musí pokrývat celou plochu jakékoli příruby. Pokud jsou vnější upevnění přivařena na cisternu, potažení musí být souvislé na upevnění a kolem celé plochy vnějších přírub.

6.7.2.2.5 Spoje a švy potažení musí být provedeny zatavením materiálů nebo jinými rovnocennými prostředky.

6.7.2.2.6 Dotyk různých kovů, které by mohly způsobit poškození galvanickými účinky, není přípustěn.

6.7.2.2.7 Materiály přemístitelné cisterny, včetně jakýchkoli přístrojů, těsnění, potažení a příslušenství nesmějí nepříznivě ovlivňovat látky určené k přepravě v přemístitelné cisterně.

6.7.2.2.8 Přemístitelné cisterny musí být konstruovány a vyrobeny s podporami pro bezpečnou základnu během přepravy a vhodnými zvedacími a spouštěcími upevňovacími prvky.

- 6.7.2.2.9** Přemístitelné cisterny musí být konstruovány tak, aby odolaly beze ztráty obsahu nejméně vnitřnímu tlaku způsobenému obsahem a statickým, dynamickým a tepelným zatížením během normálních podmínek manipulace a dopravy. Konstrukce musí prokázat, že únavové účinky způsobené těmito opakovanými namáháními v průběhu očekávané životnosti přemístitelné cisterny byly zohledněny.
- 6.7.2.2.10** Nádrž, která má být vybavena zařízením pro vyrovnávání podtlaku, musí být konstruována tak, aby odolala bez trvalé deformace vnějšímu tlaku nejméně 0,21 baru nad vnitřní tlak. Zařízení pro vyrovnávání podtlaku musí být nastaveno tak, aby vypouštělo při podtlaku do minus (-)0,21 baru, pokud nádrž není konstruována pro vyšší vnější přetlak; v takovém případě nesmí být odpouštěcí tlak zařízení vyšší než výpočtový podtlak cisterny. Nádrž používaná pro přepravu tuhých látek (práškových nebo zrnitých) pouze obalových skupin II nebo III, které během přepravy nezkapalňují, může být zkonstruována pro nižší vnější tlak, podléhající schválení příslušného orgánu. V tomto případě musí být podtlakový ventil nastaven tak, aby otevřel při tomto nižším tlaku. Nádrž, která nemá být vybavena zařízením pro vyrovnávání podtlaku, musí být konstruována tak, aby odolala bez trvalé deformace vnějšímu tlaku nejméně 0,4 baru nad vnitřní tlak.
- 6.7.2.2.11** Podtlak vyrovnávající zařízení používané na přemístitelných cisternách, určených pro přepravu látek splňujících kritéria bodu vzplanutí třídy 3, včetně zahřátých látek přepravovaných při nebo nad jejich bodem vzplanutí, musí být chráněno proti okamžitému prošlehnutí plamene do nádrže, nebo musí mít přemístitelná cisterna nádrž schopnou odolat bez úniku obsahu výbuchu z prošlehnutí plamene do nádrže.
- 6.7.2.2.12** Přemístitelné cisterny a jejich upevnění musí při nejvyšším dovoleném zatížení být schopny absorbovat následující jednotlivé statické síly:
- (a) Ve směru jízdy: dvojnásobek MPGM násobená zemským zrychlením (g)¹;
 - (b) Vodorovně kolmo na směr jízdy: MPGM (pokud směr jízdy není jasně určen, síly musí být rovnocenné dvojnásobku MPGM) násobená zemským zrychlením (g)¹;
 - (c) Svisle vzhůru: MPGM násobená zrychlením (g)¹; a
 - (d) Svisle dolů: dvojnásobek MPGM (celkové zatížení včetně účinku gravitace) násobené zemským zrychlením (g)¹.
- 6.7.2.2.13** U každé ze sil v 6.7.2.2.12 musí být zachován koeficient bezpečnosti takto:
- (a) Pro kovy mající výrazně definovanou mez průtažnosti koeficient 1,5 ve vztahu k mezi tažnosti; nebo
 - (b) Pro kovy nemající výrazně definovanou mez průtažnosti koeficient 1,5 ve vztahu k zaručeným 0,2 % prokázané průtažnosti a pro austenitické oceli 1 % prokázané průtažnosti.
- 6.7.2.2.14** Hodnoty meze pevnosti nebo prokázané pevnosti musí být hodnoty podle národních a mezinárodních materiálových norem. Pokud jsou používány austenitické oceli, stanovené nejnižší hodnoty meze pevnosti nebo prokázané pevnosti podle materiálových norem mohou být zvýšeny o 15 %, pokud jsou tyto vyšší hodnoty ověřeny v kontrolních osvědčeních materiálu. Pokud neexistuje žádná materiálová norma pro daný materiál, hodnota meze pevnosti nebo prokázané pevnosti musí být schválena příslušným orgánem.
- 6.7.2.2.15** Přemístitelné cisterny musí být možno elektricky uzemnit, pokud jsou určeny pro přepravu látek s bodem vzplanutí podle kritérií pro třídu 3 včetně zahřátých látek přepravovaných při teplotě rovné nebo převyšující jejich bod vzplanutí. Musí být provedena taková opatření, aby se zamezilo nebezpečnému elektrostatickému výboji.
- 6.7.2.2.16** Pokud je to požadováno pro určité látky vhodným pokynem pro přemístitelné cisterny uvedeným ve sloupci (10) tabulky A kapitoly 3.2 a popsáném v 4.2.5.2.6 nebo zvláštním ustanovením pro přemístitelné cisterny uvedeným ve sloupci (11) tabulky A kapitoly 3.2 a popsáným v 4.2.5.3, přemístitelné cisterny musí být provedeny s dodatečnou ochranou, která může mít formu dodatečné tloušťky nádrže nebo vyššího zkušebního tlaku, dodatečné tloušťky stěny nebo vyššího zkušebního tlaku stanoveného podle přirozeného nebezpečí spojeného s přepravou daných látek.

¹ Pro účely výpočtu $g = 9,81 \text{ m/s}^2$.

6.7.2.3 **Konstrukční kritéria**

6.7.2.3.1 Nádrže musí být konstruovány na základě matematické analýzy namáhání nebo experimentální míry odolnosti napětí nebo jinými metodami schválenými příslušným orgánem.

6.7.2.3.2 Nádrže musí být konstruovány a vyrobeny tak, aby odolaly hydraulickému zkušebnímu tlaku rovnému nejméně 1,5 násobku výpočtového tlaku. Zvláštní požadavky pro určité látky v příslušném pokynu pro přemístitelné cisterny jsou uvedeny v sloupci (10) tabulky A kapitoly 3.2 a popsány ve 4.2.5.2.6 nebo ve zvláštním ustanovení pro přemístitelné cisterny uvedeném ve sloupci (11) tabulky A kapitoly 3.2 a popsáném ve 4.2.5.3. Pozornost je věnována požadavkům na nejmenší tloušťku stěn nádrže těchto cisteren uvedeným v 6.7.2.4.1 až 6.7.2.4.10.

6.7.2.3.3 Pro kovy vykazující zřetelnou mez pevnosti nebo charakterizované zaručenou prokázanou pevností (0,2 % prokázané pevnosti obecně nebo 0,1 % prokázané pevnosti pro austenitické oceli) primární povrchové napětí σ (sigma) v nádrži nesmí překročit 0,75 Re nebo 0,50 Rm, podle toho, která z nich je nižší, při zkušebním tlaku, kde:

Re = výrazná mez průtažnosti v N/mm² nebo 0,2 % prokázané průtažnosti nebo pro austenitické ocele 1 % prokázané průtažnosti;
Rm = zaručená minimální pevnost v tahu v N/mm².

6.7.2.3.3.1 Použité hodnoty Re a Rm musí být stanoveny jako nejmenší hodnoty podle národních a mezinárodních materiálových norem. Pokud je použita austenitická ocel, stanovené nejnižší hodnoty pro Re a Rm podle materiálových norem mohou být zvýšeny až o 15 %, jestliže vyšší hodnoty jsou ověřeny v materiálovém kontrolním osvědčení. Neexistují-li žádné materiálové normy pro daný kov, použité hodnoty Re a Rm musí být schváleny příslušným orgánem nebo jím pověřenou organizací.

6.7.2.3.3.2 Oceli, které mají poměr Re/Rm větší než 0,85, nejsou dovoleny pro výrobu svařovaných nádrží. Hodnoty Re a Rm použité pro stanovení tohoto poměru musí být hodnoty uvedené v materiálovém kontrolním osvědčení.

6.7.2.3.3.3 Oceli použité pro konstrukci nádrží musí mít prodloužení při přetržení v % nejméně 10 000/Rm s absolutním minimem 16 % pro jemnozrné oceli a 20 % pro ostatní oceli. Hliník a hliníkové slitiny používané v konstrukci nádrží musí mít prodloužení při přetržení v % nejméně 10 000/Rm s absolutním minimem 12 %.

6.7.2.3.3.4 Pro účely stanovení skutečných hodnot materiálů je třeba dodat, že pro pláštový materiál musí být osa vzorku kovu pro zkoušku pevnosti v pravém úhlu (kolmá) ke směru stáčení. Stálé prodloužení při přetržení musí být měřeno na zkušebních vzorcích v pravoúhlých příčných řezech v souladu s ISO 6892:1998 používající 50 mm měrné délky.

6.7.2.4 **Minimální tloušťka stěny**

6.7.2.4.1 Minimální tloušťka stěny musí být větší než tloušťka stanovená takto:

- (a) Minimální tloušťka stěny stanovená podle požadavků 6.7.2.4.2 až 6.7.2.4.10;
- (b) Minimální tloušťka stěny stanovená podle uznávaných předpisů pro tlakové nádoby včetně požadavků v 6.7.2.3; a
- (c) Minimální tloušťka stěny stanovená v příslušném pokynu pro přemístitelné cisterny uvedeném ve sloupci (10) tabulky A kapitoly 3.2 a popsáném v 4.2.5.2.6 nebo stanovená podle zvláštního ustanovení pro přemístitelné cisterny uvedeného ve sloupci (11) tabulky A kapitoly 3.2 a popsáného v 4.2.5.3.

6.7.2.4.2 Cylindrické části, konce (dna) a kryty uzávěrů nádrží o průměru do 1,8 m musí mít tloušťku nejméně 5 mm v referenční oceli nebo rovnocennou tloušťku použitého kovu. Nádrže o průměru větším než 1,8 m musí mít tloušťku nejméně 6 mm v referenční oceli nebo rovnocennou tloušťku použitého kovu kromě toho, že pro práškové a zrnité tuhé látky obalové skupiny II nebo III může být požadavek na minimální tloušťku snížen na nejméně 5 mm tloušťky v referenční oceli nebo rovnocennou tloušťku použitého kovu.

- 6.7.2.4.3** Pokud je provedena dodatečná ochrana nádrže proti poškození, přemístitelné cisterny se zkušebními tlaky menšími než 2,65 baru mohou mít minimální tloušťku stěny zmenšenou úměrně k provedené ochraně schválené příslušným orgánem. Avšak nádrže o průměru nejvýše 1,8 m nesmějí mít tloušťku menší než 3 mm v referenční oceli nebo rovnocennou tloušťku použitého kovu. Nádrže o průměru větším než 1,8 m nesmějí mít tloušťku menší než 4 mm v referenční oceli nebo rovnocennou tloušťku použitého kovu.
- 6.7.2.4.4** Cylindrické části, konce (dna) a kryty uzávěrů nádrží nesmějí mít tloušťku menší než 3 mm bez ohledu na materiál konstrukce.
- 6.7.2.4.5** Dodatečná ochrana uvedená v 6.7.2.4.3 může být provedena celkovou vnější konstrukční ochranou, jako vhodnou "sendvičovou" konstrukcí s vnější ochranou (pláštěm) upevněnou k nádrži, konstrukcí dvojité stěny nebo uzavřením nádrže v kompletním rámu s podélnými a příčnými konstrukčními prvky.
- 6.7.2.4.6** Rovnocenná tloušťka kovu jiná než předepsaná pro referenční ocel v 6.7.2.4.2 musí být stanovena podle tohoto vzorce:

$$e_1 = \frac{21,4 e_0}{\sqrt[3]{Rm_1 A_1}}$$

kde:

- e_1 = požadovaná rovnocenná tloušťka (v mm) použitého kovu;
 e_0 = minimální tloušťka (v mm) referenční oceli stanovená v příslušném pokynu pro přemístitelné cisterny uvedeném ve sloupci (10) tabulky A kapitoly 3.2 a popsáném v 4.2.5.2.6 nebo ve zvláštním ustanovení pro přemístitelné cisterny uvedeném ve sloupci (11) tabulky A kapitoly 3.2 a popsáném v 4.2.5.3;
 Rm_1 = minimální zaručená pevnost v tahu (v N/mm²) použitého kovu (viz 6.7.2.3.3);
 A_1 = zaručené minimální prodloužení při přetržení (v %) použitého kovu podle národních nebo mezinárodních norem.

- 6.7.2.4.7** Pokud je v příslušném pokynu pro přemístitelné cisterny v 4.2.5.2.6 uvedena minimální tloušťka 8 mm nebo 10 mm, je třeba poznamenat, že tyto tloušťky jsou založeny na vlastnostech referenční oceli a průměru nádrže 1,80 m. Pokud je použit kov jiný než měkká ocel (viz 6.7.2.1) nebo nádrž má průměr větší než 1,80 m, tloušťka musí být stanovena podle tohoto vzorce:

$$e_1 = \frac{21,4 e_0 d_1}{1,8 \sqrt[3]{Rm_1 A_1}}$$

kde:

- e_1 = požadovaná rovnocenná tloušťka (v mm) použitého kovu;
 e_0 = minimální tloušťka (v mm) referenční oceli stanovené v příslušném pokynu pro přemístitelné cisterny uvedeném ve sloupci (10) tabulky A kapitoly 3.2 a popsáném v 4.2.5.2.6 nebo ve zvláštním ustanovení pro přemístitelné cisterny uvedeném ve sloupci (11) tabulky A kapitoly 3.2 a popsáném v 4.2.5.3;
 d_1 = průměr nádrže (v m), avšak nejméně 1,80 m;
 Rm_1 = minimální zaručená pevnost v tahu (v N/mm²) použitého kovu (viz 6.7.2.3.3);
 A_1 = zaručené minimální prodloužení při přetržení (v %) použitého kovu podle národních nebo mezinárodních norem.

- 6.7.2.4.8** V žádném případě nesmí být tloušťka stěny nádrže menší, než je předepsána v 6.7.2.4.2, 6.7.2.4.3 a 6.7.2.4.4. Všechny části nádrže musí mít minimální tloušťku stanovenou v 6.7.2.4.2 až 6.7.2.4.4. Tato tloušťka musí být výlučně bez jakéhokoli přídatku na korozi.

- 6.7.2.4.9** Pokud je použita měkká ocel (viz 6.7.2.1), pro výpočet se nevyžaduje použití vzorce v 6.7.2.4.6.

- 6.7.2.4.10** V místech připojení konců (den) k cylindrické části nádrže nesmějí být žádné změny tloušťky.

6.7.2.5 Provozní výstroj

- 6.7.2.5.1** Provozní výstroj musí být tak uspořádána, aby byla chráněna proti nebezpečí utržení nebo poškození během přepravy a manipulace. Pokud spoj mezi rámem a nádrží dovoluje relativní pohyb mezi jednotlivými konstrukčními částmi, musí být výstroj upevněna tak, aby dovozovala takový pohyb

bez nebezpečí poškození provozních částí. Vnější spojovací vyprazdňovací prvky (potrubí, uzavírací ventily), vnitřní uzavírací ventil a jeho sedlo musí být chráněny proti nebezpečí utržení působením vnějších sil (např. použitím pružných částí). Plnicí a vyprazdňovací zařízení (včetně přírub nebo šroubových uzávěrů) a jakékoliv ochranné kryty musí umožňovat zajištění proti nežádoucímu otevření.

- 6.7.2.5.2** Všechny otvory nádrže určené pro plnění a vyprazdňování přemístitelné cisterny musí být vybaveny ručně ovládaným uzavíracím ventilem umístěným co nejbližší k nádrži, jak je to jen prakticky možné. Jiné otvory kromě otvorů pro odvětrání nebo odpouštění tlaku musí být vybaveny buď uzavíracím ventilem nebo jinými vhodnými uzavíracími prostředky upevněnými co nejbližší k nádrži jak je to možné.
- 6.7.2.5.3** Všechny přemístitelné cisterny musí být vybaveny otvorem s kryty nebo jinými kontrolními otvory vhodných rozměrů dovolujícími vnitřní kontrolu a přiměřený vstup pro údržbu a opravy vnitřku. Komorové přemístitelné cisterny musí mít otvor s krytem nebo jiné kontrolní otvory pro každou komoru.
- 6.7.2.5.4** Vnější spojovací prvky musí být, pokud je to možné, seskupeny. Pro izolaci přemístitelných cisteren musí být vrchní spojovací prvky obkrouženy zásobníkem pro únik s vhodným odtokem.
- 6.7.2.5.5** Každý spoj na přemístitelné cisterně musí být zřetelně označen s uvedením své funkce.
- 6.7.2.5.6** Každý uzavírací ventil nebo jiné uzavírací prostředky musí být konstruovány a vyrobeny na jmenovitý tlak nádrže MAWP a vyšší s ohledem na teploty očekávané během přepravy. Všechny uzavírací ventily se šroubovými uzávěry musí být uzavírány pravotočivým pohybem ručního kola. Pro ostatní ventily musí být poloha (otevřeno - zavřeno) a směr uzavírání zřetelně vyznačeny. Všechny uzavírací ventily musí být konstruovány tak, aby se zabránilo nežádoucímu otevření.
- 6.7.2.5.7** Pohyblivé části, jako jsou kryty, části uzávěrů atd., nesmějí být vyrobeny z nechráněné korozivní oceli, pokud mohou přijít do styku třením nebo dotykem s hliníkovými přemístitelnými cisternami určenými pro přepravu látek splňujících kritérium bodu vzplanutí třídy 3, včetně zahřátých látek přepravovaných při teplotě rovné nebo vyšší, než je jejich bod vzplanutí.
- 6.7.2.5.8** Potrubí musí být konstruováno, vyrobeno a instalováno tak, aby se zabránilo nebezpečí poškození působením tepelné roztaživosti a smršťování mechanických rázů a vibrací. Všechna potrubí musí být z vhodného kovového materiálu. Svařované spoje potrubí musí být používány všude, kde je to jen možné.
- 6.7.2.5.9** Spoje v měděném potrubí musí být spájeny nebo mít rovnocenně pevné kovové spojení. Bod tavení pájecích materiálů nesmí být vyšší než 525 °C. Spoje nesmějí snižovat pevnost potrubí, což se může stát u šroubových spojů.
- 6.7.2.5.10** Průřzný tlak všech potrubí a spojovacích prvků potrubí nesmí být menší než nejvyšší čtyřnásobek MAWP nádrže nebo čtyřnásobek tlaku, kterému může být vystavena v provozu při činnosti čerpadla nebo jiného zařízení (kromě zařízení na vyrovnávání tlaku).
- 6.7.2.5.11** Tažné kovy smějí být používány při konstrukci ventilů a příslušenství.

6.7.2.6 *Spodní otvory*

- 6.7.2.6.1** Určité látky nesmějí být přepravovány v přemístitelných cisternách se spodními otvory. Pokud vhodný pokyn pro přemístitelné cisterny uvedený ve sloupci (I0) tabulky A kapitoly 3.2, popsany v 4.2.5.2.6 stanoví, že spodní otvory jsou zakázány, nesmějí být žádné otvory pod hladinou kapaliny v nádrži, pokud je plněna na svoje nejvyšší dovolené plnění. Pokud je existující otvor uzavřen, musí být opatřen deskou vnitřním a vnějším přivařením k nádrži.
- 6.7.2.6.2** Otvory spodního vyprazdňování přemístitelných cisteren přepravujících určité tuhé krystalizující nebo vysoce viskosní látky musí být vybaveny nejméně dvěma v sérii uspořádanými a vzájemně nezávislými uzavíracími zařízeními. Konstrukce zařízení musí být schválena příslušným orgánem nebo jím pověřenou organizací a musí zahrnovat:
- a) Vnější uzavírací ventil upevněný co nejbližší k nádrži a konstruovaný tak, aby se zabránilo nežádoucímu otevření při nárazu nebo jiném neúmyslném jednání; a

- b) Vodotěsný uzávěr na konci vyprazdňovacího potrubí, který může být uzavřen slepou přírubou nebo šroubovou čepičkou.

6.7.2.6.3 Každý vývod spodního vyprazdňování, kromě uvedených v 6.7.2.6.2, musí být vybaven třemi v sérii uspořádanými a vzájemně nezávislými uzavíracími zařízeními. Konstrukce zařízení musí být schválena příslušným orgánem nebo jím pověřenou organizací musí zahrnovat:

- a) Samouzavírací vnitřní uzavírací ventil, jímž je uzavírací ventil v nádrži nebo v přivařené přírubě nebo jeho společné přírubě s tím, že:
- (i) Ovládací zařízení pro provoz ventilu je konstruováno tak, aby se zabránilo nežádoucímu otevření při nárazu nebo jiném neúmyslném jednání;
 - (ii) Ventil může být ovládán svrchu nebo zdola;
 - (iii) Pokud je to možné, nastavení ventilu (otevřeno - zavřeno) musí být možno ověřit ze země;
 - (iv) Kromě přemístitelných cisteren s vnitřním objemem nejvýše 1000 litrů, musí být možné uzavřít ventil s přístupné polohy přemístitelné cisterny, která je vzdálena od ventilu samého; a
 - (v) Ventil musí zůstat provozuschopný v případě poškození vnějšího zařízení pro ovládání činnosti ventilu;
- b) Vnější uzavírací ventil upevněný co nejbliže k nádrži, jak je to prakticky účelné;
- c) Vodotěsný uzávěr na konci vyprazdňovacího potrubí, který může být uzavřen slepou přírubou nebo šroubovou čepičkou.

6.7.2.6.4 Pro podélnou nádrž může být vnitřní uzavírací ventil požadovaný v 6.7.2.6.3(a) nahrazen dodatečným vnějším zavíracím ventilem. Výrobce musí splnit požadavky příslušného orgánu nebo jím pověřené organizace.

6.7.2.7 *Bezpečnostní zařízení*

6.7.2.7.1 Všechny přemístitelné cisterny musí být vybaveny nejméně jedním zařízením pro vyrovnávání tlaku. Všechna tato zařízení musí být konstruována, vyrobena a označena podle požadavků příslušného orgánu nebo jím pověřené organizace.

6.7.2.8 *Zařízení pro vyrovnávání tlaku*

6.7.2.8.1 Každá přemístitelná cisterna s vnitřním objemem nejméně 1900 litrů a každá nezávislá komora přemístitelné cisterny se stejným vnitřním objemem, musí být vybavena jedním nebo více zařízeními pro vyrovnávání tlaku pružinového typu s případným průtržným kotoučem nebo tavným prvkem a paralelně s pružinovým zařízením, pokud to není zakázáno v odvolávce na 6.7.2.8.3 v příslušném pokynu pro přemístitelné cisterny v 4.2.5.2.6. Zařízení pro vyrovnávání tlaku musí mít dostatečnou kapacitu, aby zabránilo roztržení nádrže vlivem přetlaku nebo podtlaku způsobeného plněním, vyprazdňováním nebo zahříváním obsahu.

6.7.2.8.2 Zařízení pro vyrovnávání tlaku musí být konstruováno tak, aby se zabránilo vniknutí cizích předmětů, úniku kapaliny a vývoji nebezpečného nadměrného tlaku.

6.7.2.8.3 Pokud je to požadováno pro určité látky příslušným pokynem pro přemístitelné cisterny uvedeným v sloupci (10) tabulky A kapitoly 3.2 a popsaným v 4.2.5.2.6, musí mít přemístitelné cisterny zařízení pro vyrovnávání tlaku schválené příslušným orgánem. Pokud není přemístitelná cisterna vyhrazena pro přepravu jedné látky a vybavena schváleným zařízením pro vyrovnávání tlaku vyrobeným z materiálů snášlivých s přepravovanou látkou, musí zařízení pro vyrovnávání tlaku obsahovat průtržný kotouč předcházející pružinovému zařízením pro vyrovnávání tlaku. Pokud je průtržný kotouč vložen do série s požadovaným zařízením pro vyrovnávání tlaku, prostor mezi průtržným kotoučem musí být vybaven měřidlem tlaku nebo indikátorem protřetí kotouče proděravění nebo úniku, který mohl způsobit špatná funkce systému pro vyrovnávání tlaku. Průtržný kotouč se musí protřhnout při tlaku o 10 % vyšším, než je počáteční vypouštěcí tlak zařízení pro vyrovnávání tlaku.

- 6.7.2.8.4** Každá přemístitelná cisterna s vnitřním objemem menším než 1900 litrů musí být vybavena zařízením pro vyrovnávání tlaku, kterým může být průtržný kotouč, pokud tento kotouč odpovídá požadavkům v 6.7.2.11.1. Pokud není použito pružinové zařízení pro vyrovnávání tlaku, musí být průtržný kotouč nastaven na protržení při jmenovitém tlaku rovném zkušebnímu tlaku. Kromě toho, tavné prvky odpovídající 6.7.2.10.1 mohou být také použity.
- 6.7.2.8.5** Pokud je nádrž vybavena pro tlakové vyprázdnění, musí být vstupní potrubí osazeno vhodným zařízením pro vyrovnávání tlaku nastaveným tak, aby pracovalo při tlaku nejvýše MAWP nádrže a uzavírací ventil byl upevněn co nejbliže k nádrži jak je to možné.
- 6.7.2.9** ***Nastavení zařízení pro vyrovnávání tlaku***
- 6.7.2.9.1** Je třeba připomenout, že zařízení pro vyrovnávání tlaku musí pracovat pouze v podmínkách nadměrného zvýšení teploty, jelikož cisterna nepodléhá nadměrným změnám tlaku během normálních podmínek přepravy (viz 6.7.2.12.2).
- 6.7.2.9.2** Požadované zařízení pro vyrovnávání tlaku musí být nastaveno tak, aby začalo vypouštět při jmenovitém tlaku pěti šestin zkušební tlaku pro nádrže mající zkušební tlak nejvýše 4,5 baru a 110 % dvou třetin zkušební tlaku pro nádrže mající zkušební tlak větší než 4,5 baru. Po vypuštění se zařízení musí uzavřít tlakem nejvýše o 10 % nižším, než je otevírací tlak. Zařízení musí zůstat uzavřeno při všech nižších tlacích. Tento požadavek nezabraňuje použití tlaku zařízení pro vyrovnávání tlaku nebo kombinace tlakových a podtlakových vyrovnávacích zařízení.
- 6.7.2.10** ***Tavné prvky***
- 6.7.2.10.1** Tavné prvky musí fungovat při teplotě mezi 100 °C a 149 °C za podmínky, že tlak v nádrži při tavné teplotě nebude vyšší než zkušební tlak. Musí být umístěny na vrcholu nádrže s jejich vstupy ve výparném prostoru a při použití, pro účely bezpečnosti dopravy, nesmějí být chráněny před vnějším teplem. Tavné prvky nesmějí být používány na přemístitelných cisternách se zkušebním tlakem, který překračuje 2,65 baru nestanoví-li zvláštní ustanovení TP36 ve sloupci (11) tabulky A kapitoly 3.2 jinak. Tavné prvky používané na přemístitelných cisternách určených pro přepravu zahřátých látek musí být konstruovány pro provoz při teplotě vyšší, než bude nejvyšší teplota očekávaná během přepravy, a musí splňovat požadavky příslušného orgánu nebo jím pověřené organizace.
- 6.7.2.11** ***Průtržné kotouče***
- 6.7.2.11.1** Průtržné kotouče, kromě uvedených v 6.7.2.8.3, musí být nastaveny na protržení při jmenovitém tlaku rovném zkušebnímu tlaku v celém rozsahu projektované teploty. Pokud jsou používány průtržné kotouče, musí být věnována zvláštní pozornost požadavkům v 6.7.2.5.1 a 6.7.2.8.3.
- 6.7.2.11.2** Průtržné kotouče musí být vhodné pro podtlaky, které mohou vzniknout v přemístitelné cisterně.
- 6.7.2.12** ***Kapacita zařízení pro vyrovnávání tlaku***
- 6.7.2.12.1** Pružinové zařízení pro vyrovnávání tlaku požadované v 6.7.2.8.1 musí mít příčný průtokový průřez rovnocenný otvoru o průměru 31,75 mm. Pokud je používáno podtlakové zařízení pro vyrovnávání tlaku, musí mít plochu průtokového průřezu nejméně 284 mm².
- 6.7.2.12.2** Kombinovaná dodávková kapacita systému pro vyrovnávání tlaku (s přihlédnutím ke sníženému průtoku, pokud je přemístitelná cisterna vybavena průtržným kotoučem předřazeným pružinovému zařízení pro vyrovnávání tlaku nebo pokud je pružinové zařízení pro vyrovnávání tlaku provedeno se zařízením pro ochranu před prolehnutím plamene) za podmínky kompletního zvládnutí ohně přemístitelné cisterny musí být dostatečná omezit tlak v nádrži o 20 % nad tlak uvádějíci v činnosti zařízení pro vyrovnávání tlaku. Nouzové zařízení pro vyrovnávání tlaku může být použito pro dosažení předepsané vypouštěcí kapacity. Tato zařízení mohou být tavná, pružinová nebo průtržné kotouče nebo kombinace zařízení pružinových a průtržných kotoučů. Celková kapacita zařízení pro vyrovnávání tlaku musí být stanovena použitím vzorce v 6.7.2.12.2.1 nebo tabulky v 6.7.2.12.2.3.
- 6.7.2.12.2.1** Pro stanovení celkové požadované kapacity zařízení pro vyrovnávání tlaku, která musí být součtem individuálních kapacit všech spolupůsobících zařízení, musí být použit následující vzorec:

$$Q = 12,4 \frac{FA^{0,82}}{LC} \sqrt{\frac{ZT}{M}}$$

kde:

Q = minimální požadovaný stupeň v krychlových metrech vzduchu za sekundu (m^3/s) za normálních podmínek: 1 bar a 0 °C (273 K);

F = koeficient této hodnoty:

pro neizolované nádrže F = 1;

pro izolované nádrže F = $U(649 - t)/13,6$ avšak v žádném případě není menší než 0,25;

kde:

U = koeficient prostupu tepla v $kW \cdot m^{-2} \cdot K^{-1}$ při 38 °C

t = skutečná teplota látky během plnění (ve °C); pokud tato teplota není známa, použije se t = 15 °C;

Hodnota koeficientu F výše uvedená pro izolované nádrže může být použita, pokud izolace splňuje požadavky uvedené v 6.7.2.12.2.4;

A = celková plocha vnějšího povrchu nádrže ve čtverečných metrech

Z = koeficient stlačitelnosti plynu za akumulací podmínky (pokud tento koeficient není znám, budiž Z rovno 1);

T = absolutní teplota v Kelvinech ($^{\circ}C + 273$) nad zařízením pro vyrovnávání tlaku za akumulací podmínky;

L = utajené teplo výparnosti kapaliny, v kJ/kg , za akumulací podmínky;

M = molekulární hmotnost vypouštěného plynu;

C = konstanta odvozená z jednoho z následujících vzorců jako funkce poměru k specifických tepel:

$$k = \frac{C_p}{C_v}$$

kde:

C_p = specifické teplo při konstantním tlaku; a

C_v = specifické teplo při konstantním objemu.

Pokud $k > 1$:

$$C = \sqrt{k \left(\frac{2}{k+1} \right)^{\frac{k+1}{k-1}}}$$

Pokud $k = 1$ nebo k není znám:

$$C = \frac{1}{\sqrt{e}} = 0,607$$

kde e je matematická konstanta 2,7183

C může být též převzata z následující tabulky:

k	C	k	C	K	C
1,00	0,607	1,26	0,660	1,52	0,704
1,02	0,611	1,28	0,664	1,54	0,707
1,04	0,615	1,30	0,667	1,56	0,710
1,06	0,620	1,32	0,671	1,58	0,713
1,08	0,624	1,34	0,674	1,60	0,716
1,10	0,628	1,36	0,678	1,62	0,719
1,12	0,633	1,38	0,681	1,64	0,722
1,14	0,637	1,40	0,685	1,66	0,725
1,16	0,641	1,42	0,688	1,68	0,728
1,18	0,645	1,44	0,691	1,70	0,731
1,20	0,649	1,46	0,695	2,00	0,770
1,22	0,652	1,48	0,698	2,20	0,793
1,24	0,656	1,50	0,701		

6.7.2.12.2.2 Jako alternativa k výše uvedeným vzorcům, mohou mít nádrže konstruované pro přepravu kapalin rozměry svých zařízení pro vyrovnávání tlaků podle tabulky v 6.7.2.12.2.3. Tato tabulka počítá s hodnotou koeficientu izolace $F = 1$ a musí být upravena podobně, jako když je nádrž izolována.

$$M = 86,7$$

$$T = 394 \text{ K}$$

$$L = 334,94 \text{ kJ/kg}$$

$$C = 0,607$$

$$Z = 1$$

6.7.2.12.2.3 Minimální nouzová ventilační kapacita, Q , v krychlových metrech vzduchu za sekundu při 1 baru a 0°C (273 K).

A Exponovaná plocha (čtvereční metry)	Q (Krychlové metry vzduchu za sekundu)	A Exponovaná plocha (čtvereční metry)	Q (Krychlové metry vzduchu za sekundu)
2	0,230	37,5	2,539
3	0,320	40	2,677
4	0,405	42,5	2,814
5	0,487	45	2,949
6	0,565	47,5	3,082
7	0,641	50	3,215
8	0,715	52,5	3,346
9	0,788	55	3,476
10	0,859	57,5	3,605
12	0,998	60	3,733
14	1,132	62,5	3,860
16	1,263	65	3,987
18	1,391	67,5	4,112
20	1,517	70	4,236
22,5	1,670	75	4,483
25	1,821	80	4,726
27,5	1,969	85	4,967
30	2,115	90	5,206
32,5	2,258	95	5,442
35	2,400	100	5,676

6.7.2.12.2.4 Izolační systémy používané za účelem snižování ventilační kapacity musí být schváleny příslušným orgánem nebo jím pověřené organizací. Ve všech případech musí izolační systém schválený pro tento účel:

- zůstat účinný při všech teplotách až do 649°C ; a
- být chráněn pláštěm s bodem tavení 700°C nebo vyšším.

6.7.2.13 Značení zařízení pro vyrovnávání tlaku

6.7.2.13.1 Každé zařízení pro vyrovnávání tlaku musí být zřetelně a trvale označeno těmito údaji:

- (a) Tlak (v barech nebo kPa) nebo teplota (ve °C), na které je nastaveno vypouštění;
- (b) Dovolená tolerance vypouštěcího tlaku pro pružinová zařízení pro vyrovnávání tlaku;
- (c) Referenční teplota odpovídající nastavenému tlaku pro průtržné kotouče;
- (d) Dovolená tolerance teploty pro tavné prvky;
- (e) Nastavená průtoková kapacita pružinových zařízení pro vyrovnávání tlaku, průtržných kotoučů nebo tavných prvků v normálních křivkových metrech vzduchu za sekundu (m³/s);
- (f) Příčný průtokový průřez pružinových zařízení pro vyrovnávání tlaku, průtržných kotoučů nebo tavných prvků v mm².

Pokud je to proveditelné, musí být uvedeny následující údaje:

- (g) Jméno výrobce a příslušné katalogové číslo zařízení pro vyrovnávání tlaku.

6.7.2.13.2 Nastavená průtoková kapacita označená na pružinových zařízeních pro vyrovnávání tlaku musí být stanovena podle ISO 4126-1:2004 a ISO 4126-7:2004.

6.7.2.14 Spoje k zařízení pro vyrovnávání tlaku

6.7.2.14.1 Spoje k zařízení pro vyrovnávání tlaku musí být dostatečných rozměrů, aby umožnily neomezeně propustit požadované vypouštění do zařízení pro vyrovnávání tlaku. Žádný uzavírací ventil nesmí být vestavěn mezi nádrž a zařízení pro vyrovnávání tlaku, kromě zdvojeného zařízení pro údržbu nebo jiných důvodů a uzavíracích ventilů sloužících pro uzamčení otevřeného zařízení v provozu nebo uzavíracích ventilů vzájemně uzamčených tak, že alespoň jeden ze zdvojených je vždy v provozu. Nesmí být žádná překážka pro otevírání vedení k zařízení ventilačnímu nebo pro vyrovnávání tlaku, která by mohla omezit nebo uzavřít průtok z nádrže do tohoto zařízení. Otvory nebo potrubí od vyústění zařízení pro vyrovnávání tlaku, pokud jsou používány, musí vypouštět přebytečné páry nebo kapaliny do atmosféry za podmínek minimálního zpětného tlaku do zařízení pro vyrovnávání tlaku.

6.7.2.15 Umístění zařízení pro vyrovnávání tlaku

6.7.2.15.1 Každé vyústění zařízení pro vyrovnávání tlaku musí být umístěno na vrchol nádrže co nejbližší podélnému a příčnému středu nádrže, jak je to proveditelné. Všechna vyústění zařízení pro vyrovnávání tlaku musí být umístěna tak, aby za podmínek maximálního plnění byla ve výparném prostoru nádrže, a zařízení musí být tak uspořádáno, aby zajistilo neomezené vypouštění unikajících par. U hořlavých látek musí být unikající páry vyvedeny přímo ven z nádrže takovým způsobem, aby se nemohly dostat pod nádrž. Ochranná zařízení, která odklánějí proud par, jsou povolena pouze tehdy, nezměňují-li kapacitu zařízení pro vyrovnávání tlaku.

6.7.2.15.2 Uspořádání musí být provedena tak, aby zabránila přístupu nepovolaných osob k zařízení pro vyrovnávání tlaku a chránila tato zařízení před poškozením způsobeným převrácením přemístitelné cisterny.

6.7.2.16 Stavoznaky (měřicí zařízení)

6.7.2.16.1 Skleněné stavoznaky a měřidla vyrobená z křehkého materiálu, která jsou v přímém styku s obsahem nádrže, nesmějí být použity.

6.7.2.17 Podpěry, rámy, zvedací a spouštěcí vybavení přemístitelných cisteren

6.7.2.17.1 Přemístitelné cisterny musí být konstruovány a vyráběny s podpěrnou konstrukcí zajišťující jejich bezpečnou základnu během přepravy. Síly uvedené v 6.7.2.2.12 a koeficient bezpečnosti uvedený

v 6.7.2.2.13 musí být zohledněny při konstrukci. Zarážky, rámy, podstavce nebo jiné podobné konstrukce jsou přípustné.

6.7.2.17.2 Kombinovaná namáhání způsobená konstrukční výstrojí přemístitelné cisterny (např. podstavce, rámy atd.) a zvedací a spouštěcí zařízení nesmějí způsobit nadměrné namáhání v jakékoli části nádrže. Stabilní zvedací a spouštěcí zařízení musí být namontováno na všech přemístitelných cisternách. Přednostně musí být upevněno na podpěry přemístitelné cisterny, avšak může být připevněno k výztužným deskám umístěným na nádrži v bodech jejich podpěr.

6.7.2.17.3 Při konstrukci podpěr a rámu se musí brát v úvahu účinky klimatické koroze.

6.7.2.17.4 Kapsy pro zvedací vidlice musí být uzavíratelné. Prostředky pro uzavření těchto kapes musí tvořit trvalou část rámu nebo být trvale připojeny k rámu. Jednokomorové přemístitelné cisterny o délce menší než 3,65 m nemusí mít tyto kapsy uzavíratelné, pokud:

- (a) jsou nádrž včetně všech spojovacích prvků dobře chráněny proti úderům zvedacích vidlic; a
- (b) vzdálenost mezi středy kapes pro zvedací vidlice je nejméně polovina maximální délky přemístitelné cisterny.

6.7.2.17.5 Pokud nejsou přemístitelné cisterny během přepravy chráněny podle 4.2.1.2, nádrže a provozní výstroj musí být chráněny proti poškození nádrže a provozní výstroje podélným nebo příčným nárazem nebo převrácením. Vnější spojovací prvky musí být chráněny tak, aby byl vyloučen únik obsahu nádrže při nárazu nebo převrácení přemístitelné cisterny na tyto spojovací prvky. Příklady takové ochrany:

- (a) Ochrana proti bočnímu nárazu, kterou mohou tvořit podélné výztuže chránící nádrž z obou stran na výškové úrovni jejího středu;
- (b) Ochrana přemístitelné cisterny proti převrácení, kterou mohou tvořit výztužné prstence nebo výztuže upevněné napříč rámu;
- (c) Ochrana proti nárazu zezadu, kterou může tvořit nárazník nebo rám;
- (d) Ochrana nádrže proti poškození nárazem nebo převrácením použitím rámu ISO podle ISO 1496-3:1995.

6.7.2.18 *Schválení typu*

6.7.2.18.1 Příslušný orgán nebo jím pověřená organizace vydá osvědčení o schválení typu pro jakoukoli novou konstrukci přemístitelné cisterny. Toto osvědčení prokazuje, že přemístitelná cisterna byla prohlédnuta tímto orgánem, je vhodná pro její zamýšlený účel a odpovídá požadavkům této kapitoly a přiměřeným ustanovením pro látky uvedené v kapitole 4.2 a v tabulce A kapitoly 3.2. Pokud série přemístitelných cisteren jsou vyráběny beze změny konstrukce, osvědčení platí pro celé tyto série. Osvědčení musí obsahovat zkušební protokol prototypu, látky nebo skupiny látek dovolené přepravovat, materiály konstrukce nádrže a vnitřního povlaku (pokud byl použit) a schvalovací číslo. Schvalovací číslo musí tvořit mezinárodní rozlišovací značka státu předepsaná v Úmluvě o silničním provozu, Vídeň 1968, a registrační číslo. V osvědčení musí být uvedena jakákoliv alternativní ujednání podle 6.7.1.2.. Schválení konstrukce typu může sloužit pro schválení menších přemístitelných cisteren vyrobených z materiálů téhož druhu a tloušťky, stejnou výrobní technologií a s identickými podpěrami, rovnocennými uzávěry a dalším příslušenstvím.

6.7.2.18.2 Zkušební protokol prototypu pro schválení konstrukce typu musí obsahovat nejméně toto:

- (a) Výsledky zkoušky vhodného rámu uvedené v ISO 1496-3:1995;
- (b) Výsledky první inspekce a zkoušky uvedené v 6.7.2.19.3;
- (c) Výsledky nárazové zkoušky uvedené v 6.7.2.19.1, je-li předepsána.

6.7.2.19 *Inspekce a zkoušení*

6.7.2.19.1 Přemístitelné cisterny odpovídající definici kontejneru podle Mezinárodní úmluvy o bezpečnosti kontejnerů (KBK) z roku 1972 v platném znění, nesmějí být používány. Jejich použití je možné pouze

tehdy, pokud se reprezentativní vzorek každého konstrukčního typu úspěšně ověří zkouškou dynamického nárazu podle Příručky zkoušek a kritérií, díl IV, odstavec 41.

- 6.7.2.19.2** Nádrž a součásti výstroje každé přemístitelné cisterny musí být podrobeny inspekci a zkoušce před jejím prvním uvedením do provozu (první inspekce a zkouška) a potom v nejdéle pětiletých intervalech (periodická inspekce a zkouška po pěti letech) s meziperiodickou inspekci a zkouškou v polovině této doby (periodická inspekce a zkouška po dvou a půl letech). Inspekce a zkouška po dvou a půl letech může být provedena během tří měsíců před nebo po stanoveném datu. Mimořádná inspekce a zkouška musí být provedena bez ohledu na datum poslední periodické inspekce a zkoušky, pokud je to nezbytné podle 6.7.2.19.7.
- 6.7.2.19.3** První inspekce a zkouška přemístitelné cisterny musí zahrnovat kontrolu konstrukčních charakteristik, vnitřní a vnější prohlídku přemístitelné cisterny a jejich spojovacích prvků vzhledem k látkám, které v ní mají být přepravovány, a tlakovou zkoušku. Před uvedením přemístitelné cisterny do provozu musí být též provedeny zkouška těsnosti a kontrola uspokojivého provozu celé provozní výstroje. Pokud byly nádrž a její spojovací prvky tlakově zkoušeny odděleně, musí být po jejich zkompletování podrobeny zkoušce těsnosti.
- 6.7.2.19.4** Periodická inspekce a zkouška po pěti letech, musí zahrnovat vnitřní a vnější prohlídku a, jak je všeobecným pravidlem, hydraulickou tlakovou zkoušku. Opláštění, tepelná izolace a jiné mohou být sejmuty pouze s ohledem na požadovaný rozsah spolehlivého zhodnocení charakteristik přemístitelné cisterny. Pokud nádrž a její výstroj byly zkoušeny odděleně, musí být po jejich zkompletování podrobeny zkoušce těsnosti.
- 6.7.2.19.5** Meziperiodická inspekce a zkouška po 2,5 letech musí zahrnovat nejméně vnitřní a vnější prohlídku přemístitelné cisterny a jejich spojovacích prvků vzhledem k látkám, které v ní mají být přepravovány, zkoušku těsnosti a zkoušku uspokojivého provozu celé provozní výstroje. Opláštění, tepelná izolace a jiné mohou být sejmuty pouze s ohledem na požadovaný rozsah spolehlivého zhodnocení charakteristik přemístitelné cisterny. Pro přemístitelné cisterny určené pro přepravu jedné látky vnitřní prohlídka po 2,5 letech může být vypuštěna nebo nahrazena jinou zkušební metodou nebo inspekčními postupy stanovenými příslušným orgánem nebo jím pověřená organizace.
- 6.7.2.19.6** Přemístitelná cisterna nesmí být plněna a přistavována k přepravě po datu uplynutí platnosti poslední pětileté nebo dvou a půlleté periodické inspekce a zkoušky, jak je požadováno v 6.7.2.19.2. Avšak přemístitelná cisterna naplněná před datem uplynutí platnosti poslední periodické inspekce a zkoušky může být přepravována po dobu nepřesahující tři měsíce od uplynutí platnosti poslední periodické zkoušky nebo inspekce. Kromě toho smí být přemístitelná cisterna přepravována po datu uplynutí platnosti poslední periodické zkoušky a inspekce:
- (a) Po vyprázdnění, ale před vyčištěním, pro účely provedení příští požadované zkoušky nebo inspekce před opětovným naplněním; a
 - (b) Pokud není jinak schváleno příslušným orgánem, pro období nepřekračující šest měsíců od data uplynutí platnosti poslední periodické zkoušky nebo inspekce, aby bylo možno vrátit nebezpečné věci k jejich likvidaci nebo recyklaci. Odvolávka na tuto výjimku musí být uvedena v přepravním dokladu.
- 6.7.2.19.7** Mimořádná inspekce a zkouška je nezbytná, pokud přemístitelná cisterna vykazuje zřetelně poškozené nebo zkorodované plochy nebo únik nebo jiné okolnosti, které ukazují nedostatky, jež by mohly ovlivnit celistvost přemístitelné cisterny. Rozsah mimořádné inspekce a zkoušky musí záviset na rozsahu poškození a zhoršení přemístitelné cisterny. Musí zahrnovat nejméně dvou a půlletou inspekci a zkoušku podle 6.7.2.19.5.
- 6.7.2.19.8** Vnitřní a vnější prohlídky musí zajistit, že:
- (a) nádrž je prohlédnuta se zaměřením na promáčknutí, korozi nebo odření, záhyby, zkroucení, vady ve svarech nebo jiné okolnosti, včetně úniku, které by mohly způsobit, že nádrž není bezpečná pro přepravu;
 - (b) potrubí, ventily, ohřívací/chladicí systém a těsnění jsou prohlédnuty se zaměřením na zkorodované plochy, závady a jiné okolnosti, včetně úniku, které by mohly způsobit, že přemístitelná cisterna není bezpečnou pro plnění, vyprazdňování nebo přepravu;

- (c) zařízení pro těsnění uzavíratelných poklopů je provozuschopné a že zde není žádný únik uzavíratelných vík a těsnění;
- (d) chybějící nebo ztracené západky nebo šrouby na jakémkoli spojení příruby nebo slepé příruby jsou nahrazeny nebo utěsněny;
- (e) všechna pojistná zařízení a ventily jsou bez koroze, zkroucení a jakéhokoli poškození nebo vady, které by mohly zabránit jejich normální činnosti. Uzavírací zařízení a samočinné uzavírací ventily musí být uvedeny v činnost pro prokázání vlastní provozuschopnosti;
- (f) vnitřní povlaky, pokud jsou, jsou prohlédnuty podle kritérií uvedených jeho výrobcem;
- (g) požadovaná značení na přemístitelné cisterně jsou čitelná a v souladu s příslušnými požadavky; a
- (h) rám, podpěry a zařízení pro zdvih přemístitelné cisterny jsou v uspokojivém stavu.

6.7.2.19.9 Inspekce a zkoušky v 6.7.2.19.1, 6.7.2.19.3, 6.7.2.19.4, 6.7.2.19.5 a 6.7.2.19.7 musí být provedeny znalcem nebo za účasti znalce schváleného příslušným orgánem nebo jím pověřenou organizací. Pokud je součástí inspekce a zkoušky tlaková zkouška, musí být provedena zkušební tlakem, který je vyznačen na štítku přemístitelné cisterny. Během tlakové zkoušky musí být přemístitelná cisterna kontrolována na jakýkoliv únik z cisterny, potrubí nebo výstroje.

6.7.2.19.10 Ve všech případech, kdy je prováděno řezání, opalování nebo sváření na nádrži, musí být tyto práce schváleny příslušným orgánem nebo jím pověřenou organizací s ohledem na předpisy pro tlakové nádoby používané pro konstrukci nádrže. Tlaková zkouška musí být provedena navíc k původní tlakové zkoušce po ukončení těchto prací.

6.7.2.19.11 Pokud se objeví jakákoli nebezpečná okolnost, nesmí být přemístitelná cisterna vrácena do provozu, dokud nebyla opravena a zkouška není opakována s uspokojivým výsledkem.

6.7.2.20 Značení

6.7.2.20.1 Každá přemístitelná cisterna musí být opatřena nerezavějícím kovovým štítkem trvale upevněným k přemístitelné cisterně na viditelném místě snadno přístupném pro kontrolu. Pokud z důvodů uspořádání přemístitelné cisterny nemůže být štítek trvale připevněn na nádrž, nádrž musí být označena nejméně informacemi požadovanými kódem příslušné tlakové nádoby. Jako minimum, musí být vyznačeny na štítku nejméně následující informace a to vyražením nebo jinou podobnou metodou:

- (a) Informace o vlastníkovi
 - (i) Registrační číslo vlastníka
- (b) Výrobní informace
 - (i) Země výroby
 - (ii) Rok výroby
 - (iii) Jméno nebo značka výrobce
 - (iv) Výrobcem přidělené sériové číslo
- (c) Informace o schválení

- (i) Znak Spojených národů pro obaly



Tento znak nesmí být použit pro jiné účely než pro osvědčení, že obal, přemístitelná cisterna nebo MEGC splňuje příslušné požadavky kapitoly 6.1, 6.2, 6.3, 6.5, 6.6 nebo 6.7².

- (ii) Země schválení;
- (iii) Pověřená organizace pro schvalování konstrukčního typu
- (iv) Číslo schválení konstrukčního typu

² Tento symbol se používá také pro osvědčení, že velké nádoby pro volně ložené látky schválené pro jiné druhy dopravy odpovídají požadavkům v kapitole 6.8 UN Modelového Regulativu.


- (v) Písmena 'AA', pokud byl konstrukční typ schválen dle ujednání (viz 6.7.1.2);
 - (vi) Předpis pro tlakové nádoby podle kterého byla nádrž zkonstruována
- (d) Tlaky
- (i) MAWP (přetlak v barech nebo kPa)³;
 - (ii) Zkušební tlak (přetlak v barech nebo kPa)³;
 - (iii) Datum první tlakové zkoušky (měsíc a rok);
 - (iv) Identifikační značka znalce účastnícího se první tlakové zkoušky
 - (v) Vnější výpočtový tlak⁴ (přetlak v barech nebo kPa)³;
 - (vi) MAWP pro ohřívací/chladicí systém (přetlak v barech nebo kPa)³; (pokud je použit);
- (e) Teploty
- (i) Rozsah výpočtových teplot (ve °C)³;
- (f) Materiály
- (i) Materiál(y) nádrže a odkaz(y) na materiálové normy;
 - (ii) Ekvivalentní tloušťka pro referenční ocel (v mm)³;
 - (iii) Materiál vnitřní izolační vložky (pokud je použita);
- (g) Vnitřní objem
- (i) Hydraulický vnitřní objem cisterny při 20 °C (v litrech)³;;
Tento údaj je následován symbolem "S", pokud je nádrž rozdělena peřejníky na oddíly s objemem nejvýše 7500 l;
 - (ii) Hydraulický vnitřní objem z každé komory při 20 °C (v litrech)³ (pokud je použit, pro více komorovou cisternu).

Tento údaj je následován symbolem "S", pokud je nádrž rozdělena peřejníky na oddíly s objemem nejvýše 7500 l;
- (h) Periodické inspekce a zkoušky
- (i) Druh poslední periodické zkoušky (2,5-roku, 5-let nebo mimořádná);
 - (ii) Datum poslední periodické zkoušky (měsíc a rok);
 - (iii) Zkušební tlak (přetlak v barech nebo kPa)³ poslední periodické zkoušky (pokud je použita);
 - (iv) Identifikační značka pověřené organizace, která provedla nebo dozorovala poslední zkoušku.

³ Použitá jednotka musí být označena.

⁴ Viz 6.7.2.2.10.

Tabulka 6.7.2.20.1: Příklad značení identifikačním štítkem

Registrační číslo vlastníka					
Výrobní informace					
Země výroby					
Rok výroby					
Výrobce					
Výrobcem přidělené sériové číslo					
Informace o schválení					
	Země schválení				
	Pověřená organizace pro schvalování konstrukčního typu				
	Číslo schválení konstrukčního typu		'AA' (pokud je použito)		
Konstrukční kód nádrže (kód tlakové nádoby)					
Tlaky					
MAWP		bar nebo kPa			
Zkušební tlak		bar nebo kPa			
Datum první tlakové zkoušky:	(měsíc/rok)	Razítko znalce:			
Vnější výpočtový tlak		bar nebo kPa			
MAWP pro ohřívací/chladicí systém (pokud je použito)		bar nebo kPa			
Teplota					
Rozsah výpočtových teplot		°C do	°C		
Materiály					
Materiál(y) nádrže a odkaz(y) na materiálové normy					
Ekvivalent tloušťky k referenční oceli		mm			
Materiál vnitřní izolační vložky (pokud je použita)					
Vnitřní objem					
Hydraulický vnitřní objem cisterny při 20 °C		litry	'S' (pokud je použito)		
Hydraulický vnitřní objem každé komory ____ při 20 °C (pokud je použit, pro více komorové cisterny)		litry	'S' (pokud je použito)		
Periodické zkoušky/inspekce					
Typ zkoušky	Datum zkoušky	Razítko znalce a zkušební tlak ^a	Typ zkoušky	Datum zkoušky	Razítko znalce a zkušební tlak ^a
	(měsíc/rok)	Bar nebo kPa		(měsíc/rok)	bar nebo kPa

^a Zkušební tlak pokud se použije.

6.7.2.20.2 Následující údaje musí být vyznačeny buď na přemístitelné cisterně samé nebo na kovovém štítku pevně umístěném na přemístitelné cisterně:

Jméno provozovatele
 Nejvyšší dovolená celková hmotnost (MPGM) _____ kg
 Vlastní hmotnost _____ kg
 Pokyny pro přemístitelné cisterny v souladu s 4.2.5.2.6.

POZNÁMKA: Pro identifikaci přepravovaných látek, viz též část 5.

6.7.2.20.3 Jestliže je přemístitelná cisterna konstruována a schválena pro manipulaci na otevřeném moři, musí být na identifikačním štítku uvedena slova "OFFSHORE PORTABLE TANK".

6.7.3 Požadavky na konstrukci, výrobu, inspekci a zkoušení přemístitelných cisteren určených pro přepravu nezchlazených zkapalněných plynů

POZNÁMKA: Tyto požadavky se vztahují též na přemístitelné cisterny určené pro pod tlakem přepravované chemikálie (UN 3500, 3501, 3502, 3503, 3504 a 3505).

6.7.3.1 Definice

Pro účely tohoto oddílu se následujícími pojmy rozumí:

Alternativní ujednání znamená schválení zaručené příslušným orgánem pro přemístitelnou cisternu nebo MEGC, které byly konstruovány, vyrobeny nebo zkoušeny podle technických požadavků nebo zkušebních metod jiných, než uvedených v této kapitole;

Přemístitelná cisterna znamená multimodální cisternu s vnitřním objemem větším než 450 litrů používanou pro přepravu nezchlazených zkapalněných plynů třídy 2. Přemístitelná cisterna zahrnuje nádrž s provozní výstrojí a konstrukční výstrojí nezbytnými pro přepravu plynů. Přemístitelnou cisternu musí být možno plnit a vyprazdňovat bez sejmutí konstrukční výstroje. Musí mít stabilizační členy vně nádrže a musí ji být možno zvedat v naplněném stavu. Musí být především konstruována pro zdvih na vozidlo, železniční vůz nebo námořní plavidlo nebo plavidlo pro vnitrozemské vodní cesty a musí být vybavena zádržkami, úchyty nebo příslušenstvím umožňujícím mechanickou manipulaci. Silniční cisternová vozidla, železniční cisternové vozy, nekovové cisterny a velké nádoby pro volně ložené látky (IBC), láhve na plyn a velké nádoby nejsou považovány za spadající do definice přemístitelných cisteren;

Nádrž znamená část přemístitelné cisterny, která obsahuje nezchlazené zkapalněné plyny určené pro přepravu (vlastní cisterna), včetně otvorů a jejich uzávěrů, ale nezahrnuje provozní výstroj a konstrukční výstroj;

Provozní výstroj znamená měřicí přístroje a plnicí, vyprazdňovací, větrací, pojistná a tepelně izolační zařízení;

Konstrukční výstroj znamená výztužné, upevňovací, ochranné a stabilizační prvky vně nádrže;

Nejvyšší dovolený provozní tlak (MAWP) znamená tlak, který nesmí být menší než nejvyšší z dále uvedených tlaků měřených na vrcholu nádrže v provozní poloze, avšak v žádném případě nesmí být nižší než 7 barů:

- (a) Nejvyšší dovolený efektivní přetlak v nádrži během plnění nebo vyprazdňování; nebo
- (b) Nejvyšší dovolený efektivní přetlak, pro který je nádrž konstruována, který musí být:
 - (i) pro nezchlazený zkapalněný plyn uvedený v pokynu pro přemístitelné cisterny T50 v 4.2.5.2.6, MAWP (v barech) uvedený v pokynu pro přemístitelné cisterny T50 pro tento plyn;
 - (ii) pro ostatní nezchlazené zkapalněné plyny nejméně součet:
 - absolutní tlak par (v barech) nezchlazeného zkapalněného plynu při konstrukční referenční teplotě minus 1 bar; a
 - parciální tlak (v barech) vzduchu nebo jiných plynů ve volném prostoru stanoveném při konstrukční referenční teplotě a roztažnosti kapalně fáze a zvýšením střední teploty volně ložené látky $t_r - t_r$ (t_r = teplota plnění, obvykle 15 °C, t_r = 50 °C nejvyšší střední teplota volně ložené látky);
 - (iii) pro chemikálie pod tlakem MAWP (v barech) stanovený v pokynu pro přemístitelné cisterny T50 pro zkapalněnou část plynu propelantů (hnacích plynů) uvedených v T50 v 4.2.5.2.6.

Výpočtový tlak znamená tlak používaný pro výpočty, vyžadovaný schváleným technickým předpisem pro tlakové nádoby. Výpočtový tlak musí být vyšší než nejvyšší z dále uvedených tlaků:

- (a) Nejvyšší dovolený efektivní přetlak v nádrži během plnění nebo vyprazdňování; nebo
- (b) Součet:

- (i) nejvyššího efektivního přetlaku, na který je nádrž konstruována, jak je stanoveno v (b) v definici MAWP (viz výše); a
- (ii) tlaku kapaliny stanoveného na základě statických sil uvedených v 6.7.3.2.9, avšak nejméně 0,35 baru;

Zkušební tlak znamená nejvyšší přetlak ve vrcholu nádrže během tlakové zkoušky;

Zkouška těsnosti znamená zkoušku nádrže a její provozní výstroje používající plyn do vnitřního tlaku nejméně 25 % nejvyššího dovoleného provozního tlaku (MAWP);

Nejvyšší dovolená celková hmotnost (MPGM) znamená součet vlastní hmotnosti přemístitelné cisterny a nejvyšší dovolené užitečné hmotnosti;

Referenční ocel znamená ocel s mezí pevností v tahu 370 N/mm² a prodloužením při přetržení 27 %;

Měkká ocel znamená ocel se zaručenou mezí pevností v tahu 360 N/mm² až 440 N/mm² a zaručeným nejmenším prodloužením při přetržení podle 6.7.3.3.3.3;

Projektovaný teplotní rozsah pro nádrž musí být od -40 °C do 50 °C pro nezchlazené zkapalněné plyny přepravované při normálních klimatických podmínkách. Přísnější projektované teploty musí být uvažovány pro přemístitelné cisterny provozované v tvrdých klimatických podmínkách;

Projektovaná referenční teplota znamená teplotu, při které je pro účely výpočtu MAWP stanovena tenze par obsahu. Projektovaná referenční teplota musí být nižší než kritická teplota nezchlazeného zkapalněného plynu nebo zkapalněného propelantu (hnacího plynu) chemikálií pod tlakem určeného pro přepravu, aby bylo zajištěno, že plyn zůstane vždy zkapalněný. Tato hodnota je pro každý typ přemístitelné cisterny následující:

- (a) Nádrž o průměru 1,5 metru nebo menším: 65 °C;
- (b) Nádrž o průměru větším než 1,5 metru:
 - (i) bez izolace nebo slunečního štítu: 60 °C;
 - (ii) se slunečním štítem (viz 6.7.3.2.12): 55 °C; a
 - (iii) s izolací (viz 6.7.3.2.12): 50 °C;

Plnicí hustota znamená průměrnou hmotnost nezchlazeného zkapalněného plynu na litr vnitřního objemu nádrže(kg/l). Plnicí hustota je uvedena v pokynu pro přemístitelné cisterny T50 v 4.2.5.2.6.

6.7.3.2 Všeobecné konstrukční a výrobní požadavky

6.7.3.2.1 Nádrže musí být zkonstruovány a vyrobeny podle požadavků předpisů pro tlakové nádoby uznávaných příslušným orgánem. Nádrže musí být vyrobeny z oceli vhodné pro tváření. Materiály musí v zásadě odpovídat národním nebo mezinárodním materiálovým normám. Pro svařované nádrže musí být použit pouze materiál, jehož svařitelnost byla plně prokázána. Svary musí být odborně provedeny a musí zaručovat úplnou bezpečnost. Pokud je to nezbytné z hlediska výrobního postupu nebo materiálů, nádrže musí být vhodně tepelně zpracovány pro zajištění přiměřené tuhosti ve svaru a v tepelně namáhaných zónách. Při volbě materiálu musí být vzato v úvahu rozmezí konstrukční teploty s přihlédnutím k nebezpečí křehkého lomu, namáhání korozivními trhlínami a odolnosti proti nárazu. Pokud je použita jemnozrná ocel, zaručená mez pružnosti musí být nejméně 460 N/mm² a zaručená hodnota meze pevnosti nejméně 725 N/mm² podle materiálové specifikace. Materiály přemístitelné cisterny musí být vhodné pro klimatické podmínky, v nichž mohou být přepravovány.

6.7.3.2.2 Nádrže přemístitelných cisteren, spojovací prvky a potrubí musí být vyrobeny z materiálů, které jsou:

- (a) Značně imunní proti působení nezchlazeného(ých) zkapalněného(ých) plynu(ů); nebo
- (b) Přirozeně pasivní nebo neutralizované chemickou reakcí.

6.7.3.2.3 Těsnění musí být vyrobena z materiálů snášlivých s nezchlazeným(i) zkapalněným(i) plynem(y) určených k přepravě.

- 6.7.3.2.4** Musí se zabránit dotyku mezi různými kovy, který by mohl mít za následek poškození galvanickým účinkem.
- 6.7.3.2.5** Materiály přemístitelné cisterny, včetně jakýchkoli zařízení, těsnění a příslušenství nesmějí nepříznivě ovlivnit nezchlazené zkapalněné plyny určené k přepravě v přemístitelné cisterně.
- 6.7.3.2.6** Přemístitelné cisterny musí být konstruovány a vyrobeny s podporami pro bezpečnou základnu během přepravy a vhodnými zvedacími a spouštěcími upevňovacími prvky.
- 6.7.3.2.7** Přemístitelné cisterny musí být konstruovány tak, aby odolaly beze ztráty obsahu nejméně vnitřnímu tlaku způsobenému obsahem a statickým, dynamickým a tepelným zatížením během normálních podmínek manipulace a přepravy. Konstrukce musí prokázat, že byly zohledněny únavové účinky způsobené těmito opakovanými namáháními v průběhu očekávané životnosti přemístitelné cisterny.
- 6.7.3.2.8** Nádrže musí být konstruovány tak, aby odolaly vnějšímu tlaku (přetlaku) nejméně 0,4 baru nad vnitřním tlakem bez trvalé deformace. Jestliže je nádrž vystavena značnému podtlaku před plněním nebo během vyprazdňování, musí být konstruována tak, aby odolala vnějšímu přetlaku nejméně 0,9 baru nad vnitřním tlakem a musí být zkoušena při tomto tlaku.
- 6.7.3.2.9** Přemístitelné cisterny a jejich upevnění musí být schopny při nejvyšším dovoleném zatížení absorbovat následující jednotlivé statické síly:
- (a) Ve směru jízdy: dvojnásobek MPGM násobená zemským zrychlením (g)¹;
 - (b) Vodorovně kolmo na směr jízdy: MPGM (pokud směr jízdy není jasně určen, síly musí být rovnocenné dvojnásobku MPGM) násobená zemským zrychlením (g)¹;
 - (c) Svisle vzhůru: MPGM násobená zrychlením (g)¹; a
 - (d) Svisle dolů: dvojnásobek MPGM (celkové zatížení včetně účinku gravitace) násobená zemským zrychlením (g)¹.
- 6.7.3.2.10** U každé ze sil v 6.7.3.2.9 musí být zachován koeficient bezpečnosti takto:
- (a) Pro kovy mající výrazně definovanou mez pružnosti koeficient bezpečnosti 1,5 ve vztahu k mezi pružnosti; nebo
 - (b) Pro kovy nemající výrazně definovanou mez pružnosti koeficient 1,5 ve vztahu k zaručeným 0,2 % prokázané pružnosti a pro austenitické oceli 1 % prokázané pružnosti.
- 6.7.3.2.11** Hodnoty meze pevnosti nebo prokázané pevnosti musí být hodnoty podle národních a mezinárodních materiálových norem. Pokud jsou používány austenitické oceli, stanovené nejnižší hodnoty meze pevnosti nebo prokázané pevnosti podle materiálových norem mohou být zvýšeny o 15 %, pokud tyto vyšší hodnoty jsou ověřeny v kontrolních osvědčeních materiálu. Pokud neexistuje žádná materiálová norma pro daný materiál, hodnota meze pevnosti nebo prokázané pevnosti musí být schválena příslušným orgánem.
- 6.7.3.2.12** Pokud nádrže určené pro přepravu nezchlazených zkapalněných plynů jsou vybaveny tepelnou izolací, systémy tepelné izolace musí splňovat následující požadavky:
- (a) Musí tvořit plášť pokrývající nejméně jednu třetinu avšak nejvýše jednu polovinu horního povrchu nádrže a oddělen od nádrže vzduchovou vrstvou o výšce asi 40 mm; a
 - (b) Musí tvořit úplné potažení přiměřenou tloušťkou izolačních materiálů tak, aby se zabránilo prostupu vlhkosti a poškození za normálních podmínek přepravy a prostupu tepla nejvýše $0,67 \text{ W.m}^{-2}.\text{K}^{-1}$;
 - (c) Pokud ochranné opláštění je tak uzavřeno, že je plynotěsné, zařízení musí být provedeno tak, aby zabránilo jakémukoli tlaku vyvíjenému v izolační vrstvě v případě nedostatečné plynotěsnosti nádrže a její výstroje;
 - (d) Tepelná izolace nesmí zneshadnit přístup ke spojovacím prvkům a vypouštěcím zařízením.
- 6.7.3.2.13** Přemístitelné cisterny určené pro přepravu hořlavých zchlazených zkapalněných plynů musí být možno elektricky uzemnit.

6.7.3.3 **Konstrukční kritéria**

¹ Pro účely výpočtu $g = 9,81 \text{ m/s}^2$.

- 6.7.3.3.1** Nádrže musí být kruhového průřezu.
- 6.7.3.3.2** Nádrže musí být zkonstruovány a vyrobeny tak, aby odolaly zkušebnímu tlaku nejméně 1,3 násobku výpočtového tlaku. Konstrukce nádrže musí brát v úvahu minimální hodnoty MAWP v pokynu pro přemístitelné cisterny T50 v 4.2.5.2.6 pro každý nezchlazený zkpalněný plyn určený k přepravě. Pozornost se musí věnovat požadavkům na minimální tloušťku nádrže pro nádrže uvedené v 6.7.3.4.
- 6.7.3.3.3** Pro oceli vykazující zřetelnou mez pevnosti nebo charakterizované zaručenou prokázanou pevností (0,2 % prokázané pevnosti obecně nebo 0,1 % prokázané pevnosti pro austenitické oceli) nesmí primární povrchové napětí σ v nádrži překročit 0,75 Re nebo 0,50 Rm, podle toho, která z nich je nižší, při zkušebním tlaku, kde:
- Re = výrazná mez průtažnosti v N/mm² nebo 0,2 % prokázané průtažnosti nebo pro austenitické ocele 1 % prokázané průtažnosti;
- Rm = zaručená minimální pevnost v tahu v N/mm²
- 6.7.3.3.3.1** Použité hodnoty Re a Rm musí být stanoveny jako nejmenší hodnoty podle národních a mezinárodních materiálových norem. Pokud je použita austenitická ocel, mohou být stanovené nejnižší hodnoty pro Re a Rm podle materiálových norem zvýšeny až o 15 %, jestliže jsou vyšší hodnoty ověřeny v kontrolním osvědčení materiálu. Neexistují-li pro daný kov žádné materiálové normy, musí být použité hodnoty Re a Rm schváleny příslušným orgánem nebo jím pověřenou organizací.
- 6.7.3.3.3.2** Oceli, které mají poměr Re/Rm větší než 0,85, nejsou dovoleny pro výrobu svařovaných nádrží. Hodnoty Re a Rm použité pro stanovení tohoto poměru musí být hodnoty uvedené v kontrolním osvědčení materiálu.
- 6.7.3.3.3.3** Oceli použité pro konstrukci nádrží musí mít prodloužení při přetržení v % nejméně 10 000/Rm s absolutním minimem 16 % pro jemnozrné oceli a 20 % pro ostatní oceli.
- 6.7.3.3.3.4** Pro účely stanovení skutečných hodnot materiálů je třeba dodat, že pro plášťový materiál musí být osa vzorku kovu pro zkoušku pevnosti v pravém úhlu (kolmá) ke směru stáčení. Stálé prodloužení při přetržení musí být měřeno na zkušebních vzorcích v pravoúhlých příčných řezech v souladu s ISO 6892:1998 používající 50 mm měrné délky.

6.7.3.4 *Minimální tloušťka stěny*

- 6.7.3.4.1** Minimální tloušťka stěny musí být větší než tloušťka stanovená takto:
- (a) Minimální tloušťka stěny stanovená podle požadavků 6.7.3.4; a
- (b) Minimální tloušťka stěny stanovená podle uznávaných předpisů pro tlakové nádoby včetně požadavků v 6.7.3.3.
- 6.7.3.4.2** Cylindrické části, konce (dna) a kryty uzávěrů nádrží o průměru nejvýše 1,80 m nesmějí mít tloušťku menší než 5 mm v referenční oceli nebo rovnocennou tloušťku v použité oceli. Nádrže o průměru větším než 1,80 m nesmějí mít tloušťku menší než 6 mm v referenční oceli nebo rovnocennou tloušťku v použité oceli.
- 6.7.3.4.3** Cylindrické části, konce (dna) a kryty uzávěrů nádrží nesmějí mít tloušťku menší než 4 mm bez ohledu na výrobní materiál.
- 6.7.3.4.4** Rovnocenná tloušťka oceli jiná než předepsaná pro referenční ocel v 6.7.3.4.2 musí být stanovena podle tohoto vzorce:

$$e_1 = \frac{21,4 e_0}{\sqrt[3]{Rm_1 A_1}}$$

kde:

- e_1 = požadovaná rovnocenná tloušťka (v mm) použité oceli;
- e_0 = minimální tloušťka (v mm) referenční oceli uvedená v 6.7.3.4.2;
- Rm_1 = minimální zaručená pevnost v tahu (v N/mm²) použité oceli (viz 6.7.3.3.3);
- A_1 = zaručené minimální prodloužení při přetržení (v %) použité oceli podle národních nebo mezinárodních norem.

- 6.7.3.4.5** V žádném případě nesmí být tloušťka stěny nádrže menší, než je předepsána v 6.7.3.4.1 až 6.7.3.4.3. Všechny části nádrže musí mít minimální tloušťku stanovenou v 6.7.3.4.1 až 6.7.3.4.3. Tato tloušťka musí být výlučně bez přídavku na korozi.
- 6.7.3.4.6** Pokud je použita měkká ocel (viz 6.7.3.1), pro výpočet se nevyžaduje použití vzorce v 6.7.3.4.4.
- 6.7.3.4.7** V místech připojení konců (den) k cylindrické části nádrže nesmějí být žádné změny tloušťky.
- 6.7.3.5** ***Provozní výstroj***
- 6.7.3.5.1** Provozní výstroj musí být uspořádána tak, aby byla chráněna proti nebezpečí utržení nebo poškození během přepravy a manipulace. Pokud spoj mezi rámem a nádrží dovoluje relativní pohyb mezi jednotlivými částmi konstrukce, výstroj musí být upevněna tak, aby dovolovala takový pohyb bez nebezpečí poškození provozních částí. Vnější spojovací vyprazdňovací prvky (potrubí, uzavírací ventily), vnitřní uzavírací ventil a jeho sedlo musí být chráněny proti nebezpečí utržení působením vnějších sil (např. použitím pružných částí). Plnicí a vyprazdňovací zařízení (včetně přírub nebo šroubových uzávěrů) a jakékoliv ochranné kryty musí umožňovat zajištění proti nežádoucímu uzavření.
- 6.7.3.5.2** Všechny otvory přemístitelných cisteren o průměru větším než 1,5 mm, kromě otvorů pro zařízení pro vyrovnávání tlaku, kontrolních otvorů a uzavřených odvodušňovacích otvorů, musí být vybaveny nejméně třemi vzájemně nezávislými uzavíracími zařízeními v sérii, první vnitřní uzavírací ventil, ventil omezující nadměrný průtok nebo rovnocenné zařízení, druhý vnější uzavírací ventil a třetí slepá příruba nebo rovnocenné zařízení.
- 6.7.3.5.2.1** Pokud je přemístitelná cisterna vybavena ventilem omezujícím nadměrný průtok, tento ventil musí být upevněn tak, že jeho nastavení je uvnitř nádrže, nebo uvnitř svařované příruby nebo, pokud je upevněn na vnějšku, jeho instalace musí být provedena tak, aby v případě nárazu jeho účinnost zůstala zachována. Ventily omezující nadměrný průtok musí být zvoleny a upevněny tak, aby uzavíraly automaticky, jestliže je dosažen nastavený průtok stanovený výrobcem. Spoje a příslušenství vedoucí do nebo z takového ventilu musí mít kapacitu pro průtok větší, než je nastavený průtok ventilu omezujícího průtok.
- 6.7.3.5.3** Pro plnicí a vyprazdňovací otvory musí být prvním uzavíracím zařízením vnitřní uzavírací ventil a druhým musí být uzavírací ventil umístěný na přístupném místě na každém vyprazdňovacím a plnicím potrubí.
- 6.7.3.5.4** Pro spodní plnicí a vyprazdňovací otvory přemístitelných cisteren určených pro přepravu hořlavých a/nebo toxických nezchlazených zkapalněných plynů nebo chemikálií pod tlakem musí být vnitřní uzavírací ventil rychle uzavíracím bezpečnostním zařízením, které uzavírá automaticky v případě neočekávaného pohybu přemístitelné cisterny během plnění nebo vyprazdňování nebo vzniku požáru. S výjimkou přemístitelných cisteren, majících vnitřní objem nejvýše 1000 litrů, musí být možné ovládat toto zařízení dálkově.
- 6.7.3.5.5** Kromě plnicích, vyprazdňovacích a tlak plynu vyrovnávajících otvorů musí mít nádrže otvory, ve kterých jsou upevněna měřidla, teploměry a tlakoměry. Spoje pro takové přístroje musí být provedeny vhodnými přivařenými nástavci nebo kapsami a nesmějí se použít šroubové spoje skrz nádrž.
- 6.7.3.5.6** Všechny přemístitelné cisterny musí být vybaveny kontrolními otvory s kryty nebo jinými kontrolními otvory vhodných rozměrů dovolujícími vnitřní kontrolu a přiměřený vstup pro údržbu a opravy vnitřku.
- 6.7.3.5.7** Vnější spojovací prvky musí být, pokud je to možné, seskupeny.
- 6.7.3.5.8** Každý spoj na přemístitelné cisterně musí být zřetelně označen s uvedením své funkce.
- 6.7.3.5.9** Každý uzavírací ventil nebo jiné uzavírací prostředky musí být konstruovány a vyrobeny na tlak nádrže MAWP a vyšší se zohledněním teplot očekávaných během přepravy. Všechny uzavírací ventily se šroubovými uzávěry musí být uzavírány pravotočivým pohybem ručního kola. Pro ostatní ventily musí být poloha (otevřeno - zavřeno) a směr uzavírání zřetelně vyznačeny. Všechny uzavírací ventily musí být konstruovány tak, aby se zabránilo nežádoucímu otevření.
- 6.7.3.5.10** Potrubí musí být konstruováno, vyrobeno a instalováno tak, aby se zabránilo nebezpečí poškození působením tepelné roztažnosti a smršťování, mechanických rázů a vibrací. Všechna potrubí musí

být z vhodného kovového materiálu. Svařované spoje potrubí musí být používány všude, kde je to jen možné.

6.7.3.5.11 Spoje v měděném potrubí musí být spájeny nebo mít rovnocenně silné kovové spojení. Bod tavení pájecích materiálů nesmí být vyšší než 525 °C. Spoje nesmějí snižovat pevnost potrubí, což se může stát u šroubových spojů.

6.7.3.5.12 Průřzný tlak všech potrubí a spojovacích prvků potrubí nesmí být menší než nejvyšší čtyřnásobek MAWP nádrže nebo čtyřnásobek tlaku, kterému může být podrobena v provozu činností čerpadla nebo jiného zařízení (kromě zařízení na vyrovnávání tlaku).

6.7.3.5.13 Tažné kovy smějí být používány při konstrukci ventilů a příslušenství.

6.7.3.6 *Spodní otvory*

6.7.3.6.1 Určité nezchlazené zkapalněné plyny nesmějí být přepravovány v přemístitelných cisternách se spodními otvory, jestliže pokyn pro přemístitelné cisterny T50 v 4.2.5.2.6 uvádí, že spodní otvory nejsou dovoleny. Žádné otvory v nádrži nesmějí být pod úrovní hladiny kapaliny, je-li plněna na nejvyšší dovolené plnění.

6.7.3.7 *Zařízení pro vyrovnávání tlaku*

6.7.3.7.1 Přemístitelné cisterny musí být provedeny s jedním nebo více pružinovými zařízeními pro vyrovnávání tlaku. Zařízení pro vyrovnávání tlaku se musí otevírat automaticky při tlaku nejméně MAWP a musí být plně otevřeny při tlaku rovném 110 % MAWP. Tato zařízení se musí po vypuštění uzavírat při tlaku nižším nejvýše o 10 % otevíracího tlaku a musí zůstat uzavřena při všech nižších tlacích. Zařízení pro vyrovnávání tlaku musí být typu, který bude odolávat dynamickým silám včetně pohybu kapaliny. Průřzný kotouče, které nejsou uspořádány do série s pružinovým zařízením pro vyrovnávání tlaku, nejsou dovoleny.

6.7.3.7.2 Zařízení pro vyrovnávání tlaku musí být konstruováno tak, aby se zabránilo vniknutí cizí věci, úniku kapaliny a vývoji nebezpečného zvýšeného tlaku.

6.7.3.7.3 Přemístitelné cisterny určené pro přepravu určitých nezchlazených zkapalněných plynů uvedených v pokynu pro přemístitelné cisterny T50 v 4.2.5.2.6 musí mít zařízení pro vyrovnávání tlaku, schválené příslušným orgánem. Pokud není přemístitelná cisterna vyhrazena pro přepravu jedné látky a vybavena schváleným zařízením pro vyrovnávání tlaku vyrobeným z materiálů snášlivých s přepravovanou látkou, takové zařízení musí mít průřzný kotouč předřazený pružinovému zařízením. Prostor mezi průřzným kotoučem a zařízením musí být vybaven měřidlem tlaku nebo vhodným indikačním přístrojem. Toto uspořádání dovoluje odhalení protržení kotouče, propíchnutí nebo úniku, který může způsobit špatnou činnost zařízení pro vyrovnávání tlaku. Průřzný kotouč se musí protrhnout při jmenovitém tlaku o 10 % vyšším, než je počáteční vypouštěcí tlak zařízení pro vyrovnávání tlaku.

6.7.3.7.4 V případě víceúčelových přemístitelných cisteren se musí zařízení pro vyrovnávání tlaku otevírat při tlaku uvedeném v 6.7.3.7.1 pro plyn mající nejvyšší dovolený tlak z plynů, jejichž přeprava je v přemístitelné cisterně dovolena.

6.7.3.8 *Kapacita zařízení pro vyrovnávání tlaku*

6.7.3.8.1 Kombinovaná dodávková kapacita zařízení pro vyrovnávání tlaku musí být dostatečná, aby v případě celkového požáru tlak (včetně akumulace) uvnitř nádrže nepřekročil 120 % MAWP. Pružinová vyrovnávací zařízení musí být použita pro dosažení předepsané plné vypouštěcí kapacity. V případě víceúčelových cisteren musí být kombinovaná dodávková kapacita zařízení pro vyrovnávání tlaku vzata pro plyn, který vyžaduje nejvyšší dodávkovou kapacitu z plynů, jejichž přeprava je v přemístitelných cisternách dovolena.

6.7.3.8.1.1 Pro stanovení celkové požadované kapacity zařízení pro vyrovnávání tlaku, která musí být součtem individuálních kapacit všech spolupůsobících zařízení, musí být použit následující vzorec⁵:

⁵ Tento vzorec se vztahuje pouze na nezchlazené zkapalněné plyny, které mají kritické teploty vyšší než teploty za akumulační podmínky. Pro plyny, které mají kritické teploty blízko nebo pod teplotou akumulační podmínky, výpočet dodávkové kapacity

$$Q = 12,4 \frac{FA^{0,82}}{LC} \sqrt{\frac{ZT}{M}}$$

kde:

Q = minimální požadovaný stupeň v krychlových metrech vzduchu za sekundu (m³/s) za normálních podmínek: 1 bar a 0 °C (273 K);

F = koeficient této hodnoty:

pro neizolované nádrže F = 1;

pro izolované nádrže F = U(649 - t)/13,6, avšak v žádném případě není menší než 0,25,

kde:

U = koeficient prostupu tepla v kW.m⁻².K⁻¹ při 38 °C

t = skutečná teplota nezchlazeného zkapalněného plynu během plnění (ve °C); pokud tato teplota není známa, bude t = 15 °C;

Výše uvedená hodnota F pro izolované nádrže může být použita, pokud izolace splňuje požadavky uvedené v 6.7.3.8.1.2;

kde:

A = celková plocha vnějšího povrchu nádrže ve čtverečných metrech

Z = koeficient stlačitelnosti plynu za akumulací podmínky (pokud tento koeficient není znám, bude Z rovno 1);

T = absolutní teplota v Kelvinech (°C + 273) nad zařízením pro vyrovnávání tlaku za akumulací podmínky;

L = utajené teplo výparnosti kapaliny, v kJ/kg, za akumulací podmínky;

M = molekulární hmotnost vypouštěného plynu;

C = konstanta odvozená z jedné z následujících vzorců jako funkce poměru k specifických tepel:

$$k = \frac{C_p}{C_v}$$

kde:

C_p = specifické teplo při konstantním tlaku; a

C_v = specifické teplo při konstantním objemu.

pokud k > 1:

$$C = \sqrt{k \left(\frac{2}{k+1} \right)^{\frac{k+1}{k-1}}}$$

pokud k = 1 nebo k není znám:

$$C = \frac{1}{\sqrt{e}} = 0,607$$

kde

e je matematická konstanta 2,7183

C může být též převzata z následující tabulky:

k	C	k	C	K	C
1,00	0,607	1,26	0,660	1,52	0,704
1,02	0,611	1,28	0,664	1,54	0,707
1,04	0,615	1,30	0,667	1,56	0,710
1,06	0,620	1,32	0,671	1,58	0,713
1,08	0,624	1,34	0,674	1,60	0,716
1,10	0,628	1,36	0,678	1,62	0,719
1,12	0,633	1,38	0,681	1,64	0,722
1,14	0,637	1,40	0,685	1,66	0,725
1,16	0,641	1,42	0,688	1,68	0,728
1,18	0,645	1,44	0,691	1,70	0,731
1,20	0,649	1,46	0,695	2,00	0,770
1,22	0,652	1,48	0,698	2,20	0,793
1,24	0,656	1,50	0,701		

6.7.3.8.1.2 Izolační systémy používané za účelem snižování ventilační kapacity musí být schváleny příslušným orgánem nebo jím pověřenou organizací. Ve všech případech musí izolační systém schválený pro tento účel:

- (a) zůstat účinný při všech teplotách až do 649 °C; a
- (b) být chráněn pláštěm s bodem tavení 700 °C nebo vyšším.

6.7.3.9 Značení zařízení pro vyrovnávání tlaku

6.7.3.9.1 Každé zařízení pro vyrovnávání tlaku musí být zřetelně a trvale označeno těmito údaji:

- (a) Tlak (v barech nebo kPa), na které je nastaveno vypouštění;
- (b) Dovolená tolerance vypouštěcího tlaku pro pružinová zařízení pro vyrovnávání tlaku;
- (c) Referenční teplota odpovídající nastavenému tlaku pro průtržné kotouče; a
- (d) Nastavená průtoková kapacita zařízení v normálních krychlových metrech vzduchu za sekundu (m³/s);
- (e) Příčný průtokový průřez pružinového zařízení pro vyrovnávání tlaku a průtržných kotoučů v mm².

Pokud je to proveditelné, musí být uvedeny následující údaje:

- (f) Jméno výrobce a příslušné katalogové číslo zařízení pro vyrovnávání tlaku.

6.7.3.9.2 Nastavená průtoková kapacita označená na zařízení pro vyrovnávání tlaku musí být stanovena podle ISO 4126-1:2004 a ISO 4126-7:2004.

6.7.3.10 Spoje k zařízení pro vyrovnávání tlaku

6.7.3.10.1 Spoje k zařízení pro vyrovnávání tlaku musí být dostatečných rozměrů, aby umožnily neomezeně propustit požadované vypouštění do zařízení pro vyrovnávání tlaku. Žádný uzavírací ventil nesmí být vestavěn mezi nádrž a zařízení pro vyrovnávání tlaku, kromě zdvojeného zařízení pro údržbu nebo jiných důvodů a uzavíracích ventilů sloužících pro uzamčení otevřeného zařízení v provozu nebo uzavíracích ventilů vzájemně uzamčených tak, že alespoň jeden ze zdvojených je vždy provozuschopný a schopný splnit požadavky v 6.7.3.8. Nesmí být žádná překážka pro otevírání

vedení k zařízení ventilačnímu nebo pro vyrovnávání tlaku, která by mohla omezit nebo uzavřít průtok z nádrže do tohoto zařízení. Otvory od vyústění zařízení pro vyrovnávání tlaku, pokud jsou používány, musí vypouštět přebytečné páry nebo kapaliny do atmosféry za podmínek minimálního zpětného tlaku do zařízení pro vyrovnávání tlaku.

6.7.3.11 Umístění zařízení pro vyrovnávání tlaku

6.7.3.11.1 Každé vyústění zařízení pro vyrovnávání tlaku musí být umístěno na vrchol nádrže co nejbližší podélnému a příčnému středu nádrže, jak je to proveditelné. Všechna vyústění zařízení pro vyrovnávání tlaku musí být umístěna tak, aby za podmínek maximálního plnění byla ve výparném prostoru nádrže, a zařízení musí být tak uspořádáno, aby zajistilo neomezené vypouštění unikajících par. U hořlavých nezchlazených zkapalněných plynů musí být unikající páry vyvedeny přímo ven z nádrže takovým způsobem, aby se nemohly dostat pod nádrž. Ochranná zařízení, která odkládají proud par, jsou povolena pouze tehdy, nezmenšují-li kapacitu zařízení pro vyrovnávání tlaku.

6.7.3.11.2 Uspořádání musí být provedena tak, aby zabránila přístupu nepovolaných osob k zařízení pro vyrovnávání tlaku a chránila tato zařízení před poškozením způsobeným převrácením přemístitelné cisterny.

6.7.3.12 Stavoznaky (měřicí zařízení)

6.7.3.12.1 Pokud je přemístitelná cisterna určena pro hmotnostní plnění, musí být vybavena jedním nebo více měřicími zařízeními. Skleněné stavoznaky a měřidla vyrobená z křehkého materiálu, která jsou v přímém styku s obsahem nádrže, nesmějí být použita.

6.7.3.13 Podpěry, rámy, zvedací a spouštěcí vybavení přemístitelných cisteren

6.7.3.13.1 Přemístitelné cisterny musí být konstruovány a vyráběny s podpěrnou konstrukcí zajišťující jejich bezpečnou základnu během přepravy. Síly uvedené v 6.7.3.2.9 a koeficient bezpečnosti uvedený v 6.7.3.2.10 musí být při konstrukci zohledněny. Zarážky, rámy, podstavce nebo jiné podobné konstrukce jsou přípustné.

6.7.3.13.2 Kombinovaná namáhání způsobená konstrukční výstrojí přemístitelné cisterny (např. podstavce, rámy atd.) a zvedací a spouštěcí zařízení nesmějí způsobit nadměrné namáhání v jakékoli části nádrže. Stabilní zvedací a spouštěcí zařízení musí být namontována na všech přemístitelných cisternách. Přednostně musí být upevněna na podpěry přemístitelné cisterny, avšak mohou být připevněna i k vyztužným deskám umístěným na nádrži v bodech jejich podpěr.

6.7.3.13.3 Při konstrukci podpěr a rámu se musí brát v úvahu účinky klimatické koroze.

6.7.3.13.4 Kapsy pro zvedací vidlice musí být uzavíratelné. Prostředky pro uzavření těchto kapes musí tvořit trvalou část rámu nebo musí být trvale připojeny k rámu. Jednokomorové přemístitelné cisterny o délce menší než 3,65 m nemusí mít tyto kapsy uzavíratelné, pokud:

- (a) nádrž a všechny spojovací prvky jsou dobře chráněny proti úderům zvedacích vidlí; a
- (b) vzdálenost mezi středy kapes pro zvedací vidlice je nejméně polovina maximální délky přemístitelné cisterny.

6.7.3.13.5 Pokud přemístitelné cisterny nejsou během přepravy chráněny podle 4.2.2.3, nádrže a provozní výstrojí musí být chráněny proti poškození nádrže a provozní výstroje podélným nebo příčným nárazem nebo převrácením. Vnější spojovací prvky musí být chráněny tak, aby byl vyloučen únik obsahu nádrže při nárazu nebo převrácení přemístitelné cisterny na tyto spojovací prvky. Příklady takové ochrany:

- (a) Ochrana proti bočnímu nárazu, kterou mohou tvořit podélné vyztuže chránící nádrž z obou stran na výškové úrovni jejího středu;
- (b) Ochrana přemístitelné cisterny proti převrácení, kterou mohou tvořit vyztužené prstence nebo vyztuže upevněné napříč rámu;
- (c) Ochrana proti nárazu zezadu, kterou může tvořit nárazník nebo rám;
- (d) Ochrana nádrže proti poškození nárazem nebo převrácením použitím rámu ISO podle ISO 1496-3:1995.

6.7.3.14 Schválení konstrukce

- 6.7.3.14.1** Příslušný orgán nebo jím pověřená organizace vydává osvědčení o schválení konstrukce pro jakoukoli novou konstrukci přemístitelné cisterny. Toto osvědčení ověřuje, že přemístitelná cisterna byla prohlédnuta touto organizací, je vhodná pro její zamýšlený účel a odpovídá požadavkům této kapitoly a přiměřeným ustanovením pro plyny uvedeným v pokynu pro přemístitelné cisterny T50 v 4.2.5.2.6. Pokud jsou série přemístitelných cisteren vyráběny beze změny konstrukce, osvědčení platí pro celé tyto série. Osvědčení musí obsahovat zkušební protokol prototypu, plyny dovozené přepravovat, materiály konstrukce nádrže a schvalovací číslo. Schvalovací číslo musí tvořit mezinárodní rozlišovací značka státu předepsaná v Úmluvě o silničním provozu, Vídeň 1968, a registrační číslo. Jakákoliv alternativní ujednání podle 6.7.1.2 musí být uvedena v osvědčení. Schválení konstrukce může sloužit pro schválení menších přemístitelných cisteren vyrobených z materiálů téhož druhu a tloušťky, stejnou výrobní technologií a s identickými podpěrami, rovnocennými uzávěry a dalším příslušenstvím.
- 6.7.3.14.2** Zkušební protokol prototypu pro schválení konstrukce typu musí obsahovat nejméně toto:
- (a) Výsledky zkoušky vhodného rámu uvedené v ISO 1496-3:1995;
 - (b) Výsledky první inspekce a zkoušky uvedené v 6.7.3.15.3;
 - (c) Výsledky nárazové zkoušky uvedené v 6.7.3.15.1, je-li předepsána.
- 6.7.3.15** ***Inspekce a zkoušení***
- 6.7.3.15.1** Přemístitelné cisterny odpovídající definici kontejneru podle Mezinárodní úmluvy o bezpečnosti kontejnerů (KBK) z roku 1972 v platném znění, nesmějí být používány. Jejich použití je možné pouze tehdy, pokud se reprezentativní vzorek každého konstrukčního typu úspěšně ověří zkouškou dynamického nárazu podle Příručky zkoušek a kritérií, díl IV, odstavec 41.
- 6.7.3.15.2** Nádrž a součásti výstroje každé přemístitelné cisterny musí být podrobeny inspekci a zkoušce před jejím prvním uvedením do provozu (první inspekce a zkouška) a potom v nejvýše pětiletých intervalech (periodická inspekce a zkouška po pěti letech) s meziperiodickou inspekci a zkouškou v polovině této doby (periodická inspekce a zkouška po dvou a půl letech). Inspekce a zkouška po dvou a půl letech může být provedena během tří měsíců před nebo po stanoveném datu. Mimořádná inspekce a zkouška musí být provedena bez ohledu na datum poslední periodické inspekce a zkoušky, pokud je to nezbytné podle 6.7.3.15.7.
- 6.7.3.15.3** První inspekce a zkouška přemístitelné cisterny musí zahrnovat kontrolu konstrukčních charakteristik, vnitřní a vnější prohlídku přemístitelné cisterny a jejich spojovacích prvků vzhledem k nezchlazeným zkapalněným plynům, které v ní mají být přepravovány, a tlakovou zkoušku podle zkušebních postupů uvedených v 6.7.3.3.2. Tlaková zkouška může být provedena jako hydraulická zkouška nebo použitím jiné kapaliny nebo plynu po dohodě s příslušným orgánem nebo jím pověřenou organizací. Před uvedením přemístitelné cisterny do provozu musí být též provedeny zkouška těsnosti a kontrola uspokojivého provozu celé provozní výstroje. Pokud byly nádrž a její spojovací prvky tlakově zkoušeny odděleně, musí být po jejich zkompletování podrobeny zkoušce těsnosti. Všechny svary vystavené úrovni plného namáhání v nádrži musí být zkontrolovány během první zkoušky rentgenem, ultrazvukem nebo jinou metodou nedestruktivní zkoušky. To se nevztahuje na opláštění.
- 6.7.3.15.4** Periodická inspekce a zkouška po pěti letech, musí zahrnovat vnitřní a vnější prohlídku a, jak je všeobecným pravidlem, hydraulickou tlakovou zkoušku. Opláštění, tepelná izolace a jiné mohou být sejmuty pouze s ohledem na požadovaný rozsah spolehlivého zhodnocení charakteristik přemístitelné cisterny. Pokud nádrž a její výstroj byly zkoušeny odděleně, musí být po jejich zkompletování podrobeny zkoušce těsnosti.
- 6.7.3.15.5** Meziperiodická inspekce a zkouška po dvou a půl letech musí zahrnovat nejméně vnitřní a vnější prohlídku přemístitelné cisterny a jejich spojovacích prvků vzhledem k nezchlazeným zkapalněným plynům, které v ní mají být přepravovány, zkoušku těsnosti a ověření uspokojivého provozu celé provozní výstroje. Opláštění, tepelná izolace a jiné mohou být sejmuty pouze vzhledem k požadovanému rozsahu spolehlivého zhodnocení charakteristik přemístitelné cisterny. Pro přemístitelné cisterny určené pro přepravu jednoho nezchlazeného zkapalněného plynu může být vnitřní prohlídka po dvou a půl letech vypuštěna nebo nahrazena jinou zkušební metodou nebo inspekčními postupy stanovenými příslušným orgánem nebo jím pověřenou organizací.
- 6.7.3.15.6** Přemístitelná cisterna nesmí být plněna a přistavována k přepravě po datu uplynutí platnosti poslední pětileté nebo dvou a půlleté periodické inspekce a zkoušky, jak je požadováno v 6.7.3.15.2. Avšak

přemístitelná cisterna naplněná před datem uplynutí platnosti poslední periodické inspekce a zkoušky může být přepravována po dobu nepřesahující tři měsíce od uplynutí platnosti poslední periodické zkoušky nebo inspekce. Kromě toho smí být přemístitelná cisterna přepravována po datu uplynutí platnosti poslední periodické zkoušky a inspekce:

- (a) Po vyprázdnění, ale před vyčištěním, pro účely provedení příští požadované zkoušky nebo inspekce před opětovným naplněním; a
- (b) Pokud není jinak schváleno příslušným orgánem, pro období nepřekračující šest měsíců od data uplynutí platnosti poslední periodické zkoušky nebo inspekce, aby bylo možno vrátit nebezpečné věci k jejich likvidaci nebo recyklaci. Odvolávka na tuto výjimku musí být uvedena v přepravním dokladu.

6.7.3.15.7 Mimořádná inspekce a zkouška je nezbytná, pokud přemístitelná cisterna vykazuje zřetelně poškozené nebo zkorodované plochy nebo únik nebo jiné okolnosti, které ukazují nedostatky, jež by mohly ovlivnit celistvost přemístitelné cisterny. Rozsah mimořádné inspekce a zkoušky musí záviset na rozsahu poškození a zhoršení přemístitelné cisterny. Musí zahrnovat nejméně dvou a půlletou inspekci a zkoušku podle 6.7.3.15.5.

6.7.3.15.8 Vnitřní a vnější prohlídky musí zajistit, že:

- (a) Nádrž je prohlédnuta se zaměřením na promáčknutí, korozi nebo odření, záhyby, zkroucení, vady ve svarech nebo jiné okolnosti, včetně úniku, které by mohly způsobit, že přemístitelná cisterna není bezpečná pro přepravu;
- (b) Potrubí, ventily systém a těsnění jsou prohlédnuty se zaměřením na zkorodované plochy, závady a jiné okolnosti, včetně úniku, které by mohly způsobit, že přemístitelná cisterna není bezpečnou pro plnění, vyprazdňování nebo přepravu;
- (c) Zařízení pro těsnění uzavíratelných poklopů je provozuschopné a že zde není žádný únik z uzavíratelných vík a těsnění;
- (d) Chybějící nebo ztracené šrouby nebo matice na jakémkoli spojení příruby nebo slepé příruby jsou nahrazeny nebo utěsněny;
- (e) Všechna pojistná zařízení a ventily jsou bez koroze, zkroucení a jakéhokoli poškození nebo vady, které by mohly zabránit jejich normální činnosti. Uzavírací zařízení a samočinné uzavírací ventily musí být uvedeny v činnost pro prokázání vlastní provozuschopnosti;
- (f) Požadovaná značení na přemístitelné cisterně jsou čitelná a v souladu s příslušnými požadavky; a
- (g) Rám, podpěry a zařízení pro zdvih přemístitelné cisterny jsou v uspokojivém stavu.

6.7.3.15.9 Inspekce a zkoušky v 6.7.3.15.1, 6.7.3.15.3, 6.7.3.15.4, 6.7.3.15.5 a 6.7.3.15.7 musí být provedeny znalcem nebo za účasti znalce schváleného příslušným orgánem nebo jím pověřenou organizací. Pokud je součástí inspekce a zkoušky tlaková zkouška, musí být provedena zkušební tlakem, který je vyznačen na štítku přemístitelné cisterny. Během tlakové zkoušky musí být přemístitelná cisterna kontrolována na jakýkoliv únik z cisterny, potrubí nebo výstroje.

6.7.3.15.10 Ve všech případech, kdy je prováděno řezání, opalování nebo sváření na nádrži, musí být tyto práce schváleny příslušným orgánem nebo jím pověřenou organizací s ohledem na předpisy pro tlakové nádoby používané pro konstrukci nádrže. Tlaková zkouška musí být provedena navíc k původní tlakové zkoušce po ukončení těchto prací.

6.7.3.15.11 Pokud se objeví jakákoli nebezpečná okolnost, nesmí být přemístitelná cisterna vrácena do provozu, pokud nebyla opravena a zkouška není opakována s uspokojivým výsledkem.

6.7.3.16 *Značení*

6.7.3.16.1 Každá přemístitelná cisterna musí být opatřena nerezavějícím kovovým štítkem trvale upevněným k přemístitelné cisterně na viditelném místě snadno přístupném pro kontrolu. Pokud z důvodů uspořádání přemístitelné cisterny nemůže být štítek trvale připevněn na nádrž, nádrž musí být označena nejméně informacemi požadované kódem příslušné tlakové nádoby. Jako minimum, nejméně následující informace musí být vyznačeny na štítku vyražením nebo jinou podobnou metodou:

(a) Informace o vlastníkovi

(i) Registrační číslo vlastníka

(b) Výrobní informace

- (i) Země výroby
- (ii) Rok výroby
- (iii) Jméno nebo značka výrobce
- (iv) Výrobcem přidělené sériové číslo

(c) Informace o schválení



- (i) Znak Spojených národů pro obaly

Tento znak nesmí být použit pro jiné účely než pro osvědčení, že obal, přemístitelná cisterna nebo MEGC splňuje příslušné požadavky kapitoly 6.1, 6.2, 6.3, 6.5, 6.6 nebo 6.7².

- (ii) Země schválení;
- (iii) Pověřená organizace pro schvalování konstrukčního typu.
- (iv) Číslo schválení konstrukčního typu
- (v) Písmena 'AA', pokud byl konstrukční typ schválen dle ujednání (viz 6.7.1.2);
- (vi) Předpis pro tlakové nádoby podle kterého byla nádrž zkonstruována

(d) Tlaky

- (i) MAWP (přetlak v barech nebo kPa)³;
- (ii) Zkušební tlak (přetlak v barech nebo kPa)³;
- (iii) Datum první tlakové zkoušky (měsíc a rok);
- (iv) Identifikační značka znalce účastnícího se první tlakové zkoušky
- (v) Vnější výpočtový tlak⁶ (přetlak v barech nebo kPa)³;

(e) Teploty

- (i) Rozsah výpočtových teplot (ve °C)³;
- (ii) Referenční výpočtová teplota (ve °C)³

(f) Materiály

- (i) Materiál(y) nádrže a odkaz(y) na materiálové normy;
- (ii) Ekvivalent tloušťky pro referenční ocel (v mm)³;

(g) Vnitřní objem

- (i) Hydraulický vnitřní objem cisterny při 20 °C (v litrech)³;

(h) Periodické inspekce a zkoušky

- (i) Druh poslední periodické zkoušky (2,5-roku, 5-let nebo mimořádná);
- (ii) Datum poslední periodické zkoušky (měsíc a rok);
- (iii) Zkušební tlak (přetlak v barech nebo kPa)³ poslední periodické zkoušky (pokud byla provedena);
- (iv) Identifikační značka pověřené organizace, která provedla nebo dozorovala poslední zkoušku.


Tabulka 6.7.3.16.1: Příklad značení identifikačním štítkem

Registrační číslo vlastníka	
Výrobní informace	
Země výroby	

² Tento symbol se používá také pro osvědčení, že velké nádoby pro volně ložené látky schválené pro jiné druhy dopravy odpovídají požadavkům v kapitole 6.8 UN Modelového Regulativu.

³ Použitá jednotka musí být označena.

⁶ Viz 6.7.2.2.10.

Rok výroby					
Výrobce					
Výrobcem přidělené sériové číslo					
Informace o schválení					
	Země schválení				
	Pověřená organizace pro schvalování konstrukčního typu				
	Číslo schválení konstrukčního typu		'AA' (pokud je použito)		
Konstrukční kód nádrže (kód tlakové nádoby)					
Tlaky					
MAWP		bar nebo kPa			
Zkušební tlak		bar nebo kPa			
Datum první tlakové zkoušky:	(měsíc/rok)	Razítko znalce:			
Vnější výpočtový tlak		bar nebo kPa			
Teplota					
Rozsah výpočtových teplot		°C do	°C		
Referenční výpočtová teplota		°C			
Materiály					
Materiál(y) nádrže a odkaz(y) na materiálové normy					
Ekvivalentní tloušťka pro referenční ocel		mm			
Vnitřní objem					
Hydraulický vnitřní objem cisterny při 20 °C		litry	'S' (pokud je použito)		
Periodické zkoušky/inspekce					
Typ zkoušky	Datum zkoušky	Razítko znalce a zkušební tlak ^a	Typ zkoušky	Datum zkoušky	Razítko znalce a zkušební tlak ^a
	(měsíc/rok)	bar nebo kPa		(měsíc/rok)	bar nebo kPa

^a Zkušební tlak pokud se použije.

6.7.3.16.2 Následující údaje musí být vyznačeny buď na přemístitelné cisterně samé nebo na kovovém štítku pevně umístěném na přemístitelné cisterně:

Jméno provozovatele
 Název nezchladeného zkapalněného plynu(ů) dovoleného(ných) k přepravě
 Nejvyšší dovolená užitečná hmotnost pro každý dovolený nezchladený zkapalněný plyn _____ kg
 Nejvyšší dovolená celková hmotnost (MPGM) _____ kg
 Vlastní hmotnost _____ kg
 Pokyny pro přemístitelné cisterny v souladu s 4.2.5.2.6

POZNÁMKA: Pro identifikaci přepravovaných nezchladených zkapalněných plynů, viz též část 5.

6.7.3.16.3 Jestliže je přemístitelná cisterna konstruována a schválena pro manipulaci na otevřeném moři, musí být na identifikačním štítku uvedena slova "OFFSHORE PORTABLE TANK".

6.7.4 Požadavky na konstrukci, výrobu, inspekci a zkoušení přemístitelných cisteren určených pro přepravu hluboce zchlazených zkapalněných plynů

6.7.4.1 Definice

Pro účely tohoto oddílu se následujícími pojmy rozumí:
Alternativní ujednání znamená schválení zaručené příslušným orgánem pro přemístitelnou cisternu nebo MEGC, které byly konstruovány, vyrobeny nebo zkoušeny podle technických požadavků nebo zkušebních metod jiných, než uvedených v této kapitole;

Přemístitelná cisterna znamená tepelně izolovanou multimodální cisternu s vnitřním objemem větším než 450 litrů vybavenou provozní a konstrukční výstrojí nezbytnou pro přepravu hluboce

zchladených zkapalněných plynů. Přemístitelnou cisternu musí být možno plnit a vyprazdňovat bez sejmutí konstrukční výstroje. Musí mít stabilizační členy vně nádrže a musí ji být možno zvedat v naplněném stavu. Musí být především konstruována pro zdvih na vozidlo, železniční vůz nebo námořní plavidlo nebo plavidlo pro vnitrozemské vodní cesty a musí být vybavena zarážkami, úchyty nebo příslušenstvím umožňujícím mechanickou manipulaci. Silniční cisternová vozidla, železniční cisternové vozy, nekovové cisterny, velké nádoby pro volně ložené látky (IBC), láhve na plyn a velké nádoby nespádají do definice přemístitelné cisterny;

Cisterna znamená konstrukci, kterou normálně tvoří buď:

- (a) Plášť a jedna nebo více nádrží, kde je z prostoru mezi nádrží(emi) a pláštěm vyčerpán vzduch (vakuová izolace), a může být současně doplněn tepelně izolačním systémem; nebo
- (b) Plášť a vnitřní nádrž s mezivrstvou tepelně izolačního materiálu (např. tuhé pěny);

Nádrž znamená část přemístitelné cisterny, která obsahuje hluboce zchladené zkapalněné plyny určené pro přepravu, včetně otvorů a jejich uzávěrů, ale nezahrnuje provozní výstroj a konstrukční výstroj;

Plášť znamená vnější izolační opláštění, které může být součástí tepelně izolačního systému;

Provozní výstroj znamená měřicí přístroje a plnicí, vyprazdňovací, větrací, pojistná, komprimující, chladicí a tepelně izolační zařízení;

Konstrukční výstroj znamená výztužné, upevňovací, ochranné a stabilizační prvky vně nádrže;

Nejvyšší dovolený provozní tlak (MAWP) znamená nejvyšší dovolený efektivní přetlak ve vrcholu nádrže naplněné přemístitelné cisterny v její provozní poloze včetně nejvyššího efektivního tlaku během plnění a vyprazdňování;

Zkušební tlak znamená nejvyšší přetlak ve vrcholu nádrže během tlakové zkoušky;

Zkouška těsnosti znamená zkoušku nádrže a její provozní výstroje používající plyn do vnitřního tlaku nejméně 90 % MAWP.

Nejvyšší dovolená celková hmotnost (MPGM) znamená součet vlastní hmotnosti přemístitelné cisterny a nejvyšší dovolené užitečné hmotnosti;

Skutečná doba naplnění znamená dobu, která uplyne od začátku plnění až do zvýšení tlaku vlivem zahřívání na nejnižší nastavený tlak zařízení omezujícího(ch) tlak;

Referenční ocel znamená ocel s mezí pevnosti v tahu 370 N/mm² a prodloužením při přetržení 27 %;

Nejnižší projektovaná teplota znamená teplotu, která je používána pro návrh a výrobu nádrže nepřekračující nejnižší (studenou) teplotu (provozní teplotu) obsahu během normálních podmínek plnění, vyprazdňování a přepravy.

6.7.4.2 Všeobecné konstrukční a výrobní požadavky

6.7.4.2.1

Nádrže musí být zkonstruovány a vyrobeny podle požadavků předpisů pro tlakové nádoby uznávaných příslušným orgánem. Nádrže a pláště musí být vyrobeny z kovových materiálů vhodných pro tváření. Pláště musí být vyrobeny z oceli. Nekovové materiály mohou být použity pro připojení a podpory mezi nádrží a pláštěm, pokud jsou vlastnosti těchto materiálů při nejmenší projektované teplotě prokázány jako dostačující. Materiály musí v zásadě odpovídat národním nebo mezinárodním materiálovým normám. Pro svařované nádrže a pláště musí být použity pouze materiály, jejichž svařitelnost byla plně prokázána. Svary musí být odborně provedeny a musí zaručovat úplnou bezpečnost. Pokud je to nezbytné z hlediska výrobního postupu nebo materiálů, musí být nádrže vhodně tepelně zpracovány pro zajištění přiměřené tuhosti ve svaru a v tepelně namáhaných zónách. Při volbě materiálu musí být vzato v úvahu rozmezí projektované teploty s přihlédnutím k nebezpečí křehkého lomu, vodíkové křehkosti namáhání korozivními trhlínami a odolnosti proti nárazu. Pokud je použita jemnozrná ocel, musí být zaručena mez průtažnosti nejméně 460 N/mm² a zaručená hodnota meze pevnosti nejméně 725 N/mm² podle materiálové specifikace. Materiály přemístitelné cisterny musí být vhodné pro klimatické podmínky, v nichž mohou být přepravovány.

- 6.7.4.2.2** Jakákoli část přemístitelné cisterny, včetně spojovacích prvků, těsnění a potrubí, které mohou normálně přijít do styku s přepravovaným hluboce zchlazeným zkvapalněným plynem musí být snášelivá s tímto hluboce zchlazeným zkvapalněným plynem.
- 6.7.4.2.3** Musí se zabránit dotyku mezi různými kovy, který by mohl mít za následek poškození galvanickým účinkem.
- 6.7.4.2.4** Systém tepelné izolace musí tvořit úplné opláštění nádrže(i) účinnými izolačními materiály. Vnější izolace musí být chráněna pláštěm tak, aby se zabránilo pronikání vlhkosti a jinému poškození za normálních přepravních podmínek.
- 6.7.4.2.5** Pokud je plášť uzavřen tak, že je plynotěsný, zařízení musí být provedeno tak, aby zabránilo jakémukoli nebezpečnému tlaku vyvíjenému v izolačním prostoru.
- 6.7.4.2.6** Přemístitelné cisterny určené pro přepravu hluboce zchlazených zkvapalněných plynů majících bod varu nižší než minus (-)182 °C při atmosférickém tlaku nesmějí obsahovat materiály, které mohou nebezpečně reagovat s kyslíkem nebo kyslíkem obsaženým ve vzduchu, pokud jsou umístěny v částech tepelné izolace, kde je nebezpečí styku s kyslíkem nebo s kyslíkem obsaženým v kapalině.
- 6.7.4.2.7** Izolační materiály se nesmějí v provozu poškozovat zvlněním.
- 6.7.4.2.8** Referenční skutečná doba naplnění musí být stanovena pro každý hluboce zchlazený zkvapalněný plyn určený k přepravě v přemístitelné cisterně.
- 6.7.4.2.8.1** Referenční skutečná doba naplnění musí být stanovena metodou uznávanou příslušným orgánem na základě následujícího:
- (a) Účinnosti izolačního systému stanovené podle 6.7.4.2.8.2;
 - (b) Nejnižšího nastaveného tlaku zařízení omezujícího(ch) tlak;
 - (c) Prvních plnicích podmínek;
 - (d) Očekávané teploty okolí 30 °C;
 - (e) Fyzikálních vlastností jednotlivého hluboce zchlazeného zkvapalněného plynu určeného k přepravě.
- 6.7.4.2.8.2** Účinnost izolačního systému (tepelný příkon ve watttech) musí být stanoven při zkoušce typu přemístitelné cisterny podle postupu uznávaného příslušným orgánem. Tuto zkoušku tvoří buď:
- (a) Zkouška při konstantním tlaku (např. při atmosférickém tlaku), pokud ztráta hluboce zchlazeného zkvapalněného plynu je měřena po celou dobu; nebo
 - (b) Zkouška uzavřeného systému, pokud vzrůst tlaku v nádrži je měřen po celou dobu. Pokud je prováděna zkouška při konstantním tlaku, musí se brát v úvahu změny atmosférického tlaku. Pokud se provádějí zkoušky, korekce musí být provedeny pro jakékoli změny okolní teploty od očekávané referenční teploty hodnoty 30 °C.
- POZNÁMKA:** Pro stanovení skutečné teploty naplnění před každou cestou, viz 4.2.3.7.
- 6.7.4.2.9** Plášť vakuově izolované dvojité stěny cisterny musí mít buď vnější výpočtový tlak nejméně 100 kPa (1 bar) (přetlak) vypočtený podle uznávaného technického předpisu nebo vypočtený kritický tlak nejméně 200 kPa (2 bary) (přetlak). Vnitřní a vnější vyztužení mohou být zahrnuta při výpočtu schopnosti pláště odolávat vnějšímu tlaku.
- 6.7.4.2.10** Přemístitelné cisterny musí být konstruovány a vyráběny se základnou zajišťující bezpečnost během přepravy a s vhodnými zvedacími a spouštěcími zařízeními.
- 6.7.4.2.11** Přemístitelné cisterny musí být konstruovány tak, aby odolaly beze ztráty obsahu nejméně vnitřnímu tlaku vyvolanému obsahem a statickým, dynamickým a tepelným namáháním během normálních podmínek manipulace a přepravy. Konstrukce musí prokázat, že účinky únavy způsobené opakovaným působením těchto namáhání během očekávané životnosti přemístitelné cisterny byly zohledněny.
- 6.7.4.2.12** Přemístitelné cisterny a jejich upevnění musí při nejvyšším dovoleném zatížení být schopny absorbovat následující jednotlivé statické síly:

- (a) Ve směru jízdy: dvojnásobek MPGM násobená zemským zrychlením (g)¹;
- (b) Vodorovně kolmo na směr jízdy: MPGM (pokud směr jízdy není jasně určen, síly musí být rovnocenné dvojnásobku MPGM) násobené zemským zrychlením (g)¹;
- (c) Svisle vzhůru: MPGM násobená zrychlením (g)¹; a
- (d) Svisle dolů: dvojnásobek MPGM (celkové zatížení včetně účinku gravitace) násobené zemským zrychlením (g)¹.

6.7.4.2.13 U každé ze sil v 6.7.4.2.12 musí být zachován koeficient bezpečnosti takto:

- (a) Pro kovy mající výrazně definovanou mez průtažnosti koeficient 1,5 ve vztahu k mezi průtažnosti; nebo
- (b) Pro kovy nemající výrazně definovanou mez průtažnosti koeficient 1,5 ve vztahu k zaručeným 0,2 % prokázané průtažnosti a pro austenitické oceli 1 % prokázané průtažnosti.

6.7.4.2.14 Hodnoty meze pevnosti nebo prokázané pevnosti musí být hodnoty podle národních a mezinárodních materiálových norem. Pokud jsou používány austenitické oceli, stanovené nejnižší hodnoty meze pevnosti nebo prokázané pevnosti podle materiálových norem mohou být zvýšeny o 15 %, pokud jsou tyto vyšší hodnoty ověřeny v kontrolních osvědčeních materiálu. Pokud neexistuje žádná materiálová norma pro daný materiál, hodnota meze pevnosti nebo prokázané pevnosti musí být schválena příslušným orgánem.

6.7.4.2.15 Přemístitelné cisterny určené pro přepravu hořlavých hluboce zchlazených zkvapalněných plynů musí být možno elektricky uzemnit.

6.7.4.3 *Konstrukční kritéria*

6.7.4.3.1 Nádrže musí být kruhového průřezu.

6.7.4.3.2 Nádrže musí být zkonstruovány a vyrobeny tak, aby odolaly zkušebnímu tlaku nejméně 1,3 násobku MAWP. Pro nádrže s vakuovou izolací nesmí být zkušební tlak menší než součet MAWP a 100 kPa (1 bar). V žádném případě nesmí být zkušební tlak menší než 300 kPa (3 bary) přetlaku. Pozornost musí být věnována požadavkům na nejmenší tloušťku stěny uvedeným v 6.7.4.4.2 až 6.7.4.4.7.

6.7.4.3.3 Pro kovy vykazující výrazně definovanou mez průtažnosti nebo charakterizované zaručenou prokázanou průtažností (0,2 % prokázané průtažnosti obecně nebo 1 % prokázané průtažnosti pro austenitické oceli) nesmí primární povrchové napětí σ v nádrži překročit 0,75 Re nebo 0,50 Rm, podle toho, která z těchto hodnot je nižší, při zkušebním tlaku, kde:

Re = výrazná mez průtažnosti v N/mm^2 nebo 0,2 % prokázané průtažnosti nebo pro austenitické ocele 1 % prokázané průtažnosti;
Rm = zaručená minimální pevnost v tahu v N/mm^2 .

6.7.4.3.3.1 Použité hodnoty Re a Rm musí být stanoveny jako nejmenší hodnoty podle národních a mezinárodních materiálových norem. Pokud je použita austenitická ocel, mohou být stanovené nejnižší hodnoty pro Re a Rm podle materiálových norem zvýšeny až o 15 %, jestliže vyšší hodnoty jsou ověřeny v kontrolním osvědčení materiálu. Neexistují-li žádné materiálové normy pro daný kov, použité hodnoty Re a Rm musí být schváleny příslušným orgánem nebo jím pověřenou organizací.

6.7.4.3.3.2 Oceli, které mají poměr Re/Rm větší než 0,85, nejsou dovoleny pro výrobu svařovaných nádrží. Hodnoty Re a Rm použité pro stanovení tohoto poměru musí být hodnoty uvedené v kontrolním osvědčení materiálu.

6.7.4.3.3.3 Oceli použité pro výrobu nádrží musí mít prodloužení při přetržení v % nejméně 10 000/Rm s absolutním minimem 16 % pro jemnozrné oceli a 20 % pro ostatní oceli. Hliník a hliníkové slitiny používané v konstrukci nádrží musí mít prodloužení při přetržení v % nejméně 10 000/Rm s absolutním minimem 12 %.

6.7.4.3.3.4 Pro účely stanovení skutečných hodnot materiálů je třeba připomenout, že pro plášťový materiál musí být osa vzorku kovu pro zkoušku pevnosti v pravém úhlu (kolmá) ke směru stáčení. Stálé prodloužení při přetržení musí být měřeno na zkušebních vzorcích v pravoúhlých příčných řezech v souladu s ISO 6892:1998 používající 50 mm měrné délky.

¹ Pro účely výpočtu $g = 9,81 m/s^2$.

6.7.4.4 Minimální tloušťka stěny nádrže

6.7.4.4.1 Minimální tloušťka stěny musí být větší než tloušťka stanovená následovně:

- (a) Minimální tloušťka stěny stanovená podle požadavků v 6.7.4.4.2 až 6.7.4.4.7; nebo
- (b) Minimální tloušťka stěny stanovená podle příslušných předpisů pro tlakové nádoby včetně požadavků v 6.7.4.3.

6.7.4.4.2 Nádrže o průměru nejvýše 1,80 m nesmějí mít tloušťku stěny menší než 5 mm v referenční oceli nebo rovnocennou tloušťku v použitém kovu. Nádrže o průměru větším než 1,80 m nesmějí mít tloušťku stěny menší než 6 mm v referenční oceli nebo rovnocennou tloušťku v použitém kovu.

6.7.4.4.3 Nádrže vakuově izolovaných cisteren o průměru nejvýše 1,80 m nesmějí mít tloušťku stěny menší než 3 mm v referenční oceli nebo rovnocennou tloušťku v použitém kovu. Takové nádrže o průměru větším než 1,80 m nesmějí mít tloušťku stěny menší než 4 mm v referenční oceli nebo rovnocennou tloušťku v použitém kovu.

6.7.4.4.4 Pro vakuově izolované cisterny musí celková tloušťka pláště a nádrže odpovídat nejmenší tloušťce předepsané v 6.7.4.4.2, tloušťka stěny nádrže samé nesmí být menší než nejmenší tloušťka předepsaná v 6.7.4.4.3.

6.7.4.4.5 Nádrže nesmějí mít tloušťku stěny menší než 3 mm bez ohledu na materiál konstrukce.

6.7.4.4.6 Rovnocenná tloušťka kovu jiná než předepsaná pro referenční ocel v 6.7.4.4.2 a 6.7.4.4.3 musí být stanovena podle tohoto vzorce:

$$e_1 = \frac{21,4 e_0}{\sqrt[3]{Rm_1 A_1}}$$

kde:

e_1 = požadovaná rovnocenná tloušťka (v mm) použitého kovu;

e_0 = minimální tloušťka (v mm) referenční oceli uvedená v 6.7.4.4.2 a 6.7.4.4.3;

Rm_1 = minimální zaručená pevnost v tahu (v N/mm²) použitého kovu (viz 6.7.4.3.3);

A_1 = zaručené minimální prodloužení při přetržení (v %) použitého kovu podle národních nebo mezinárodních norem.

6.7.4.4.7 V žádném případě nesmí být tloušťka stěny nádrže menší, než je předepsána v 6.7.4.4.1 až 6.7.4.4.5. Všechny části nádrže musí mít minimální tloušťku stanovenou podle 6.7.4.4.1 až 6.7.4.4.6. Tato tloušťka musí být výlučně bez přídavku na korozi.

6.7.4.4.8 Nesmí být žádná náhlá změna tloušťky v místě spojení konců (den) s cylindrickou částí nádrže.

6.7.4.5 Provozní výstroj

6.7.4.5.1 Provozní výstroj musí být uspořádána tak, aby byla chráněna proti nebezpečí utržení nebo poškození během přepravy a manipulace. Pokud spoj mezi rámem a cisternou nebo pláštěm a nádrží dovoluje relativní pohyb, výstroj musí být upevněna tak, aby dovozovala takový pohyb bez nebezpečí poškození provozních částí. Vnější spojovací vyprazdňovací prvky (potrubí, uzavírací ventily), uzavírací ventil a jeho sedlo musí být chráněny proti nebezpečí utržení působením vnějších sil (např. použitím pružných částí). Plnicí a vyprazdňovací zařízení (včetně přírub nebo šroubových uzávěrů) a jakékoliv ochranné kryty musí umožňovat zajištění proti nežádoucímu otevření.

6.7.4.5.2 Každý plnicí a vyprazdňovací otvor přemístitelných cisteren používaných pro přepravu hořlavých hluboce zchlazených zkapalněných plynů musí být vybaven nejméně třemi vzájemně nezávislými uzavíracími zařízeními v sérii, prvním uzavíracím ventilem umístěným co nejbližší k plášti, druhým uzavíracím ventilem a třetím slepou přírubou nebo rovnocenným zařízením. Uzavírací ventil nejbližší k plášti musí být rychle uzavíratelným zařízením, které uzavírá automaticky v případě nežádoucího

pohybu přemístitelné cisterny během plnění nebo vyprazdňování nebo vzniku požáru. Toto zařízení musí být také možno dálkově ovládat.

- 6.7.4.5.3** Každý plnicí a vyprazdňovací otvor přemístitelných cisteren používaných pro přepravu nehořlavých hluboce zchladených zkapalněných plynů musí být vybaven nejméně dvěma vzájemně nezávislými uzavíracími zařízeními v sérii, prvním uzavíracím ventilem umístěným co nejbližší k plášti, druhým slepou přírubou nebo rovnocenným zařízením.
- 6.7.4.5.4** Pro části potrubí, které zůstávají uzavřeny na obou stranách a kde může být uzavřena kapalina, musí být zajištěna metoda automatického vyrovnávání tlaku pro zabránění zvýšení tlaku vyvinutého v potrubí.
- 6.7.4.5.5** Vakuově izolované cisterny nemusí mít kontrolní otvory.
- 6.7.4.5.6** Vnější spojovací prvky musí být, pokud je to možné, seskupeny.
- 6.7.4.5.7** Každý spoj na přemístitelné cisterně musí být zřetelně označen s uvedením své funkce.
- 6.7.4.5.8** Každý uzavírací ventil nebo jiné uzavírací prostředky musí být konstruovány a vyrobeny na tlak nádrže MAWP a vyšší s ohledem na teploty očekávané během přepravy. Všechny uzavírací ventily se šroubovými uzávěry musí být uzavírány pravotočivým pohybem ručního kola. Pro ostatní ventily musí být poloha (otevřeno - zavřeno) a směr uzavírání zřetelně vyznačeny. Všechny uzavírací ventily musí být konstruovány tak, aby se zabránilo nežádoucímu otevření.
- 6.7.4.5.9** Pokud jsou použita tlaková zařízení, musí být spoje těchto zařízení pro kapaliny a páru opatřeny ventilem co možná nejbližší k plášti, aby se při poškození tlakových zařízení zabránilo uniknutí naplněné věci.
- 6.7.4.5.10** Potrubí musí být konstruováno, vyrobeno a instalováno tak, aby se zabránilo nebezpečí poškození působením tepelné roztažnosti a smršťování mechanických rázů a vibrací. Všechna potrubí musí být z vhodného kovového materiálu. Pro ochranu před únikem způsobeným ohněm se musí používat výhradně ocelové potrubí a svařované spoje mezi pláštěm a spojem k prvnímu uzávěru jakéhokoli vývodu. Metoda připojení uzávěru k tomuto spoji musí být odsouhlasena příslušným orgánem nebo jím pověřenou organizací. Spoje potrubí musí být svařeny všude, kde je to nezbytné.
- 6.7.4.5.11** Spoje v měděném potrubí musí být spájeny nebo mít rovnocenně silné kovové spojení. Bod tavení pájecích materiálů nesmí být vyšší než 525 °C. Spoje nesmějí snižovat pevnost potrubí, což se může stát u šroubových spojů.
- 6.7.4.5.12** Materiály konstrukce ventilů a příslušenství musí mít uspokojivé vlastnosti při nejnižší provozní teplotě přemístitelné cisterny.
- 6.7.4.5.13** Průřzný tlak všech potrubí a spojovacích prvků potrubí nesmí být menší než nejvyšší čtyřnásobek MAWP nádrže nebo čtyřnásobek tlaku, kterému může být podrobena v provozu činností čerpadla nebo jiného zařízení (kromě zařízení na vyrovnávání tlaku).

6.7.4.6 *Zařízení pro vyrovnávání tlaku*

- 6.7.4.6.1** Každá nádrž musí být vybavena dvěma nezávislými pružinovými zařízeními pro vyrovnávání tlaku. Zařízení pro vyrovnávání tlaku se musí otevírat automaticky při tlaku nejméně MAWP a musí být plně otevřena při tlaku rovném 110 % MAWP. Tato zařízení musí po vypuštění uzavírat při tlaku nižším nejvýše o 10 % otevíracího tlaku a musí zůstat uzavřena při všech nižších tlacích. Zařízení pro vyrovnávání tlaku musí být typu, který bude odolávat dynamickým silám včetně pohybu kapaliny.
- 6.7.4.6.2** Nádrže pro nehořlavé hluboce zchladené zkapalněné plyny a vodík mohou mít kromě toho průřzný kotouče v sérii s pružinovými zařízeními pro vyrovnávání tlaku, jak je uvedeno v 6.7.4.7.2 a 6.7.4.7.3.
- 6.7.4.6.3** Zařízení pro vyrovnávání tlaku musí být konstruováno tak, aby se zabránilo vniknutí cizího předmětu, úniku kapaliny a vývoji nebezpečného zvýšeného tlaku.
- 6.7.4.6.4** Zařízení pro vyrovnávání tlaku musí být schválena příslušným orgánem nebo jím pověřenou organizací.

6.7.4.7 *Kapacita a nastavení zařízení pro vyrovnávání tlaku*

- 6.7.4.7.1** V případě ztráty podtlaku ve vakuově izolované cisterně nebo ztráty 20 % izolace cisterny izolované tuhými materiály musí být kombinovaná kapacita všech instalovaných zařízení pro vyrovnávání tlaku dostatečná, aby tlak (včetně akumulace) uvnitř nádrže nepřekročil 120 % MAWP.
- 6.7.4.7.2** Pro nehořlavé hluboce zchlazené zkvalněné plyny (kromě kyslíku) a vodík může být tato kapacita dosažena použitím průtržných kotoučů paralelně s požadovanými zařízeními pro vyrovnávání tlaku. Průtržné kotouče se musí protrhnout při jmenovitém tlaku rovném zkušebnímu tlaku nádrže.
- 6.7.4.7.3** Za okolností popsaných v 6.7.4.7.1 a 6.7.4.7.2 společně s kompletním prošlehnutím plamene musí být celková odpouštěcí kapacita všech instalovaných zařízení pro vyrovnávání tlaku dostatečná, aby omezila tlak v nádrži na zkušební tlak.
- 6.7.4.7.4** Požadovaná kapacita zařízení pro vyrovnávání tlaku musí být vypočtena podle technických předpisů uznávaných příslušným orgánem⁷.

6.7.4.8 Značení zařízení pro vyrovnávání tlaku

6.7.4.8.1 Každé zařízení pro vyrovnávání tlaku musí být zřetelně a trvale označeno těmito údaji:

- (a) Tlak (v barech nebo kPa), na které je nastaveno vypouštění;
- (b) Dovolená tolerance vypouštěcího tlaku pro pružinová zařízení pro vyrovnávání tlaku;
- (c) Referenční teplota odpovídající nastavenému tlaku pro průtržné kotouče;a
- (d) Nastavená průtoková kapacita zařízení v normálních krychlových metrech vzduchu za sekundu (m^3/s);
- (e) Příčný průtokový průřez pružinového zařízení pro vyrovnávání tlaku a průtržných kotoučů v mm^2 .

Pokud je to proveditelné, musí být uvedeny navíc následující údaje:

- (f) Jméno výrobce a příslušné katalogové číslo zařízení pro vyrovnávání tlaku.

6.7.4.8.2 Nastavená průtoková kapacita označená na zařízení pro vyrovnávání tlaku musí být stanovena podle ISO 4126-1:2004 a ISO 4126-7:2004.

6.7.4.9 Spoje k zařízení pro vyrovnávání tlaku

6.7.4.9.1 Spoje k zařízení pro vyrovnávání tlaku musí být dostatečných rozměrů, aby umožnily neomezeně propustit požadované vypouštění do zařízení pro vyrovnávání tlaku. Žádný uzavírací ventil nesmí být vestavěn mezi nádrž a zařízení pro vyrovnávání tlaku, kromě zdvojeného zařízení pro údržbu nebo jiných důvodů a uzavíracích ventilů sloužících pro uzamčení otevřeného zařízení v provozu nebo uzavíracích ventilů vzájemně uzamčených tak, že požadavky 6.7.4.7 jsou vždy splněny. Nesmí být žádná překážka pro otevírání vedení k odvětrávacímu zařízení nebo k zařízení pro vyrovnávání tlaku, která by mohla omezit nebo uzavřít průtok z nádrže do tohoto zařízení. Otvory od vyústění unikajících par. U hluboce zchlazených zkvalněných plynů musí být unikající páry vyvedeny přímo ven z nádrže takovým způsobem, aby se nemohly dostat pod cisternu. Ochranná zařízení, která odklánějí proud par, jsou povolena pouze tehdy, nezmenšují-li kapacitu zařízení pro vyrovnávání tlaku.

6.7.4.10 Umístění zařízení pro vyrovnávání tlaku

6.7.4.10.1 Každé vyústění zařízení pro vyrovnávání tlaku musí být umístěno na vrchol nádrže co nejbližší podélnému a příčnému středu nádrže, jak je to proveditelné. Všechna vyústění zařízení pro vyrovnávání tlaku musí být umístěna tak, aby byla za podmínek maximálního plnění ve výparném prostoru nádrže, a zařízení musí být uspořádáno tak, aby zajistilo neomezené vypouštění unikajících par. U hluboce zchlazených zkvalněných plynů musí být unikající páry vyvedeny přímo ven z nádrže takovým způsobem, aby se nemohly dostat pod cisternu. Ochranná zařízení, která odklánějí proud par, jsou povolena pouze tehdy, nezmenšují-li kapacitu zařízení pro vyrovnávání tlaku.

⁷ Viz příklad CGA S-1,2-2003 normy zařízení pro vyrovnání tlaku, část 2, nákladní a přemístitelné cisterny na stlačené plyny.

6.7.4.10.2 Uspořádání musí být provedeno tak, aby zabránilo přístupu nepovolaných osob k zařízení pro vyrovnávání tlaku a chránilo tato zařízení před poškozením způsobeným převrácením přemístitelné cisterny.

6.7.4.11 Stavoznaky (měrná zařízení)

6.7.4.11.1 Pokud je přemístitelná cisterna určena pro hmotnostní plnění, musí být vybavena jedním nebo více měřicími zařízeními. Skleněné stavoznaky a měřidla vyrobená z křehkého materiálu, která jsou v přímém styku s obsahem nádrže, nesmějí být použity.

6.7.4.11.2 Spoj pro měření podtlaku musí být proveden v plášti.

6.7.4.12 Podpěry, rámy, zvedací a spouštěcí vybavení přemístitelných cisteren

6.7.4.12.1 Přemístitelné cisterny musí být konstruovány a vyráběny s podpěrnou konstrukcí zajišťující jejich bezpečnou základnu během přepravy. Síly uvedené v 6.7.4.2.12 a koeficient bezpečnosti uvedený v 6.7.4.2.13 musí být zohledněny při konstrukci. Zarážky, rámy, podstavce nebo jiné podobné konstrukce jsou přípustné.

6.7.4.12.2 Kombinovaná namáhání způsobená konstrukční výstrojí přemístitelné cisterny (např. podstavce, rámy atd.) a zvedací a spouštěcí zařízení nesmějí způsobit nadměrné namáhání v jakékoli části nádrže. Stabilní zvedací a spouštěcí zařízení musí být namontována na všech přemístitelných cisternách. Přednostně musí být upevněna na podpěry přemístitelné cisterny, avšak mohou být připevněny k výztužným deskám umístěným na nádrži v bodech jejich podpěr.

6.7.4.12.3 Při konstrukci podpěr a rámu se musí brát v úvahu účinky klimatické koroze.

6.7.4.12.4 Kapsy pro zvedací vidlice musí být uzavíratelné. Prostředky pro uzavření těchto kapes musí tvořit trvalou část rámu nebo musí být trvale připojeny k rámu. Jednokomorové přemístitelné cisterny o délce menší než 3,65 m nemusí mít tyto kapsy uzavíratelné, pokud:

- (a) nádrž a všechny spojovací prvky jsou dobře chráněny proti úderům zvedacích vidlí; a
- (b) vzdálenost mezi středy kapes pro zvedací vidlice je nejméně polovina maximální délky přemístitelné cisterny.

6.7.4.12.5 Pokud přemístitelné cisterny nejsou během přepravy chráněny podle 4.2.3.3, nádrže a provozní výstroj musí být chráněny proti poškození nádrže a provozní výstroje podélným nebo příčným nárazem nebo převrácením. Vnější spojovací prvky musí být chráněny tak, aby byl vyloučen únik obsahu nádrže při nárazu nebo převrácení přemístitelné cisterny na tyto spojovací prvky. Příklady takové ochrany:

- (a) Ochrana proti bočnímu nárazu, kterou mohou tvořit podélné výztuže chránící nádrž z obou stran na výškové úrovni jejího středu;
- (b) Ochrana přemístitelné cisterny proti převrácení, kterou mohou tvořit výztužné prstence nebo výztuže upevněné napříč rámu;
- (c) Ochrana proti nárazu zezadu, kterou může tvořit nárazník nebo rám;
- (d) Ochrana nádrže proti poškození nárazem nebo převrácením použitím rámu ISO podle ISO 1496-3:1995.
- (e) Ochrana přemístitelné cisterny před nárazem a převrácením vakuově izolačním pláštěm.

6.7.4.13 Schválení konstrukce

6.7.4.13.1 Příslušný orgán nebo jím pověřená organizace vydává osvědčení o schválení konstrukce pro jakoukoli novou konstrukci přemístitelné cisterny. Toto osvědčení ověřuje, že přemístitelná cisterna byla prohlédnuta touto organizací, je vhodná pro její zamýšlený účel a odpovídá požadavkům této kapitoly. Pokud jsou série přemístitelných cisteren vyráběny beze změny konstrukce, osvědčení platí pro celé tyto série. Osvědčení musí obsahovat zkušební protokol prototypu, hluboce zchlazené zkapalněné plyny dovolené přepravovat, materiály konstrukce nádrže a schvalovací číslo. Schvalovací číslo musí tvořit mezinárodní rozlišovací značka státu předepsaná v Úmluvě o silničním provozu, Vídeň 1968, a registrační číslo. Jakákoliv alternativní ujednání k 6.7.1.2 musí být uvedena v osvědčení. Schválení konstrukce může sloužit pro schválení menších přemístitelných cisteren

vyrobených z materiálů téhož druhu a tloušťky, stejnou výrobní technologií a s identickými podpěrami, rovnocennými uzávěry a dalším příslušenstvím.

6.7.4.13.2 Zkušební protokol prototypu pro schválení konstrukce musí obsahovat nejméně toto:

- (a) Výsledky zkoušky vhodného rámu uvedené v ISO 1496-3:1995;
- (b) Výsledky první inspekce a zkoušky uvedené v 6.7.4.14.3;
- (c) Výsledky nárazové zkoušky uvedené v 6.7.4.14.1, je-li předepsána.

6.7.4.14 *Inspekce a zkoušení*

6.7.4.14.1 Přemístitelné cisterny odpovídající definici kontejneru podle Mezinárodní úmluvy o bezpečnosti kontejnerů (KBK) z roku 1972 v platném znění, nesmějí být používány. Jejich použití je možné pouze tehdy, pokud se reprezentativní vzorek každého konstrukčního typu úspěšně ověří zkouškou dynamického nárazu podle Příručky zkoušek a kritérií, díl IV, odstavec 4.1.

6.7.4.14.2 Cisterna a součásti výstroje každé přemístitelné cisterny musí být podrobeny inspekci a zkoušce před jejím prvním uvedením do provozu (první inspekce a zkouška) a potom v nejvýše pětiletých intervalech (periodická inspekce a zkouška po pěti letech) s meziperiodickou inspekci a zkouškou v polovině této doby (periodická inspekce a zkouška po dvou a půl letech). Inspekce a zkouška po dvou a půl letech může být provedena během tří měsíců před nebo po stanoveném datu. Mimořádná inspekce a zkouška musí být provedena bez ohledu na datum poslední periodické inspekce a zkoušky, pokud je to nezbytné podle 6.7.4.14.7.

6.7.4.14.3 První inspekce a zkouška přemístitelné cisterny musí zahrnovat kontrolu konstrukčních charakteristik, vnitřní a vnější prohlídku přemístitelné cisterny a jejich spojovacích prvků vzhledem k hluboce zchlazeným zkapalněným plynům, které v ní mají být přepravovány, a tlakovou zkoušku podle zkušebních postupů uvedených v 6.7.4.3.2. Tlaková zkouška může být provedena jako hydraulická zkouška nebo použitím jiné kapaliny nebo plynu po dohodě s příslušným orgánem nebo jím pověřenou organizací. Před uvedením přemístitelné cisterny do provozu musí být též provedeny zkouška těsnosti a kontrola uspokojivého provozu celé provozní výstroje. Pokud byly nádrž a její spojovací prvky tlakově zkoušeny odděleně, musí být po jejich zkompletování podrobeny zkoušce těsnosti. Všechny svary vystavené úrovni plného namáhání musí být zkontrolovány během první zkoušky rentgenem, ultrazvukem nebo jinou metodou nedestruktivní zkoušky. To se nevztahuje na plášť.

6.7.4.14.4 Periodická inspekce a zkouška po 5 a 2,5 letech zahrnuje vnější prohlídku přemístitelné cisterny a jejich spojovacích prvků vzhledem k přepravovaným hluboce zchlazeným zkapalněným plynům, zkoušku těsnosti, kontrolu uspokojivého provozu celé provozní výstroje a indikátoru podtlaku, pokud je použit. V případě nevakuumě izolovaných cisteren, plášť a izolace musí být sejmuty během 2,5leté a 5leté periodické inspekce a zkoušek avšak pouze v rozsahu nezbytném pro spolehlivé hodnocení.

6.7.4.14.5 *(Vypuštěno)*

6.7.4.14.6 Přemístitelná cisterna nesmí být plněna a přistavována k přepravě po datu uplynutí platnosti poslední 5leté nebo 2,5leté periodické inspekce a zkoušky, jak je požadováno v 6.7.4.14.2. Avšak přemístitelná cisterna naplněná před datem uplynutí platnosti poslední periodické inspekce a zkoušky může být přepravována po dobu nepřesahující tři měsíce od uplynutí platnosti poslední periodické zkoušky nebo inspekce. Kromě toho může být přemístitelná cisterna přepravována po datu uplynutí platnosti poslední periodické zkoušky a inspekce:

- (a) Po vyprázdnění, ale před vyčistěním, pro účely provedení příští požadované zkoušky nebo inspekce před opětovným naplněním; a
- (b) Pokud není jinak schváleno příslušným orgánem, pro období nepřekračující šest měsíců od data uplynutí platnosti poslední periodické zkoušky nebo inspekce, aby bylo možno vrátit nebezpečné věci k jejich likvidaci nebo recyklaci. Odvolávka na tuto výjimku musí být uvedena v přepravním dokladu.

6.7.4.14.7 Mimořádná inspekce a zkouška je nezbytná, pokud přemístitelná cisterna vykazuje zřetelně poškozené nebo zkorodované plochy nebo únik nebo jiné okolnosti, které ukazují nedostatky, jež by mohly ovlivnit celistvost přemístitelné cisterny. Rozsah mimořádné inspekce a zkoušky musí záviset na rozsahu poškození a zhoršení přemístitelné cisterny. Musí zahrnovat nejméně 2,5letou inspekci a zkoušku podle 6.7.4.14.4.

- 6.7.4.14.8** Vnitřní prohlídka během první inspekce a zkoušky musí zajistit, že nádrž je prohlédnuta se zaměřením na proděravění, korozi nebo odřeniny, promáčknutí, zvlnění, vady ve svarech a jiné okolnosti, které by mohly vést k nezpůsobilosti cisterny pro bezpečnou přepravu.
- 6.7.4.14.9** Vnější prohlídka musí zajistit, že:
- (a) Vnější potrubí, ventily, komprimující/chladicí systémy, pokud jsou použity, a těsnění jsou prohlédnuty se zaměřením na zkorodované plochy, závady nebo jiné okolnosti, včetně netěsností, které by mohly způsobit nezpůsobilost přemístitelné cisterny pro bezpečné plnění, vyprazdňování a přepravu;
 - (b) Nejsou žádné netěsnosti uzavíratelných vík a těsnění;
 - (c) Chybějící nebo ztracené šrouby nebo matice na jakémkoli spojení příruby nebo slepé příruby jsou nahrazeny nebo utěsněny;
 - (d) Všechna pojistná zařízení a ventily jsou bez koroze, zkroucení a jakéhokoli poškození nebo vady, které by mohly zabránit jejich normální činnosti. Uzavírací zařízení a samočinné uzavírací ventily musí být uvedeny v činnost pro prokázání vlastní provozuschopnosti;
 - (e) Požadovaná značení na přemístitelné cisterně jsou čitelná a v souladu s příslušnými požadavky; a
 - (f) Rám, podpěry a zařízení pro zdvih přemístitelné cisterny jsou v uspokojivém stavu.
- 6.7.4.14.10** Inspekce a zkoušky v 6.7.4.14.1, 6.7.4.14.3, 6.7.4.14.4, 6.7.4.14.5 a 6.7.4.14.7 musí být provedeny znalcem nebo za účasti znalce schváleného příslušným orgánem nebo jím pověřenou organizací. Pokud je tlaková zkouška součástí inspekce a zkoušky, musí být provedena zkušebním tlakem vyznačeným na štítku přemístitelné cisterny. Během tlakové zkoušky musí být přemístitelná cisterna kontrolována na jakýkoliv únik z cisterny, potrubí nebo výstroje.
- 6.7.4.14.11** Ve všech případech, kdy je prováděno řezání, opalování nebo sváření na nádrži, musí být tyto práce schváleny příslušným orgánem nebo jím pověřenou organizací s ohledem na předpisy pro tlakové nádoby používané pro konstrukci nádrže. Tlaková zkouška musí být provedena navíc k původní tlakové zkoušce po ukončení těchto prací.
- 6.7.4.14.12** Pokud se objeví jakákoliv nebezpečná okolnost, nesmí být přemístitelná cisterna vrácena do provozu, pokud nebyla opravena a zkouška není opakována s uspokojivým výsledkem.

6.7.4.15 *Značení*

- 6.7.4.15.1** Každá přemístitelná cisterna musí být opatřena nerezavějícím kovovým štítkem trvale upevněným k přemístitelné cisterně na viditelném místě snadno přístupném pro kontrolu. Pokud z důvodů uspořádání přemístitelné cisterny nemůže být štítek trvale připevněn na nádrž, nádrž musí být označena nejméně informacemi požadované kódem příslušné tlakové nádoby. Jako minimum, nejméně následující informace musí být vyznačeny na štítku vyražením nebo jinou podobnou metodou:

- (a) Informace o vlastníkovi
 - (i) Registrační číslo vlastníka
- (b) Výrobní informace
 - (i) Země výroby
 - (ii) Rok výroby
 - (iii) Jméno nebo značka výrobce
 - (iv) Výrobcem přidělené sériové číslo

- (c) Informace o schválení

- (i) Znak Spojených národů pro obaly



Tento znak nesmí být použit pro jiné účely než pro osvědčení, že obal, přemístitelná cisterna nebo MEGC splňuje příslušné požadavky kapitoly 6.1, 6.2, 6.3, 6.5, 6.6 nebo 6.7².


- (ii) Země schválení;
 - (iii) Pověřená organizace pro schvalování konstrukčního typu
 - (iv) Číslo schválení konstrukčního typu
 - (v) Písmena 'AA', pokud byl konstrukční typ schválen dle ujednání (viz 6.7.1.2);
 - (vi) Předpis pro tlakové nádoby podle kterého byla nádrž zkonstruována
- (d) Tlaky
- (i) MAWP (přetlak v barech nebo kPa)³;
 - (ii) Zkušební tlak (přetlak v barech nebo kPa)³;
 - (iii) Datum první tlakové zkoušky (měsíc a rok);
 - (iv) Identifikační značka znalce účastnícího se první tlakové zkoušky;
- (e) Teploty
- (i) Rozsah výpočtových teplot (ve °C)³;
- (f) Materiály
- (i) Materiál(y) nádrže a odkaz(y) na materiálové normy;
 - (ii) Ekvivalentní tloušťka pro referenční ocel (v mm)³;
- (g) Vnitřní objem
- (i) Hydraulický vnitřní objem cisterny při 20 °C (v litrech)³;
- (h) Izolace
- (i) Buď „teplně izolovaná“ nebo „vakuově izolovaná“ (pokud je použita);
 - (ii) Účinnost izolačního systému (tepelný příkon) (ve Watech)³;
- (i) Doba uchování – pro každý hluboce zchlazený zkapalněný plyn pro který je přeprava v přemístitelných cisternách dovolena
- (i) Úplný název hluboce zchlazeného zkapalněného plynu;
 - (ii) Referenční doba uchování (ve dnech nebo hodinách)³;
 - (iii) Počáteční tlak (přetlak v barech nebo přetlak v kPa)³;
 - (iv) Stupeň plnění (v kg)³;
- (j) Periodické inspekce a zkoušky
- (i) Druh poslední periodické zkoušky (2,5-roku, 5-let nebo mimořádná);
 - (ii) Datum poslední periodické zkoušky (měsíc a rok);
 - (iii) Identifikační značka pověřené organizace, která provedla nebo dozorovala poslední zkoušku.

Tabulka 6.7.4.15.1 : Příklad značení identifikačním štítkem

Registrační číslo vlastníka	
Výrobní informace	

² Tento symbol se používá také pro osvědčení, že velké nádoby pro volně ložené látky schválené pro jiné druhy dopravy odpovídají požadavkům v kapitole 6.8 UN Modelového Regulativu.

³ Použitá jednotka musí být označena.

Země výroby					
Rok výroby					
Výrobce					
Výrobce přidělené sériové číslo					
Informace o schválení					
	Země schválení				
	Pověřená organizace pro schvalování konstrukčního typu				
	Číslo schválení konstrukčního typu	'AA' (pokud je použito)			
Konstrukční kód nádrže (kód tlakové nádoby)					
Tlaky					
MAWP	bar nebo kPa				
Zkušební tlak	bar nebo kPa				
Datum první tlakové zkoušky:	(měsíc/rok)	Razítko znalce:			
Teplota					
Nejnižší výpočtová teplota			°C		
Materiály					
Materiál(y) nádrže a odkaz(y) na materiálové normy					
Ekvivalentní tloušťka pro referenční ocel			mm		
Vnitřní objem					
Hydraulický vnitřní objem cisterny při 20 °C			litry		
Izolace					
„Teplně izolovaná“ nebo „Vakuově izolovaná“ (pokud je použita)					
Teplný příkon			Watty		
Doba uchování					
Hluboce zchlazený(é) zkapalněný(é) plyn(y) přeprava povolena	Referenční doba uchování	První tlak	Stupeň plnění		
	Dny nebo hodiny	bar nebo kPa	kg		
Periodické zkoušky/inspekce					
Typ zkoušky	Datum zkoušky	Razítko znalce	Typ zkoušky	Datum zkoušky	Razítko znalce
	(měsíc/rok)			(měsíc/rok)	

- 6.7.4.15.2 Následující údaje musí být trvanlivě vyznačeny buď na přemístitelné cisterně samé nebo na kovovém štítku pevně umístěném na přemístitelné cisterně:

Jméno vlastníka a provozovatele
 Název hluboce zchlazeného zkapalněného plynu určeného k přepravě (a nejnižší střední teplota volně ložené látky) pokud je vyšší než 50 °C
 Nejvyšší dovolená celková hmotnost (MPGM) _____ kg
 Vlastní hmotnost _____ kg
 Skutečná doba naplnění přepravovaným plynem _____ dní (hodin)
 Pokyny pro přemístitelné cisterny v souladu s 4.2.5.2.6.

POZNÁMKA: Pro zařízení přepravovaných hluboce zchlazených zkapalněných plynů, viz též část 5.

- 6.7.4.15.3 Jestliže je přemístitelná cisterna konstruována a schválena pro manipulaci na otevřeném moři, musí být na identifikačním štítku uvedena slova "OFFSHORE PORTABLE TANK".

6.7.5 Požadavky na konstrukci, výrobu, inspekce a zkoušení UN vícečlánkových kontejnerů na plyn (MEGC) určených pro přepravu nezchlazených plynů

6.7.5.1 **Definice**

Pro účely tohoto oddílu se následujícími pojmy rozumí:

Alternativní ujednání znamená schválení zaručené příslušným orgánem pro přemístitelnou cisternu nebo MEGC, které byly konstruovány, vyrobeny nebo zkoušeny podle technických požadavků nebo zkušebních metod jiných, než uvedených v této kapitole;

Články jsou lahve, trubkové nádoby nebo svazky lahví;

Zkouška těsnosti znamená zkoušku používající plyn naplněný do článků a provozní výstroje MEGC na účinný vnitřní tlak nejméně 20 % zkušebního tlaku;

Sběrné potrubí znamená soustavu potrubí a ventilů spojující plnicí a/nebo vyprazdňovací otvory článků;

Největší dovolená celková hmotnost (MPGM) znamená součet vlastní hmotnosti MEGC a největší dovolené užitečné hmotnosti pro přepravu;

UN vícečlánkové kontejnery na plyn (MEGC) jsou multimodální jednotky lahví, trubkových nádob a svazků lahví navzájem propojených sběrným potrubím, které jsou namontovány na rámu. MEGC zahrnují provozní výstroj a konstrukční výstroj nezbytné pro přepravu plynů;

Provozní výstroj znamená měřicí přístroje a plnicí, vyprazdňovací, ventilační a bezpečnostní zařízení;

Konstrukční výstroj znamená vyztužovací, upevňovací, ochranné a stabilizační členy článků.

6.7.5.2 **Všeobecné konstrukční a výrobní požadavky**

- 6.7.5.2.1** MEGC musí být schopný plnění a vyprazdňování bez sejmutí své konstrukční výstroje. Musí být vybaven stabilizačními členy vně článků zabezpečujícími konstrukční celistvost pro manipulaci a přepravu. MEGC musí být konstruovány a vyrobeny s podporami tvořícími bezpečnou základnu během přepravy a se zvedacími a spouštěcími úchyty, které umožňují zvedání MEGC, včetně jejich naplnění na největší dovolenou celkovou hmotnost. MEGC musí být konstruovány pro naložení na vozidlo, železniční vůz nebo námořní plavidlo nebo plavidlo pro vnitrozemské vodní cesty a musí být vybaveny zářádkami, úchyty nebo příslušenstvím umožňujícím mechanickou manipulaci.
- 6.7.5.2.2** MEGC musí být konstruovány, vyrobeny a vybaveny tak, aby odolaly všem podmínkám, kterým mohou být vystaveny během normálních podmínek manipulace a přepravy. Konstrukce musí zohlednit účinky dynamického zatížení a únavy.
- 6.7.5.2.3** Články MEGC musí být zhotoveny z bezešvé oceli a konstruovány a zkoušeny podle 6.2.1 a 6.2.2. Všechny články MEGC musí být stejného typu.
- 6.7.5.2.4** Články MEGC, spojovací prvky a potrubí musí být:
- (a) snášetlivé s látkami určenými pro přepravu (viz ISO 11114-1:1997 a ISO 11114-2:2000);
nebo
 - (b) netečné nebo neutralizované chemickou reakcí.
- 6.7.5.2.5** Dotyk různých kovů, které by mohly způsobit poškození galvanickými účinky, není dovolen.
- 6.7.5.2.6** Materiály MEGC, včetně jakýchkoli zařízení, těsnění a příslušenství nesmějí nepříznivě ovlivnit plyny určené k přepravě v MEGC.
- 6.7.5.2.7** MEGC musí být konstruovány tak, aby odolaly beze ztráty obsahu nejméně vnitřnímu tlaku způsobenému obsahem a statickým, dynamickým a tepelným zatížením během normálních podmínek manipulace a přepravy. Konstrukce musí prokázat, že únavové účinky způsobené těmito opakovanými namáháními v průběhu očekávané životnosti vícečlánkového kontejneru na plyn byly zohledněny.

- 6.7.5.2.8** MEGC a jejich upevnění musí být při nejvyšším dovoleném zatížení schopny absorbovat následující jednotlivé statické síly:
- (a) Ve směru jízdy: dvojnásobek MPGM násobená zemským zrychlením (g)¹;
 - (b) Vodorovně kolmo na směr jízdy: MPGM (pokud směr jízdy není jasně určen, síly musí být rovnocenné dvojnásobku MPGM) násobené zemským zrychlením (g)¹;
 - (c) Svisle vzhůru: MPGM násobená zrychlením (g)¹; a
 - (d) Svisle dolů: dvojnásobek MPGM (celkové zatížení včetně účinku gravitace) násobené zemským zrychlením (g)¹.
- 6.7.5.2.9** Při silách uvedených v 6.7.5.2.8 nesmí napětí v nejvíce namáhaném bodě článků překročit hodnoty uvedené buď v příslušných normách pododdílu 6.2.2.1 nebo, pokud nejsou články konstruovány, vyrobeny a zkoušeny podle těchto norem, v technických předpisech nebo normách uznávaných nebo schválených příslušným orgánem země používání (viz 6.2.5).
- 6.7.5.2.10** U každé ze sil v 6.7.5.2.8 musí být zachován pro rám a upevnění koeficient bezpečnosti takto:
- (a) Pro kovy mající výrazně definovanou mez pružnosti koeficient 1,5 ve vztahu k zaručené mezi pružnosti; nebo
 - (b) Pro kovy nemající výrazně definovanou mez pružnosti koeficient 1,5 ve vztahu k zaručeným 0,2 % prokázané pružnosti a pro austenitické oceli 1 % prokázané pružnosti.
- 6.7.5.2.11** MEGC určené pro přepravu hořlavých zchladených zkvalněných plynů musí být možno elektricky uzemnit.
- 6.7.5.2.12** Články musí být zajištěny takovým způsobem, aby se zabránilo nežádoucímu pohybu vzhledem ke konstrukci a koncentraci škodlivého místního napětí.

6.7.5.3 *Provozní výstroj*

- 6.7.5.3.1** Provozní výstroj musí být uspořádána nebo konstruována tak, aby byla chráněna proti poškození způsobeným zvýšením tlaku obsahu nádob během normálních podmínek manipulace a přepravy. Pokud spoj mezi rámem a nádrží dovoluje relativní pohyb mezi jednotlivými částmi konstrukce, musí být výstroj upevněna tak, aby dovolovala takový pohyb bez nebezpečí poškození provozních částí. Sběrné potrubí, vyprazdňovací prvky (potrubí, uzavírací ventily) a uzavírací ventil musí být chráněny proti nebezpečí utržení působením vnějších sil. Sběrné potrubí vedoucí k uzavíracím ventilům musí být dostatečně pružné, aby chránilo ventily a potrubí před stříhem nebo zvýšením tlaku obsahem nádob. Plnicí a vyprazdňovací zařízení (včetně přírub nebo šroubových uzávěrů) a jakékoliv ochranné kryty musí umožňovat zajištění proti nežádoucímu otevření.
- 6.7.5.3.2** Každý článek určený pro přepravu toxických plynů (plynů skupin T, TF, TC, TO, TFC a TOC) musí být opatřen ventilem. Sběrné potrubí pro zkvalněné toxické plyny (plyny klasifikačních kódů 2T, 2TF, 2TC, 2TO, 2TFC a 2TOC) musí být konstruováno tak, aby články mohly být plněny odděleně a udržovány izolovaně uzavřené zaplombovaným (uzamykatelným) ventilem. Pro přepravu hořlavých plynů (plyny skupiny F) musí být články rozděleny do skupin s vnitřním objemem nejvýše 3000 litrů každé izolované ventilem.
- 6.7.5.3.3** U plnicích a vyprazdňovacích otvorů MEGC musí být na každém plnicím a vyprazdňovacím potrubí na přístupném místě umístěny v sérii dva ventily. Jeden z ventilů může být nevratný. Plnicí a vyprazdňovací zařízení mohou být upevněna na sběrné potrubí. Pro části potrubí, které mohou být uzavřeny na obou koncích a z nichž kapalina může být vypuštěna, musí být pojistný ventil proveden tak, aby se zabránilo nadměrnému zvýšení tlaku. Hlavní izolující ventily na MEGC musí být zřetelně označeny s uvedením směru jejich uzavírání. Každý uzavírací ventil nebo jiné druhy uzávěrů musí být konstruovány a vyrobeny tak, aby odolaly tlaku rovnému nebo většímu než 1,5 násobku zkušební tlaku MEGC. Všechny uzavírací ventily se šroubovými uzávěry musí být uzavírány pravotočivým pohybem ručního kola. Pro ostatní ventily musí být poloha (otevřeno - zavřeno) a směr uzavírání zřetelně vyznačeny. Všechny uzavírací ventily musí být konstruovány tak, aby se zabránilo nežádoucímu otevření. Tažný kov může být použit pro konstrukci ventilů nebo příslušenství.
- 6.7.5.3.4** Potrubí musí být konstruováno, vyrobeno a instalováno tak, aby se zabránilo nebezpečí poškození působením tepelné roztažnosti a smršťování, mechanických rázů a vibrací. Spoje v potrubí musí být

¹ Pro účely výpočtu $g = 9,81 \text{ m/s}^2$.

spájeny nebo mít rovnocenně silné kovové spojení. Bod tavení pájecích materiálů nesmí být vyšší než 525 °C. Jmenovitý tlak provozní výstroje a sběrného potrubí musí být nejméně dvě třetiny zkušební tlaku článků.

6.7.5.4 Zařízení pro vyrovnávání tlaku

6.7.5.4.1 Články MEGC používané pro přepravu UN 1013 oxid uhlíčitý a UN 1070 oxid dusný (rajský plyn) musí být rozděleny do skupin s vnitřním objemem nejvýše 3000 litrů každé izolované ventilem. Každá sestava musí být vybavena jedním nebo více zařízeními pro vyrovnání tlaku. Pokud je požadováno příslušným orgánem v zemi použití, MEGC pro ostatní plyny musí být vybaven zařízením pro vyrovnávání tlaku specifikovaným příslušným orgánem.

6.7.5.4.2 Každý článek nebo skupina článků MEGC, který může být izolován, musí být vybaven jedním nebo více zařízeními pro vyrovnávání tlaku. Zařízení pro vyrovnávání tlaku musí být typu, které odolá dynamickým silám, včetně rázových vln kapalin, a konstruováno tak, aby se zabránilo vniknutí cizího předmětu, úniku plynu a vývoji nebezpečného nadměrného tlaku.

6.7.5.4.3 MEGC používané pro přepravu určitých nezchladených plynů uvedených v pokynu pro přemístitelné cisterny T50 v 4.2.5.2.6 mohou mít zařízení pro vyrovnávání tlaku podle požadavků příslušného orgánu země jejich používání. Pokud není MEGC vyhrazen pro přepravu určitého plynu a vybaven schváleným zařízením pro vyrovnávání tlaku vyrobeným z materiálů snášlivých s přepravovaným plynem, musí zařízení pro vyrovnávání tlaku obsahovat průtržný kotouč předcházející pružinovému zařízení pro vyrovnávání tlaku. Prostor mezi průtržným kotoučem a zařízením musí být vybaven měřidlem tlaku nebo vhodným indikačním přístrojem. Toto uspořádání dovoluje odhalení protření kotouče, propíchnutí nebo únik, který může způsobit špatnou činnost zařízení pro vyrovnávání tlaku. Průtržný kotouč se musí protrhnout při jmenovitém tlaku o 10 % vyšším než je počáteční vypouštěcí tlak pružinového zařízení pro vyrovnávání tlaku.

6.7.5.4.4 V případě víceúčelových MEGC používaných pro přepravu nízkotlakých zkapalněných plynů se musí zařízení pro vyrovnávání tlaku otevřít při tlaku uvedeném v 6.7.3.7.1 pro plyn s nejvyšším dovoleným provozním tlakem z plynů, jejichž přeprava je v MEGC povolena.

6.7.5.5 Kapacita zařízení pro vyrovnávání tlaku

6.7.5.5.1 Kombinovaná dodávková kapacita zařízení pro vyrovnávání tlaku, pokud je instalováno, musí být dostatečná, aby v případě celkového požáru MEGC nepřekročil tlak (včetně akumulace) uvnitř článků 120 % nastaveného tlaku zařízení pro vyrovnávání tlaku. Vzorec uvedený v CGA S-1,2-2003 normy pro zařízení pro vyrovnání tlaku – Díl 2 – cisterny pro nákladní přepravy a přemístitelné cisterny pro stlačené plyny musí být použit pro stanovení nejmenší celkové průtokové kapacity pro systém zařízení pro vyrovnávání tlaku. CGA S-1,1-2003 normy pro zařízení pro vyrovnání tlaku – Díl 1 – láhve na stlačené plyny mohou být použity pro stanovení vyrovnávací kapacity jednotlivých článků pro vyrovnávání tlaku. Pružinová zařízení pro vyrovnávání tlaku mohou být použita pro dosažení plné vypouštěcí kapacity předepsané v případě nízkotlakých zkapalněných plynů. V případě víceúčelových MEGC musí být kombinovaná dodávková kapacita zařízení pro vyrovnávání tlaku stanovena pro plyn, který vyžaduje nejvyšší dodávkovou kapacitu z plynů dovolených pro přepravu v MEGC.

6.7.5.5.2 Pro stanovení celkové požadované kapacity zařízení pro vyrovnávání tlaku instalovaného na člancích pro přepravu zkapalněných plynů musí být zohledněny termodynamické vlastnosti plynu (viz např. CGA S-1,2-2003 normy pro zařízení pro vyrovnání tlaku – Díl 2 – cisterny pro nákladní přepravy a přemístitelné cisterny pro stlačené plyny pro nízkotlaké zkapalněné plyny a CGA S-1,1-2003 normy pro zařízení pro vyrovnání tlaku - Díl 1 – láhve na stlačené plyny pro vysokotlaké zkapalněné plyny).

6.7.5.6 Značení zařízení pro vyrovnávání tlaku

6.7.5.6.1 Zařízení pro vyrovnání tlaku musí být zřetelně a trvale označeno těmito údaji:

- (a) Jméno výrobce a příslušné výrobní číslo
- (b) Tlak a teplota, na který je nastaveno vypouštění
- (c) Datum poslední zkoušky;

(d) Příčný průtokový průřez pružinového zařízení pro vyrovnávání tlaku a průtržných kotoučů v mm².

6.7.5.6.2 Jmenovitá průtoková kapacita vyznačená na pružinovém zařízení pro vyrovnávání tlaku musí být stanovena podle ISO 4126-1:2004 nebo ISO 4126-7:2004.

6.7.5.7 *Připojení zařízení pro vyrovnávání tlaku*

6.7.5.7.1 Připojení zařízení pro vyrovnávání tlaku musí být dostatečných rozměrů, aby umožnilo neomezeně propustit požadované vypouštění do zařízení pro vyrovnávání tlaku. Žádný uzavírací ventil nesmí být vestavěn mezi nádrž a zařízení pro vyrovnávání tlaku, kromě zdvojeného zařízení pro údržbu nebo jiných důvodů a uzavíracích ventilů sloužících pro uzamčení otevřeného zařízení v provozu nebo uzavíracích ventilů vzájemně uzamčených tak, že alespoň jeden ze zdvojených je vždy provozuschopný a schopný splnit požadavky v 6.7.5.5. Nesmí být žádná překážka pro otevírání vedení k odvětrávacímu zařízení nebo k zařízení pro vyrovnávání tlaku, která by mohla omezit nebo uzavřít průtok z nádrže do tohoto zařízení. Otvor celým potrubím a spoji musí mít nejméně stejnou průtočnou plochu jako vstup do zařízení pro vyrovnávání tlaku, ke kterému jsou připojeny. Jmenovitý rozměr výpustného potrubí musí být nejméně tak velký, jako je výstup ze zařízení pro vyrovnávání tlaku. Otvory od vyústění zařízení pro vyrovnávání tlaku, pokud jsou používány, musí vypouštět přebytečné páry nebo kapaliny do atmosféry za podmínek minimálního zpětného tlaku do zařízení pro vyrovnávání tlaku.

6.7.5.8 *Umístění zařízení pro vyrovnávání tlaku*

6.7.5.8.1 Každé zařízení pro vyrovnávání tlaku při nejvyšším dovoleném plnění musí být spojeno s výparným prostorem článků pro přepravu zkapalněných plynů. Zařízení pro vyrovnávání tlaku, pokud jsou instalována, musí být tak uspořádána, aby se zajistilo vypouštění unikajících par nahoru a neomezeně pro zabránění srážení unikajícího plynu nebo kapaliny na MEGC, jeho člancích nebo osobách. Pro hořlavé plyny a plyny pyroforní a podporující hoření, musí být unikající plyn usměrněn od článků takovým způsobem, aby nemohl narážet na jiné články. Tepelně odolná ochranná zařízení, která odklánějí proud plynu, jsou povolena pouze tehdy, pokud nezmenšují požadovanou kapacitu zařízení pro vyrovnávání tlaku.

6.7.5.8.2 Uspořádání musí být provedena tak, aby zabránila přístupu nepovolaných osob k zařízení pro vyrovnávání tlaku a chránila tato zařízení před poškozením způsobeným převrácením MEGC.

6.7.5.9 *Stavoznaky (měřicí zařízení)*

6.7.5.9.1 Pokud je MEGC určen pro hmotnostní plnění, musí být vybaven jedním nebo více měřicími zařízeními. Skleněné stavoznaky a měřidla vyrobené z jiného křehkého materiálu nesmějí být použity.

6.7.5.10 *Podpěry, rámy, zvedací a spouštěcí vybavení MEGC*

6.7.5.10.1 MEGC musí být konstruovány a vyráběny s podpěrou konstrukcí zajišťující jejich bezpečnou základnu během přepravy. Síly uvedené v 6.7.5.2.8 a koeficient bezpečnosti uvedený v 6.7.5.2.10 musí zohledněny při konstrukci. Zarážky, rámy, podstavce nebo jiné podobné konstrukce jsou přípustné.

6.7.5.10.2 Kombinovaná namáhání způsobená konstrukční výstrojí článků (např. podstavce, rámy atd.) a zvedací a spouštěcí zařízení MEGC nesmějí způsobit nadměrné namáhání v jakémkoli článku. V žádném případě nesmí být výstroj nebo úchyty přivařeny přímo k článkům.

6.7.5.10.3 Při konstrukci podpěr a rámu se musí zohlednit účinky klimatické koroze.

6.7.5.10.4 Pokud nejsou MEGC během přepravy chráněny podle 4.2.4.3, musí být články a provozní výstroj chráněny proti poškození nádrže a provozní výstroje podélným nebo příčným nárazem nebo převrácením. Vnější spojovací prvky musí být chráněny tak, aby byl vyloučen únik obsahu článků při nárazu nebo převrácení MEGC na tyto spojovací prvky. Zvláštní pozornost musí být věnována ochraně sběrného potrubí. Příklady takové ochrany:

- (a) Ochrana proti bočnímu nárazu, kterou mohou tvořit podélné výztuže;
- (b) Ochrana proti převrácení, kterou mohou tvořit výztužné prstence nebo výztuže upevněné napříč rámu;
- (c) Ochrana proti nárazu zezadu, kterou může tvořit nárazník nebo rám;
- (d) Ochrana článků a provozní výstroje proti poškození nárazem nebo převrácením použitím rámu ISO podle příslušných ustanovení ISO 1496-3:1995.

6.7.5.11 Schválení konstrukce

6.7.5.11.1 Příslušný orgán nebo jím pověřená organizace vydává osvědčení o schválení konstrukce pro jakoukoli novou konstrukci MEGC. Toto osvědčení ověřuje, že MEGC byl prohlédnut touto organizací, je vhodný pro jeho zamýšlený účel a odpovídá požadavkům této kapitoly a příslušným ustanovením pro plyny kapitoly 4.1 uvedeným v pokynu pro balení P200. Pokud jsou série MEGC vyráběny beze změny konstrukce, osvědčení platí pro celé tyto série. Osvědčení musí obsahovat zkušební protokol prototypu, materiály konstrukce sběrného potrubí, normy, podle kterých byly články vyrobeny, a schvalovací číslo. Schvalovací číslo musí tvořit mezinárodní rozlišovací značka státu předepsaná v Úmluvě o silničním provozu, Vídeň 1968, a registrační číslo. Jakákoliv alternativní ujednání podle 6.7.1.2 musí být uvedena v osvědčení. Schválení konstrukce může sloužit pro schválení menších MEGC vyrobených z materiálů téhož druhu a tloušťky, stejnou výrobní technologií a s identickými podpěrami, rovnocennými uzávěry a dalším příslušenstvím.

6.7.5.11.2 Zkušební protokol prototypu pro schválení konstrukce musí obsahovat nejméně toto:

- (a) Výsledky zkoušky vhodného rámu uvedené v ISO 1496-3:1995;
- (b) Výsledky první inspekce a zkoušky uvedené v 6.7.5.12.3;
- (c) Výsledky nárazové zkoušky uvedené v 6.7.5.12.1; a
- (d) Schvalovací doklad ověřující, že lahve a trubkové nádoby splňují příslušné normy.

6.7.5.12 Inspekce a zkoušení

6.7.5.12.1 MEGC odpovídající definici kontejneru podle mezinárodní úmluvy o bezpečnosti kontejnerů (KBK) z roku 1972 v platném znění, nesmějí být používány. Jejich použití je možné pouze tehdy, pokud se reprezentativní vzorek každého konstrukčního typu úspěšně ověří zkouškou dynamického nárazu podle Příruček zkoušek a kritérií, díl IV, odstavec 41.

6.7.5.12.2 Články a součásti výstroje každého MEGC musí být podrobeny inspekci a zkoušce před jeho prvním uvedením do provozu (první inspekce a zkouška). Potom musí být MEGC podrobeny inspekci v nejvýše pětiletých intervalech (periodická inspekce a zkouška po pěti letech). Mimořádná inspekce a zkouška musí být provedena bez ohledu na datum poslední periodické inspekce a zkoušky, pokud je to nezbytné podle 6.7.5.12.5.

6.7.5.12.3 První inspekce a zkouška MEGC musí zahrnovat kontrolu konstrukčních charakteristik, vnitřní a vnější prohlídku MEGC a jeho spojovacích prvků vzhledem k plynům, které v něm mají být přepravovány, a tlakovou zkoušku provedenou zkušebními tlaky podle pokynu pro balení P200 uvedeného v 4.1.4.1. Tlaková zkouška sběrného potrubí může být provedena jako hydraulická zkouška nebo použitím jiné kapaliny nebo plynu se souhlasem příslušného orgánu nebo jím pověřené organizace. Před uvedením MEGC do provozu musí být též provedeny zkouška těsnosti a zkouška uspokojivého provozu celé provozní výstroje. Pokud byly články a jejich spojovací prvky tlakově zkoušeny odděleně, musí být po svém spojení podrobeny zkoušce těsnosti.

6.7.5.12.4 Periodická inspekce a zkouška po pěti letech musí zahrnovat vnější prohlídku konstrukce, článků a provozní výstroje podle 6.7.5.12.6. Články a potrubí musí být zkoušeny periodicky ve lhůtách uvedených v pokynu pro balení P200 a podle ustanovení uvedených v 6.2.1.6. Pokud byly články a jejich spojovací prvky tlakově zkoušeny odděleně, musí být po svém spojení podrobeny zkoušce těsnosti.

6.7.5.12.5 Mimořádná inspekce a zkouška je nezbytná, pokud MEGC vykazuje zřetelně poškozené nebo zkorodované plochy nebo únik nebo jiné okolnosti, které ukazují nedostatky, jež by mohly ovlivnit celistvost MEGC. Rozsah mimořádné inspekce a zkoušky musí záviset na rozsahu poškození a zhoršení stavu MEGC. Musí zahrnovat nejméně prohlídky požadované v 6.7.5.12.6.

6.7.5.12.6 Prohlídky musí zajistit, že:

- (a) články jsou zvnějšku prohlédnuty se zřetelem na promáčknutí, korozi nebo odření, záhyby, zkroucení, vady ve svarech nebo jiné okolnosti, včetně úniku, které by mohly způsobit, že MEGC není bezpečný pro přepravu;
- (b) potrubí, ventily systém a těsnění jsou prohlédnuty se zřetelem na zkorodované plochy, závady a jiné okolnosti, včetně úniku, které by mohly způsobit, že MEGC není bezpečný pro plnění, vyprazdňování nebo přepravu;
- (c) chybějící nebo ztracené šrouby nebo matice na jakémkoli spojení příruby nebo slepé příruby jsou nahrazeny nebo utěsněny;
- (d) všechna pojistná zařízení a ventily jsou bez koroze, zkroucení a jakéhokoli poškození nebo vady, které by mohly zabránit jejich normální činnosti. Uzavírací zařízení a samočinné uzavírací ventily musí být uvedeny v činnost pro prokázání vlastní provozuschopnosti;
- (e) požadovaná značení na MEGC jsou čitelná a v souladu s příslušnými požadavky; a
- (f) rámy, podpěry a zařízení pro zdvih MEGC jsou v uspokojivém stavu.

6.7.5.12.7 Inspekce a zkoušky v 6.7.5.12.1, 6.7.5.12.3, 6.7.5.12.4 a 6.7.5.12.5 musí být provedeny organizací nebo za účasti organizace schválené příslušným orgánem. Pokud je tlaková zkouška součástí inspekce a zkoušky, musí být provedena zkušebním tlakem vyznačeným na štítku MEGC. Během tlakové zkoušky musí být MEGC kontrolován na jakýkoliv únik z článků, potrubí nebo výstroje.

6.7.5.12.8 Pokud se objeví jakákoli nebezpečná okolnost, nesmí být MEGC vrácen do provozu, pokud nebyl opraven a nebyl podroben příslušným zkouškám a ověřením.

6.7.5.13 **Značení**

6.7.5.13.1 Každý MEGC musí být opatřen nerezavějícím kovovým štítkem trvale upevněným k MEGC na viditelném místě snadno přístupném pro kontrolu. Kovový štítek nesmí být připevněn k článkům. Články musí být označeny v souladu s kapitolou 6.2. Jako minimum, nejméně následující informace musí být vyznačeny na štítku vyražením nebo jinou podobnou metodou:

- (a) Informace o vlastníkovi
 - (i) Registrační číslo vlastníka
- (b) Výrobní informace
 - (i) Země výroby
 - (ii) Rok výroby
 - (iii) Jméno nebo značka výrobce
 - (iv) Výrobce přidělené sériové číslo

(c) Informace o schválení

- (i) Znak Spojených národů pro obaly



Tento znak nesmí být použit pro jiné účely než pro osvědčení, že obal, přemístitelná cisterna nebo MEGC splňuje příslušné požadavky kapitoly 6.1, 6.2, 6.3, 6.5, 6.6 nebo 6.7².

- (ii) Země schválení;
- (iii) Pověřená organizace pro schvalování konstrukčního typu
- (iv) Číslo schválení konstrukčního typu
- (v) Písmena 'AA', pokud byl konstrukční typ schválen dle ujednání (viz 6.7.1.2);

(d) Tlaky

- (i) Zkušební tlak (přetlak v barech nebo kPa)³;
- (ii) Datum první tlakové zkoušky (měsíc a rok);
- (iii) Identifikační značka znalce účastnického se první tlakové zkoušky


(e) Teploty

² Tento symbol se používá také pro osvědčení, že velké nádoby pro volně ložené látky schválené pro jiné druhy dopravy odpovídají požadavkům v kapitole 6.8 UN Modelového Regulativu.

³ Použitá jednotka musí být označena.

- (i) Rozsah výpočtových teplot (ve °C)³;
- (f) Články / Vnitřní objem
- (i) Počet článků;
(ii) Celkový hydraulický vnitřní objem (v litrech)³;
- (g) Periodické inspekce a zkoušky
- (i) Typ poslední periodické zkoušky (2,5-roku, 5-let nebo mimořádná);
(ii) Datum poslední periodické zkoušky (měsíc a rok);
(iii) Identifikační značka pověřené organizace, která provedla nebo dozorovala poslední zkoušku.

Tabulka 6.7.5.13.1: Příklad značení identifikačním štítkem

Registrační číslo vlastníka					
Výrobní informace					
Země výroby					
Rok výroby					
Výrobce					
Výrobce přidělené sériové číslo					
Informace o schválení					
	Země schválení				
	Pověřená organizace pro schvalování konstrukčního typu				
	Číslo schválení konstrukčního typu				'AA' (pokud je použito)
Konstrukční kód nádrže (kód tlakové nádoby)					
Tlaky					
Zkušební tlak					bar
Datum první tlakové zkoušky:		(měsíc/rok)	Razítko znalce:		
Teplota					
Rozsah výpočtových teplot					°C do °C
Články / Vnitřní objem					
Počet článků					
Celkový hydraulický vnitřní objem					litry
Periodické zkoušky/inspekce					
Typ zkoušky	Datum zkoušky	Razítko znalce	Typ zkoušky	Datum zkoušky	Razítko znalce
	(měsíc/rok)			(měsíc/rok)	

6.7.5.13.2 Následující údaje musí být vyznačeny na kovovém štítku pevně umístěném na MEGC:

Jméno provozovatele
 Nejvyšší dovolená užitečná hmotnost _____ kg
 Pracovní tlak při 15°C _____ bar
 Nejvyšší dovolená celková hmotnost (MPGM) _____ kg
 Vlastní hmotnost _____ kg

³ Použitá jednotka musí být označena.

KAPITOLA 6.8

POŽADAVKY NA KONSTRUKCI, VÝROBU, VÝSTROJ, SCHVALOVÁNÍ TYPU, INSPEKCE A ZKOUŠENÍ A ZNAČENÍ NESNÍMATELNÝCH CISTEREN (CISTERNOVÝCH VOZIDEL), SNÍMATELNÝCH CISTEREN A CISTERNOVÝCH KONTEJNERU A CISTERNOVÝCH VÝMĚNNÝCH NÁSTAVEB S NÁDRŽEMI VYROBENÝMI Z KOVOVÝCH MATERIÁLŮ A BATERIOVÝCH VOZIDEL A VÍCEČLÁNKOVÝCH KONTEJNERŮ NA PLYNY (MEGC)

POZNÁMKA: Pro přemístitelné cisterny a UN MEGC viz kapitolu 6.7, pro cisterny z vyztužených plastů viz kapitola 6.9, pro cisterny pro podtlakové vyčerpávání odpadů viz kapitola 6.10.

6.8.1 Rozsah použití

6.8.1.1 Požadavky uvedené přes celou šířku stránky se vztahují na nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla a současně i na cisternové kontejnery, cisternové výměnné nástavby a MEGC. Ty, které jsou uvedeny v jednotlivých sloupcích se vztahují pouze na:

- nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny a bateriová vozidla (levý sloupec);
- cisternové kontejnery, cisternové výměnné nástavby a MEGC (pravý sloupec).

6.8.1.2 Tyto požadavky se vztahují na

nesnímatelné cisterny (cisternová vozidla),
snímatelné cisterny a bateriová vozidla

cisternové kontejnery, cisternové výměnné
nástavby a MEGC

používané pro přepravu plyných, kapalných, práškových nebo zrnitých látek.

6.8.1.3 Oddíl 6.8.2 uvádí požadavky vztahující se na nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny, cisternové kontejnery a cisternové výměnné nástavby určené pro přepravu látek všech tříd a na bateriová vozidla a MEGC určená pro přepravu plynů třídy 2. Oddíly 6.8.3 až 6.8.5 obsahují zvláštní požadavky doplňující nebo pozměňující požadavky uvedené v oddílu 6.8.2.

6.8.1.4 Ustanovení týkající se používání těchto cisteren viz kapitolu 4.3.

6.8.2 Požadavky vztahující se na všechny třídy

6.8.2.1 Konstrukce

Základní zásady

6.8.2.1.1 Nádrže, jejich upevnění a jejich provozní a konstrukční výstroj musejí být konstruovány tak, aby odolaly beze ztráty svého obsahu (jiné než množství plynu uniknuvšího odplyňovacími otvory):

- statickým a dynamickým namáháním za normálních podmínek přepravy uvedeným v 6.8.2.1.2 a 6.8.2.1.13;
- předepsaným nejmenším namáháním uvedeným v 6.8.2.1.15.

- | | | |
|------------|--|---|
| 6.8.2.1.2 | Cisterny a jejich upevňovací prvky musí být při největší povolené hmotnosti náplně způsobilé odolat následujícím silám rovnajícím se silám vyvolaným působením | Cisternové kontejnery a jejich upevňovací prvky musí být při největší povolené hmotnosti náplně způsobilé odolat následujícím silám rovnajícím se silám vyvolaným působením: |
| | <ul style="list-style-type: none"> - ve směru jízdy: dvojnásobku celkové hmotnosti; - v příčném směru kolmo ke směru jízdy: celkové hmotnosti; - ve svislém směru zdola nahoru: celkové hmotnosti, - ve svislém směru shora dolů: dvojnásobku celkové hmotnosti. | <ul style="list-style-type: none"> - ve směru jízdy: dvojnásobku celkové hmotnosti; - v příčném směru kolmo ke směru jízdy: celkové hmotnosti (není-li směr jízdy jasně určen, platí dvojnásobek celkové hmotnosti ve všech směrech); - ve svislém směru zdola nahoru: celkové hmotnosti; - ve svislém směru shora dolů: dvojnásobku celkové hmotnosti. |
| 6.8.2.1.3 | Stěny nádrží musí mít nejméně tloušťku uvedenou v 6.8.2.1.17 až 6.8.2.1.21 6.8.2.1.17 až 6.8.2.1.20. | |
| 6.8.2.1.4 | Nádrže musí být zkonstruovány a vyrobeny v souladu s požadavky norem uvedenými v 6.8.2.6 nebo technických předpisů uznaných příslušným orgánem v souladu s 6.8.2.7, ve kterých je určen materiál a tloušťka stěny stanovena s přihlédnutím k nejvyšším a nejnižším plnicím a provozním teplotám, avšak musí být dodrženy minimální požadavky uvedené v 6.8.2.1.6 až 6.8.2.1.26. | |
| 6.8.2.1.5 | Cisterny určené pro některé nebezpečné látky musí být opatřeny doplňkovou ochranou, která může mít formu přídatné tloušťky nádrže (zvýšený výpočtový tlak) stanovené vzhledem k povaze nebezpečí, která představují dotyčné látky, nebo formu ochranného zařízení (viz zvláštní ustanovení uvedená v 6.8.4). | |
| 6.8.2.1.6 | Svary musí být odborně provedené a musí zaručit naprostou bezpečnost. Provedení a kontrola svarů musí splňovat požadavky uvedené v 6.8.2.1.23. | |
| 6.8.2.1.7 | Musí být provedena opatření chránící nádrže před nebezpečím deformace způsobené vnitřním podtlakem. Nádrže, kromě nádrží podle 6.8.2.2.6, konstruované pro vybavení podtlakovými ventily musí odolat bez stálé deformace vnějšímu tlaku překračujícímu vnitřní tlak o nejméně 21 kPa (0,21 baru). Nádrže používané pouze pro přepravu tuhých látek (práškových nebo zrnitých) obalových skupin II nebo III, které během přepravy nezkapalňují, mohou být zkonstruovány pro nižší vnější tlak, avšak nejméně 5 kPa (0,05 baru). Podtlakové ventily musí být nastaveny tak, aby nastavený vyrovnávací tlak nepřevyšoval konstrukční podtlak cisterny. Nádrže, které nejsou konstruovány pro vybavení podtlakovými ventily, musí odolat bez stálé deformace vnějšímu tlaku překračujícímu vnitřní tlak o nejméně 40 kPa (0,4 baru). | |
| | Materiály pro nádrže | |
| 6.8.2.1.8 | Nádrže musí být vyrobeny z vhodných kovových materiálů, které jsou odolné proti křehkému lomu a proti trhlínkové korozi při napětí v rozmezí teplot -20 °C až +50 °C, pokud není u některé třídy předepsán jiný rozsah teplot. | |
| 6.8.2.1.9 | Materiály nádrží nebo jejich ochranných povlaků, které jsou ve styku s obsahem nádrže, nesmějí obsahovat látky náchylné k nebezpečné reakci (viz „Nebezpečné reakce“ v 1.2.1) s tímto obsahem, k vytváření nebezpečných látek nebo k podstatnému zeslabení materiálu. | |
| | Pokud styk mezi přepravovanou látkou a materiálem použitým k výrobě nádrže způsobuje progresivní úbytek tloušťky stěn nádrže, musí být tato tloušťka při výrobě patřičně zvětšena. Tato dodatečná tloušťka zohledňující korozi se nebere v úvahu při výpočtu tloušťky stěn nádrže. | |
| 6.8.2.1.10 | Pro svařované nádrže se použije jen materiálů dokonalé svařitelnosti, u nichž může být zaručena dostatečná vrubová houževnatost při okolní teplotě -20 °C, zejména ve svarech a v jejich okolí. | |

Při použití jemnozrné oceli zaručená mez pružnosti R_e musí být nejvýše 460 N/mm^2 a zaručená mez pevnosti v tahu musí být nejvýše 725 N/mm^2 podle specifikací materiálu.

6.8.2.1.11 Poměry R_e/R_m větší než 0,85 nejsou pro oceli používané při výrobě svařovaných cisteren dovoleny.

R_e = výrazná mez pružnosti pro oceli s jasně definovanou mezí pružnosti nebo zaručenou mezí pružnosti 0,2 % prodloužení pro oceli bez jasně definované meze pružnosti (pro austenitické oceli 1 %)

R_m = pevnost v tahu

Hodnoty uvedené v kontrolním osvědčení pro materiál musí být v každém případě vzaty za základ pro stanovení tohoto poměru.

6.8.2.1.12 U oceli musí být prodloužení při přetržení v % nejméně

10 000

zjištěná pevnost v tahu v N/mm^2

avšak v žádném případě nesmí být menší než 16 % u jemnozrných ocelí a menší než 20 % u jiných ocelí.

U hliníkových slitin nesmí být prodloužení při přetržení menší než 12 %¹.

Výpočet tloušťky nádrže

6.8.2.1.13 Tlak, podle něhož byla stanovena tloušťka stěny, nesmí být nižší než výpočtový tlak, avšak musí být též vzata v úvahu namáhání uvedená v 6.8.2.1.1 a, pokud je to nezbytné, následující namáhání:

V případě vozidel, u nichž cisterna tvoří namáhaný samonosný prvek, musí být nádrž konstruována tak, aby odolala takto vyvolanému namáhání dodatečně k namáháním z jiných zdrojů.

Za působení těchto namáhání napětí v nejvíce namáhaném bodě nádrže a jejich upevňovacích prvků nesmí překročit hodnotu σ uvedenou v 6.8.2.1.16.

U každého z těchto namáhání stanovený koeficient bezpečnosti musí být následující:

- pro kovy s jasně stanovenou mezí pružnosti: koeficient bezpečnosti 1,5 ve vztahu k výrazné mezi pružnosti; nebo

- pro kovy bez jasně stanovené meze pružnosti: koeficient bezpečnosti 1,5 ve vztahu k zaručené mezi pružnosti 0,2 % prodloužení (1 % maximálního prodloužení pro austenitické oceli).

6.8.2.1.14 Výpočtový tlak je uveden v druhé části kódu (viz 4.3.4.1) podle sloupce (12) tabulky A kapitoly 3.2.

Pokud tam je uvedeno písmeno „G“, musí být splněny následující požadavky:

- Nádrže s vyprazdňováním samospádem, určené k přepravě látek, které mají při 50°C tenzi par nepřevyšující 110 kPa (1,1 baru) (absolutní tlak), musí být dimenzovány na tlak rovnající se dvojnásobku statického tlaku přepravované látky, nejméně však dvojnásobku statického tlaku vody.
- Nádrže plněné nebo vyprazdňované pod tlakem, určené k přepravě látek, které mají při 50°C tenzi par nepřevyšující 110 kPa (1,1 baru) (absolutní tlak), musí být dimenzovány na tlak rovnající se 1,3 násobku plnicího nebo vyprazdňovacího tlaku

¹ U plechů musí být osa vzorku pro zkoušku tahem kolmá ke směru válcování. Prodloužení při přetržení ($l = 5 d$) se měří na zkušebních vzorcích kruhového průřezu, jejichž měrná délka (vzdálenost mezi ryskami) se rovná pětinašobku průměru d ; použije-li se zkušebních vzorků pravouhlého průřezu, vypočítá se měrná délka podle vzorce $l = 5,65\sqrt{F_0}$, kde F_0 je původní plošný obsah průřezu zkušebního vzorku.

Pokud je tam uveden nejmenší výpočtový tlak (přetlak), nádrž musí být konstruována na tento tlak, který nesmí být nižší než 1,3 násobek plnicího nebo vyprazdňovacího tlaku. Dále uvedené minimální požadavky se vztahují na tyto nádrže:

- (c) Nádrže s jakýmkoli systémem plnění nebo vyprazdňování, určené k přepravě látek, které mají při 50 °C tenzi par vyšší než 110 kPa (1,1 baru), a bod varu vyšší než 35 °C musí být dimenzovány na výpočtový tlak nejméně 150 kPa (1,5 baru) (přetlak), nebo na tlak rovnající se 1,3 násobku plnicího nebo vyprazdňovacího tlaku, pokud je plnicí nebo vyprazdňovací tlak vyšší.
- (d) Nádrže s jakýmkoli systémem plnění nebo vyprazdňování, určené k přepravě látek, které mají bod varu nejvýše 35 °C, musí být dimenzovány na tlak rovnající se 1,3 násobku plnicího nebo vyprazdňovacího tlaku, nejméně však 400 kPa (4 bary) (přetlak).

6.8.2.1.15 Při zkušebním tlaku nesmí napětí δ (sigma) v bodě největšího namáhání nádrže překročit mezní hodnoty závislé na materiálu, které jsou předepsány dále. Je třeba pamatovat na případné zeslabení způsobené svary.

6.8.2.1.16 Pro všechny kovy a slitiny musí být napětí při zkušebním tlaku nižší než menší z hodnot daných následujícími vzorci:

$$\sigma \leq 0.75 Re \text{ nebo } \sigma \leq 0.5 Rm$$

kde

Re = výrazná mez pružnosti pro oceli s jasně definovanou mezí pružnosti nebo

zaručená mez pružnosti 0,2 % prodloužení pro oceli bez jasně definované meze pružnosti (pro austenitické oceli 1 %)

Rm = pevnost v tahu.

Hodnoty Re a Rm, které se použijí, musejí být určeny minimálními hodnotami podle materiálových norem. Pokud materiálové normy pro dotyčné kovy nebo slitiny neexistují, použité Re a Rm musí být schváleny příslušným orgánem nebo organizací jím určené.

Při použití austenitických ocelí smějí být určené minimální hodnoty podle materiálových norem překročeny nejvýše o 15 %, pokud jsou tyto vyšší hodnoty potvrzeny (doloženy) v kontrolním osvědčení.

Minimální hodnoty však nesmějí být překročeny, pokud byl použit vzorec uvedený v 6.8.2.1.18.

Minimální tloušťka nádrže

6.8.2.1.17 Tloušťka nádrže nesmí být menší, než je větší z hodnot vypočtených podle těchto vzorců:

$$e = \frac{P_T D}{2\sigma\lambda} \quad \left| \quad e = \frac{P_C D}{2\sigma} \right.$$

kde

e = minimální tloušťka stěny v mm

P_T = zkušební tlak v MPa

P_C = výpočtový tlak v MPa definovaný v 6.8.2.1.14

D = vnitřní průměr nádrže v mm

σ = dovolené napětí, jak je definováno v 6.8.2.1.16, v N/mm²

λ = součinitel menší než 1, který zohledňuje případné zeslabení způsobené svarovými švy, v souladu s kontrolními metodami uvedenými v 6.8.2.1.23.

Tloušťka nesmí být v žádném případě menší, než je předepsáno v

6.8.2.1.18	<p>6.8.2.1.18 až 6.8.2.1.21.</p> <p>Nádrže kruhového průřezu² o průměru nejvýše 1,80 m, kromě nádrží uvedených v 6.8.2.1.21, nesmějí mít tloušťku menší než 5 mm, pokud jsou z měkké oceli, nebo ekvivalentní tloušťku, pokud jsou z jiného kovu.</p> <p>Pokud je průměr větší než 1,80 m, tato tloušťka musí být zvětšena na 6 mm, kromě nádrží určených pro přepravu práškových nebo zrnitých látek, jsou-li nádrže vyrobeny z měkké oceli³, nebo na ekvivalentní tloušťku u nádrží vyrobených z jiného kovu.</p>	<p>6.8.2.1.18 až 6.8.2.1.20.</p> <p>Tloušťka nádrží z měkké oceli nesmí být menší než 5 mm (v souladu s požadavky uvedenými v 6.8.2.1.11 a 6.8.2.1.12) nebo ekvivalentní tloušťka u nádrží z jiného kovu. Pokud je průměr větší než 1,80 m, tato tloušťka musí být zvětšena na 6 mm, kromě nádrží určených pro přepravu práškových nebo zrnitých látek, jsou-li nádrže vyrobeny z měkké oceli³, nebo na ekvivalentní tloušťku u nádrží vyrobených z jiného kovu.</p> <p>Ať je použit jakýkoli kov, nejmenší tloušťka stěny nesmí být v žádném případě menší než 3 mm.</p>
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"Ekvivalentní tloušťka" znamená tloušťku vypočtenou podle tohoto vzorce⁴:

$$e_1 = \frac{464 e_0}{\sqrt[3]{(R_{m1} A_1)^2}}$$

6.8.2.1.19	<p>Je-li nádrž vybavena ochranou proti poškození při bočním nárazu nebo převrácení podle 6.8.2.1.20, může příslušný orgán povolit zmenšení výše uvedených minimálních tlouštěk v poměru k této ochraně; avšak uvedená minimální tloušťka nádrží, jejichž průměr nepřevyšuje 1,80 m, nesmí být menší než 3 mm u nádrží z měkké oceli³ nebo než ekvivalentní tloušťka u nádrží z jiných materiálů.</p> <p>U nádrží o průměru větším než 1,80 m nesmí být uvedená minimální tloušťka menší než 4 mm, je-li nádrž z měkké oceli³, nebo než ekvivalentní tloušťka, je-li nádrž z jiného kovu.</p> <p>Ekvivalentní tloušťka znamená tloušťku vypočtenou podle vzorce uvedeného v 6.8.2.1.18.</p> <p>Kromě případů, pro které platí 6.8.2.1.21, tloušťka nádrží s ochranou proti poškození podle 6.8.2.1.20 (a) nebo (b) nesmí být menší než hodnoty uvedené v následující tabulce.</p>	<p>Je-li nádrž vybavena ochranou proti poškození podle 6.8.2.1.20, může příslušný orgán povolit zmenšení výše uvedených minimálních tlouštěk v poměru k této ochraně; avšak uvedená minimální tloušťka nesmí být menší než 3 mm u nádrží z měkké oceli³ nebo než ekvivalentní tloušťka u nádrží z jiných materiálů, jestliže průměr nádrže nepřevyšuje 1,80 m. U nádrží o průměru větším než 1,80 m nesmí být uvedená minimální tloušťka menší než 4 mm, je-li nádrž z měkké oceli³, nebo než ekvivalentní tloušťka, je-li nádrž z jiného kovu.</p> <p>Ekvivalentní tloušťka znamená tloušťku vypočtenou podle vzorce uvedeného v 6.8.2.1.18.</p> <p>Tloušťka nádrží s ochranou proti poškození podle 6.8.2.1.20 nesmí být menší než uvedené v tabulce níže.</p>
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² U nádrží nekruhového průřezu, např. pravouhlého nebo elipsovitého, musí příslušné průměry odpovídat průměrům vypočteným z kruhového průřezu stejného plošného obsahu. Pro tyto tvary průřezů nesmí poloměry vypouklosti stěn nádrže přesáhnout 2000 mm po stranách a 3000 mm na horní a spodní části nádrže.

³ Definice „měkká ocel“ a „referenční ocel“ viz 1.2.1. „Měkká ocel“ se v tomto případě rovněž vztahuje i na ocel uvedenou v EN materiálových normách jako „měkká ocel“ s minimální pevností v tahu mezi 360 N/mm² a 490 N/mm² a minimální prodloužení při lomu v souladu s 6.8.2.1.12.

⁴ Tento vzorec je odvozen z obecného vzorce:

$$e_1 = e_0 \sqrt[3]{\frac{R_{m0} A_0}{R_{m1} A_1}}^2$$

kde

e = minimální tloušťka stěny pro zvolený kov, v mm;
e₀ = minimální tloušťka stěny pro měkkou ocel, v mm, podle odstavců 6.8.2.1.18 a 6.8.2.1.19;
R_{m0} = 370 (pevnost v tahu pro referenční ocel, viz definice oddílu 1.2.1, v N/mm);

	Průměr nádrže	≤ 1.80 m	> 1.80 m
	Minimální tloušťka nádrže	Austenitické nerezavějící oceli	2.5 mm
Austenitické feritické nerezavějící oceli		3 mm	3,5 mm
Jiné oceli		3 mm	4 mm
Hliníkové slitiny		4 mm	5 mm
Hliník 99.80 %čistoty		6 mm	8 mm

6.8.2.1.20

U cisteren vyrobených po 1. lednu 1990, se za ochranu proti poškození podle 6.8.2.1.19 považují tato nebo jim rovnocenná⁵ opatření:

(a) U cisteren určených k přepravě práškovitých nebo zrnitých látek musí ochrana proti poškození splňovat požadavky příslušného orgánu.

(b) U cisteren určených k přepravě jiných látek se za ochranu proti poškození považuje, jestliže:

1. U nádrží kruhového nebo eliptického průřezu o maximálním poloměru zakřivení nejvýše 2 m je nádrž opatřena výtuhami tvořenými přepážkami, peřejníky, nebo vnějšími nebo vnitřními prstenci, umístěnými tak, aby byla splněna alespoň jedna z následujících podmínek:

- vzdálenost mezi dvěma sousedními výtuhami je nejvýše 1,75 m;
- vnitřní objem mezi dvěma přepážkami nebo peřejníky je nejvýše 7500 litrů.

Vertikální průřez prstence s průřezem styčné části pláště musí mít průřezový modul nejméně 10 m³.

Vnější prstence nesmějí mít ostré hrany s poloměrem zaoblení menším než 2,5 mm.

Přepážky a peřejníky musí odpovídat ustanovením 6.8.2.1.22.

Tloušťka přepážek a peřejníků nesmí být v žádném případě menší než tloušťka stěn nádrže;

2. U cisteren s dvojitou stěnou a vakuovou izolací součet tloušťky vnější kovové stěny a tloušťky stěny nádrže odpovídá tloušťce stěny předepsané v 6.8.2.1.18 a tloušťka stěny vlastní nádrže není menší než minimální tloušťka předepsaná v 6.8.2.1.19.

3. U nádrží s dvojitou stěnou s mezivrstvou z tuhých látek o tloušťce nejméně 50 mm má vnější stěna tloušťku nejméně 0,5 mm,

Ochrana uvedená v 6.8.2.1.19 může mít formu:

- kompaktní vnější konstrukce, jako je "sendvičová" konstrukce, u níž je vnější plášť připevněn k nádrži; nebo
- konstrukce, u níž je nádrž uložena v kompletní kostře s podélnými a příčnými konstrukčními prvky; nebo
- konstrukce s dvojitou stěnou.

Jedná-li se o nádrže s dvojitou stěnou s vakuovou izolací, musí součet tloušťky vnější kovové stěny a tloušťky stěny nádrže odpovídat tloušťce stěny předepsané v 6.8.2.1.18, tloušťka stěny vlastní nádrže nesmí být menší než minimální tloušťka předepsaná v 6.8.2.1.19.

Mají-li nádrže dvojitě stěny s mezivrstvou z tuhých látek o tloušťce nejméně 50 mm, musí mít vnější stěna tloušťku nejméně 0,5 mm, jsou-li vyrobeny z měkké oceli³ nebo nejméně 2 mm, jsou-li vyrobeny z plastu vyztuženého skelným vláknem. Jako mezivrstvy z tuhých látek může být použito tuhé pěny s takovou schopností utlumit nárazy, jako např. polyuretanová pěna.

⁵ Rovnocennými opatřeními se rozumí opatření stanovená v normách uvedených v 6.8.2.6.

³ Definice „měkká ocel“ a „referenční ocel“ viz 1.2.1. „Měkká ocel“ se v tomto případě rovněž vztahuje i na ocel uvedenou v EN materiálových normách jako „měkká ocel“ s minimální pevností v tahu mezi 360 N/mm² a 490 N/mm² a minimální prodloužení při lomu v souladu s 6.8.2.1.12.

pokud je z měkké oceli³, nebo nejméně 2 mm, pokud je z plastu vyztuženého skelnými vlákny. Jako mezivrstvy z tuhých látek se může použít tuhé pěny (se stejnou schopností utlumit náraz jako např. polyuretanová pěna);

4. Nádrže jiných tvarů, než jsou uvedeny v bodě 1, a především cisterny skříňového tvaru jsou opatřeny ze všech stran na 30 % své výšky, v jejím středu dodatečnou ochranou konstruovanou tak, aby její specifická vrubová houževnatost byla nejméně rovna specifické vrubové houževnatosti nádrže vyrobené z měkké oceli³ o tloušťce 5 mm (pro průměr nádrže nejvýše 1,80 m) nebo 6 mm (pro průměr nádrže nad 1,80 m). Dodatečná ochrana musí být trvale připojena k nádrži.

Tento požadavek se považuje za splněný bez další zkoušky specifické vrubové houževnatosti, pokud dodatečná ochrana znamená přivaření plechu za stejného materiálu, jako je nádrž, na její část, která se má vyztužit tak, aby minimální tloušťka stěny odpovídala 6.8.2.1.18.

Tato ochrana je funkcí možných namáhání působících v případě nehody na nádrže z měkké oceli³, jejíž dna a stěny mají při průměru nejvýše 1,80 m tloušťku nejméně 5 mm, nebo při průměru větším než 1,80 m tloušťku nejméně 6 mm. Při použití jiného kovu se určí ekvivalentní tloušťka podle vzorce uvedeného v 6.8.2.1.18.

U snímatelných cisteren se tato ochrana nevyžaduje, jsou-li chráněny ze všech stran čely a bočnicemi nosného vozidla.

6.8.2.1.21

Tloušťka stěn nádrží cisteren dimenzovaných podle 6.8.2.1.14 (a), jejichž vnitřní objem nepřevyšuje 5000 litrů nebo jež jsou rozděleny na těsné komory o jednotkovém vnitřním objemu nejvýše 5000 litrů, může být upravena na úroveň, pokud není předepsáno jinak v 6.8.3 nebo 6.8.4, která však nesmí být menší než příslušná hodnota uvedená v následující tabulce:

Maximální poloměr zakřivení nádrže (m)	Vnitřní objem nádrže nebo její komory (m ³)	Minimální tloušťka (mm)
		Měkká ocel
≤ 2	≤ 5.0	3
2 – 3	≤ 3.5	3
	> 3.5 ale ≤ 5.0	4

Použije-li se jiného kovu než měkké oceli³, určí se ekvivalentní tloušťka podle vzorce uvedeného v 6.8.2.1.18 a nesmí být menší než hodnoty uvedené v následující tabulce.

	Maximální poloměr zakřivení nádrže (m)	≤ 2	2 - 3	2 - 3
	Vnitřní objem nádrže nebo komory (m ³)	≤ 5,0	≤ 3,5	> 3,5 ale ≤ 5,0
Minimální tloušťka nádrže	Austenitické nerezavějící oceli	2,5 mm	2,5 mm	3 mm
	Jiné oceli	3 mm	3 mm	4 mm
	Hliníkové slitiny	4 mm	4 mm	5 mm
	Hliník čistoty 99,80 %	6 mm	6 mm	8 mm

Tloušťka přepážek a peřejníků nesmí být v žádném případě menší než tloušťka nádrže.

- 6.8.2.1.22 Peřejníky a přepážky musí být vyduté, s hloubkou vydutí nejméně 10 cm, nebo musí být vlnité, profilované nebo jinak zesílené, aby zaručovaly rovnocennou pevnost. Plošný obsah peřejníku musí činit nejméně 70 % plošného obsahu průřezu cisterny, v níž je peřejník zabudován.

Svařování a kontrola svarů

- 6.8.2.1.23 Způsobilost výrobce k provádění svářečských operací musí být potvrzena příslušným orgánem. Svářečské operace musí provádět kvalifikovaní svářeči používající svářečský postup, jehož kvalita (včetně potřebného tepelného zpracování) byla dokázána technologickou zkouškou. Musí se provést nedestruktivní zkoušky prozářením nebo ultrazvukem a tyto zkoušky musí potvrdit, že kvalita svarů je přiměřená namáháním.

Musí být provedeny níže uvedené kontroly podle hodnoty součinitele λ použitého pro stanovení tloušťky nádrže v 6.8.2.1.17:

- $\lambda = 0,8$: svary musí být pokud možno prohlédnuty vizuálně z obou stran a podrobeny namátkově nedestruktivní zkoušce. Všechny svařované „T“ spoje s celkovou délkou zkoušeného svaru nejméně 10 % celkové délky všech podélných, obvodových a radiálních (na koncích cisterny) svarů musí být zkoušeny.;
- $\lambda = 0,9$: všechny podélné svary v celé své délce, všechny křížové svary, 25 % kruhové svary a svary k připevnění částí výstroje velkého průměru musí být podrobeny nedestruktivním zkouškám. Svary musí být pokud možno prohlédnuty vizuálně z obou stran;
- $\lambda = 1,0$: všechny svary musí být podrobeny nedestruktivním zkouškám a pokud možno prohlédnuty vizuálně z obou stran. Musí být odebrán zkušební vzorek svaru.

³ Definice „měkká ocel“ a „referenční ocel“ viz 1.2.1. „Měkká ocel“ se v tomto případě rovněž vztahuje i na ocel uvedenou v EN materiálových normách jako „měkká ocel“ s minimální pevností v tahu mezi 360 N/mm² a 490 N/mm² a minimální prodloužení při lomu v souladu s 6.8.2.1.12.


Pokud má příslušný orgán pochybnosti o kvalitě svarů, může nařídít dodatečné zkoušky.

Jiné konstrukční požadavky

6.8.2.1.24 Ochranný povlak musí být konstruován tak, aby byla zaručena jeho těsnost při jakýchkoli deformacích, k nimž může dojít v normálních podmínkách přepravy (viz 6.8.2.1.2).

6.8.2.1.25 Tepelná izolace musí být zkonstruována tak, aby nebránila přístupu k plnicím a vyprazdňovacím zařízením a pojistným ventilům, ani jejich funkci.

6.8.2.1.26 Jestliže nádrže určené pro přepravu hořlavých kapalin majících bod vzplanutí nejvýše 60 °C jsou vybaveny nekovovými ochrannými povlaky (vnitřními vyloženími), nádrže a jejich ochranné povlaky musí být tak konstruovány, aby nemohlo dojít ke vznícení (zapálení) elektrostatickými náboji.

6.8.2.1.27 Nádrže určené pro přepravu kapalin s bodem vzplanutí nejvýše 60 °C nebo pro přepravu hořlavých plynů nebo UN 1361 uhlí nebo UN 1361 saze, obalová skupina II, musí být připojeny k podvozku nejméně jedním dobrým elektrickým spojem. Je třeba vyloučit každý dotyk kovů, který by mohl způsobit elektrochemickou korozi. Nádrže musí být opatřeny nejméně jedním elektricky propojitelným uzemněním zřetelně označeným znakem .

Všechny části cisternového kontejneru určeného k přepravě kapalin s bodem vzplanutí nejvýše 60 °C, k přepravě hořlavých plynů nebo UN 1361 uhlí nebo UN 1361 saze, obalová skupina II, musí být možno elektricky uzemnit. Je třeba vyloučit každý dotyk kovů, který by mohl způsobit elektrochemickou korozi.

6.8.2.1.28 *Ochrana upevňovacích prvků na vrchní části cisterny*

Upevňovací prvky a výstroj namontované na vrchní části cisterny musí být chráněny proti poškození způsobenému převrácením. Tato ochrana musí mít formu výztužných obručí, ochranných vrchlíků nebo příčných nebo podélných členů tvarovaných tak, aby poskytovaly účinnou ochranu.

6.8.2.2 Výstroj

6.8.2.2.1 Pro výrobu provozní a konstrukční výstroje mohou být použity vhodné nekovové materiály.

Části výstroje musí být uspořádány tak, aby byly chráněny proti nebezpečí utržení nebo poškození během přepravy a manipulace. Musí zaručovat bezpečnost odpovídající a srovnatelnou s bezpečností vlastních nádrží a musí zejména:

- být snášelivé s přepravovanými látkami; a
- splňovat požadavky 6.8.2.1.1.

Potrubi musí být tak konstruováno, vyrobeno a namontováno, aby se zabránilo riziku poškození vlivem tepelné roztažnosti a smrštnění, mechanického rázu a vibrací.

Co možno nejvíce provozních a ovládacích prvků je nutno umístit do co nejmenšího počtu otvorů v nádrži. Těsnost provozní výstroje včetně uzávěrů (vík) kontrolních otvorů musí být zajištěna i při převrácení cisterny, berouce v úvahu síly vyvolané nárazem (jako zrychlení a dynamický tlak obsahu). Je však povolen omezený únik obsahu cisterny vlivem špičky tlaku v průběhu nárazu.

Těsnost provozní výstroje musí být zajištěna i při převrácení cisternového vozidla nebo kontejneru.

Těsnění musí být vyrobena z materiálu, který se snáší s přepravovanou látkou, a musí se vyměnit, jakmile se jejich účinnost zhorší, např. v důsledku jejich stárnutí.

Těsnění zajišťující těsnost provozních a ovládacích prvků, s nimiž je nutno manipulovat během normálního použití cisterny, musí být konstruována a uspořádána tak, aby při manipulaci s provozními a ovládacími prvky, k nimž patří, nedošlo k jejich poškození.

6.8.2.2.2

Každý spodní plnicí nebo vyprazdňovací otvor v cisternách, které jsou uvedeny ve sloupci (12) tabulky A kapitoly 3.2 kódem cisterny zahrnujícím písmeno „A“ v její třetí části (viz 4.3.4.1.1) musí být vybaven nejméně dvěma na sobě nezávislými uzávěry, které jsou namontovány za sebou, tvořenými

- vnějším uzavíracím ventilem s potrubím z kovového materiálu schopného se deformovat a
- uzavíracím zařízením na konci každého potrubí, kterým může být šroubový uzávěr, slepá příruba nebo jiný stejně účinný prostředek. Toto uzavírací zařízení musí být tak těsné, že nemůže dojít k úniku látky. Je třeba přijmout opatření, která umožní umístit ve výpustném potrubí bezpečné zařízení pro vyrovnání tlaku, které účinkuje před úplným odstraněním uzavíracího zařízení.

Každý spodní plnicí nebo vyprazdňovací otvor v cisternách, které jsou uvedeny ve sloupci (12) tabulky A kapitoly 3.2 kódem cisterny zahrnujícím písmeno „B“ v její třetí části (viz 4.3.3.1.1 nebo 4.3.4.1.1), musí být vybaven nejméně třemi na sobě nezávislými uzávěry, které jsou namontovány za sebou, tvořenými

- vnitřním uzavíracím ventilem, tj. uzavíracím ventilem namontovaným uvnitř nádrže nebo v přivařené přírubě nebo v protipřírubě;
- vnějším uzavíracím ventilem nebo rovnocenným zařízením⁶

umístěným na konci každého potrubí | umístěným co možno nejbliže k nádrži

a

- uzavíracím zařízením na konci každého potrubí, kterým může být šroubový uzávěr, slepá příruba nebo jiný stejně účinný prostředek. Toto uzavírací zařízení musí být tak těsné, že nemůže dojít k úniku látky. Je třeba přijmout opatření, která umožní umístit ve výpustném potrubí bezpečné zařízení pro vyrovnání tlaku, které účinkuje před úplným odstraněním uzavíracího zařízení.

Avšak v případech cisteren určených pro přepravu určitých krystalizujících nebo vysoce viskózních látek a nádrží opatřených ebonitovým nebo termoplastovým povlakem může být vnitřní uzavírací ventil nahrazen vnějším uzavíracím ventilem s dodatečnou ochranou.

Vnitřní uzavírací ventil musí být ovladatelný buď shora nebo zdola. Poloha - otevřeno nebo zavřeno - vnitřního uzavíracího ventilu musí být v obou případech pokud možno ověřitelná. se země. Ovládací zařízení vnitřního uzavíracího ventilu musí být konstruováno tak, aby se zabránilo jakémukoli nežádoucímu otevření v důsledku nárazu nebo neúmyslného jednání.

Vnitřní uzávěr musí zůstat účinný i při poškození vnějšího ovládacího zařízení.

K zamezení úniku obsahu při poškození vnějších plnicích a vyprazdňovacích zařízení (potrubí, boční uzavírací zařízení) musí být vnitřní uzavírací ventil a jeho sedlo chráněny proti nebezpečí utržení vnějším namáháním, nebo musí být konstruovány tak, aby těmto namáháním odolaly. Plnicí a vyprazdňovací zařízení (včetně přírub nebo šroubových uzávěrů) a ochranné kryty (pokud jsou) musí být zajištěny proti jakémukoli nežádoucímu otevření.

Poloha a/nebo směr uzavírání uzavíracích zařízení musí být jednoznačně patrné.

Všechny otvory cisteren, které jsou uvedeny ve sloupci (12) tabulky A kapitoly 3.2 kódem obsahujícím písmeno „C“ nebo „D“ v jeho třetí části (viz 4.3.3.1.1 a 4.3.4.1.1) musí být umístěny nad hladinou kapaliny. Tyto cisterny nesmějí mít žádné potrubí nebo spoje potrubí pod hladinou kapaliny. Čistící otvory (velikosti pěsti) jsou však povoleny ve spodní části nádrže cisteren uvedených kódem cisterny obsahujícím písmeno „C“ v jeho třetí části. Tento otvor musí být možno uzavřít těsnou přírubou, jejíž konstrukce musí být schválena příslušným orgánem nebo jím pověřenou organizací.

⁶ V případě cisternových kontejnerů s vnitřním objemem menším než 1 m³ vnější uzavírací ventil nebo jiné ekvivalentní zařízení může být nahrazeno slepou přírubou.

6.8.2.2.3 Cisterny, které nejsou hermeticky uzavřeny, mohou být vybaveny podtlakovými ventily pro zabránění nepříjemného vnitřního podtlaku; tyto podtlakové vyrovnávací ventily musí být nastaveny tak, aby nastavený vyrovnávací tlak nepřevyšoval konstrukční podtlak cisterny (viz 6.8.2.1.7). Hermeticky uzavřené cisterny nesmí být vybaveny podtlakovými ventily. Avšak cisterny kódů cisterny SGAH, S4AH nebo L4BH, vybavené podtlakovými ventily, které se otevírají při podtlaku ne méně než 21 kPa (0.21 bar) jsou považována za hermeticky uzavřené. Pro cisterny určené pro přepravu tuhých látek (práškových, nebo zrnitých) obalových skupin II nebo III, které nezkapalní během přepravy, podtlak může být snížen na méně než 5 kPa (0.005 bar).

Podtlaková zařízení používaná na cisternách určených pro přepravu látek odpovídajícím kritériím bodu vzplanutí třídy 3 musí zamezit bezprostřednímu proniknutí plamene do nádrže pomocí vhodného ochranného zařízení, nebo nádrž cisterny musí být bez úniku schopna odolat výbuchu způsobenému proniknutím plamene.

V případě, že se ochranné zařízení skládá z vhodné pojistky proti prošlehnutí nebo ochrany proti prošlehnutí, musí být umístěna co nejbližší k nádrži nebo k obojí nádrže. Pro vícekomorové cisterny musí být každá komora chráněna odděleně.

6.8.2.2.4 Nádrž nebo každá z jejích komor musí být opatřena dostatečně velkým otvorem umožňujícím prohlídku.

6.8.2.2.5 *(Vyhrazeno)*

6.8.2.2.6 Cisterny určené k přepravě kapalin o tenzi par nejvýše 110 kPa (1,1 baru) (absolutní tlak) při 50 °C musí být opatřeny podtlakovým zařízením a pojistným zařízením zabraňujícím úniku obsahu, dojde-li k převrácení nádrže; jinak musí splňovat podmínky uvedené v 6.8.2.2.7 nebo 6.8.2.2.8.

6.8.2.2.7 Cisterny určené k přepravě kapalin o tenzi par nad 110 kPa (1,1 baru), při 50 °C a bodu varu vyšší než 35 °C musí být opatřeny pojistným ventilem nastaveným na přetlak nejméně 150 kPa (1,5 baru) a takovým, aby se úplně otevřel při tlaku nepřevyšujícím zkušební tlak; jinak musí splňovat podmínky uvedené v 6.8.2.2.8.

6.8.2.2.8 Cisterny určené k přepravě kapalin, které mají bod varu nejvýše 35 °C, musí být opatřeny pojistným ventilem seřízeným na přetlak nejméně 300 kPa (3 bary) a takovým, aby se úplně otevřel při tlaku nepřevyšujícím zkušební tlak; jinak musí být hermeticky uzavřeny⁷.

6.8.2.2.9 Pohyblivé části, jako jsou kryty, uzávěry atd., které mohou přijít třením nebo nárazem do styku s hliníkovými nádržemi určenými k přepravě hořlavých kapalin o bodu vzplanutí nejvýše 60 °C nebo k přepravě hořlavých plynů, nesmějí být vyrobeny z nechráněné korodující oceli.

6.8.2.2.10 Jestliže cisterny, u nichž je požadováno, aby byly hermeticky uzavřeny, jsou vybaveny pojistnými ventily, tyto ventily musí být předřazeny průtržným kotoučem a musí být dodrženy tyto podmínky:

Uspořádání průtržného kotouče a pojistného ventilu musí být takové, aby uspokojilo příslušný orgán. Manometr nebo jiné vhodné měřidlo musí být instalováno do prostoru mezi průtržným kotoučem a pojistným ventilem tak, aby bylo umožněno odhalení jakékoli poruchy, průtržení nebo netěsnosti kotouče, které by mohly narušit činnost pojistného systému.

6.8.2.3 Schvalování typu

6.8.2.3.1 Příslušná pověřená organizace vydá ke každému novému typu cisternového vozidla, snímatelné cisterny, cisternového kontejneru, cisternové výměnné nástavby, bateriového vozidla nebo MEGC, osvědčení potvrzující, že tento typ, včetně upevňovacích zařízení, který odborně posoudil, je vhodný k účelu, pro nějž je určen a splňuje konstrukční požadavky uvedené v 6.8.2.1, požadavky na výstroj uvedené v 6.8.2.2 a zvláštní požadavky pro třídy přepravovaných látek.

V osvědčení musí být uvedeny:

- výsledky zkoušky;
- schvalovací číslo typu;

⁷ Pro definici „hermeticky uzavřená cisterna“ viz 1.2.1.

Schvalovací číslo sestává z rozlišovací značky⁸ státu, na jehož území bylo schválení uděleno, a z registračního čísla.

- kód cisterny podle 4.3.3.1.1 nebo 4.3.4.1.1;
- alfanumerický kód zvláštních ustanovení pro konstrukci (TC), pro výstroj (TE) a pro schválení typu (TA) oddílu 6.8.4., které jsou uvedeny v kapitole 3.2 tabulce A sloupci (13) pro ty látky, pro jejichž přepravu je cisterna schválena.
- Jednu kopii tohoto osvědčení je třeba přiložit do složky dokladů k cisterně každé vyrobené cisterny, bateriového vozu nebo MEGC (viz. Odstavec 4.3.2.1.7.)
- pokud je to vyžadováno, látky a/nebo skupinu látek, pro které byla cisterna schválena. Ty musí být uvedeny svým chemickým názvem nebo odpovídajícím hromadným pojmenováním (viz 2.1.1.2) společně s jejich zatříděním (třída, klasifikační kód a obalová skupina). Kromě látek třídy 2 a těch, které jsou uvedeny v 4.3.4.1.3, se schválené látky nemusí v osvědčení uvádět. V takových případech skupiny látek dovolených na základě kódu cisterny uvedeného v racionálním přiřazování v 4.3.4.1.2 musí být připuštěny k přepravě s ohledem na příslušné zvláštní ustanovení.

Látky uvedené v osvědčení nebo skupiny látek schválených podle racionálního přiřazování musí být všeobecně snášitelné s charakteristikami cisterny. Do osvědčení musí být vložena výhrada, pokud nebylo možné prověřit tuto snášitelnost vyčerpávajícím způsobem během schvalování typu.

Jednu kopii tohoto osvědčení je třeba přiložit do dokumentace cisterny každé vyrobené cisterny, bateriového vozu nebo MEGC (viz odstavec 4.3.2.1.7).

- 6.8.2.3.2** Pokud jsou cisterny, bateriová vozidla nebo MEGC vyráběny v sériích beze změn, toto osvědčení je platné pro cisterny, bateriová vozidla nebo MEGC vyrobené v těchto sériích nebo podle schváleného prototypu.

Schválení typu může též sloužit pro schválení cisteren s omezenými změnami konstrukce, které buď snižují jejich užitečnou hmotnost nebo namáhání cisteren (např. snížený tlak, zmenšená hmotnost, zmenšený vnitřní objem) nebo zvýšení bezpečnosti konstrukce (např. zvětšená tkoušťka stěny, více peřejníků, zmenšené průměry otvorů). Omezené změny musí být zřetelně popsány v osvědčení o schválení typu.

- 6.8.2.3.3** Následující požadavky se vztahují na cisterny pro které neplatí zvláštní ustanovení TA4 v 6.8.4 (a tedy i 1.8.7.2.4).

Schválení typu je platné po dobu nejvýše deseti let. Pokud se v tomto období příslušné technické požadavky ADR (včetně uvedených norem) změnily tak, že schválený typ již není v souladu s nimi, příslušný orgán nebo organizace určená tímto orgánem, který vydal schválení typu jej musí odejmout a informovat držitele tohoto schválení typu.

POZNÁMKA: *Konečné termíny pro zrušení stávajících schválení typu, viz sloupec (5) tabulky v 6.8.2.6 nebo 6.8.3.6 v případě potřeby.*

Pokud schválení typu skončila platnost nebo bylo odejmuto, výroba cisteren, bateriových vozidel nebo MEGC dle tohoto schválení typu již není dále povolena.

V takovém případě příslušná ustanovení o používání, periodické inspekci a meziperiodické inspekci cisterny, bateriového vozidla nebo MEGC obsažené ve schválení typu, kterému skončila platnost nebo bylo odejmuto, platí i nadále pro tyto cisterny, bateriová vozidla nebo MEGC vyrobené před skončením platnosti nebo odejmutím, pokud mohou být dále používány.

Mohou být i nadále používány dokud jsou v souladu s požadavky ADR. Pokud již nejsou v souladu s požadavky ADR, mohou být nadále používány pouze tehdy, pokud takové užití je povoleno příslušnými přechodnými ustanoveními v kapitole 1.6.

Schválení typu může být obnoveno kompletní revizí a posouzením souladu s ustanoveními ADR platnými k datu obnovení. Obnovení není povoleno pokud schválení typu bylo odejmuto. Prozatímní

⁸ Rozlišovací značka v mezinárodním provozu předepsaná Úmluvou o silničním provozu (Vídeň, 1968).

změny stávajícího schválení typu nemají vliv (viz 6.8.2.3.2) na prodloužení nebo změnu původní doby platnosti osvědčení.

POZNÁMKA: *Prohlídku a posuzování shody může provádět jiná organizace než ta, která vydala původní schválení typu.*

Vydávající organizace je povinna uchovávat všechny doklady o schválení typu po celou dobu platnosti včetně jeho prodloužení, pokud je uděleno.

Je-li pověření vydávající organizace zrušeno nebo omezeno, nebo když organizace ukončila svou činnost, musí příslušný orgán přijmout vhodná opatření k zajištění toho, aby byly materiály buď zpracovány jinou organizací, nebo aby byly k dispozici.

6.8.2.3.4

V případě změny cisterny s platným, propadlým nebo odejmutým typovým schválením zkoušení, inspekce a schválení se omezují na části cisterny, které byly změněny. Změna musí splňovat ustanovení ADR použitelná v době změny. Pro všechny části cisterny neovlivněné změnou dokumentace prvního typového schválení zůstává platná.

Změna se může uplatnit na jedné nebo více cisternách pokrytých typovým schválením.

Osvědčení schvalující změnu musí být vydáno příslušným orgánem jakékoli smluvní strany ADR nebo organizací pověřenou tímto orgánem a musí být uloženo jako část dokumentace cisterny.

Každé uplatnění osvědčení o schválení změny musí být uchováno jednotlivým příslušným orgánem nebo organizací pověřenou tímto orgánem.

6.8.2.4 Inspekce a zkoušky

6.8.2.4.1

Nádrže a jejich výstroj se musí před uvedením do provozu podrobit, buď společně nebo odděleně, první inspekci. Tato inspekce zahrnuje:

- ověření shodnosti se schváleným prototypem;
- ověření konstrukčních charakteristik⁹;
- prohlídku vnějšího a vnitřního stavu;
- hydraulickou tlakovou zkoušku¹⁰ zkušebním tlakem uvedeným na štítku předepsaném v 6.8.2.5.1; a
- zkouškou těsnosti a ověření dobré funkce výstroje.

Kromě třídy 2 zkušební tlak pro hydraulickou tlakovou zkoušku závisí na výpočtovém tlaku a musí být nejméně roven tlaku uvedenému dále:

Výpočtový tlak (bary)	Zkušební tlak (bary)
G ¹¹	G ¹¹
1,5	1,5
2,65	2,65
4	4
10	4
15	4
21	10(4) ¹²

Nejnižší zkušební tlaky pro třídu 2 jsou uvedeny v tabulce plynů a směsí plynů v 4.3.3.2.5.

Hydraulická tlaková zkouška se musí provést na nádrži jako celku a zvlášť na každé komoře komorových nádrží.

⁹ Ověření konstrukčních charakteristik zahrnuje u nádrží se zkušebním tlakem 1 MPa (10 barů) nebo vyšším rovněž odebrání zkušebních vzorků svarů (pracovní vzorky) podle 6.8.2.1.23 a zkoušky předepsané v 6.8.5.

¹⁰ Ve zvláštních případech a se souhlasem znalce schváleného příslušným orgánem může být hydraulická zkouška nahrazena tlakovou zkouškou za použití jiné kapaliny nebo plynu, pokud tento postup nevyvolá nebezpečí.

¹¹ G = nejmenší výpočtový tlak podle všeobecných požadavků 6.8.2.1.14 (viz 4.3.4.1).

¹² Nejnižší zkušební tlak pro UN 1744 brom nebo UN 1744 brom, roztok.

Zkouška se musí provést na každé komoře tlakem rovným nejméně 1,3násobku maximálního provozního tlaku.

Hydraulická tlaková zkouška se musí provést před instalací tepelné izolace, pokud je tato izolace nutná.

Jsou-li nádrže a jejich výstroj zkoušeny odděleně, musí se po montáži podrobit společně zkoušce těsnosti podle 6.8.2.4.3.

Zkouška těsnosti komorových nádrží se provádí zvlášť na každé komoře.

6.8.2.4.2

Nádrže a jejich výstroj se musí podrobit periodickým inspekcím nejpozději každých

šest let

pět let

Tyto periodické inspekce musí zahrnovat:

- vnitřní a vnější prohlídku;
- zkoušku těsnosti nádrže s její výstrojí podle 6.8.2.4.3 a kontrolu uspokojivé funkce celé výstroje;
- jako všeobecné pravidlo hydraulickou tlakovou zkoušku¹⁰ (pro zkušební tlak nádrže komor, pokud je to vhodné, viz 6.8.2.4.1).

Plášť tepelné nebo jiné izolace musí být sejmuto pouze v rozsahu nutném pro spolehlivé posouzení charakteristik nádrže.

U nádrží určených k přepravě práškovitých nebo zrnitých látek může být se souhlasem znalce schváleného příslušným orgánem od periodických hydraulických zkoušek upuštěno a mohou být nahrazeny zkouškami těsnosti podle 6.8.2.4.3 při efektivním vnitřním tlaku nejméně rovném maximálnímu provoznímu tlaku.

6.8.2.4.3

Nádrže a jejich výstroj se musí podrobit meziperiodickým inspekcím nejpozději každé

tři roky

dva a půl roku

po první inspekci a každé periodické inspekci. Tyto meziperiodické inspekce mohou být provedeny tři měsíce před nebo po stanoveném datu.

Avšak meziperiodická inspekce může být provedena kdykoli před stanoveným datem.

Jestliže meziperiodická inspekce je provedena dříve než tři měsíce před stanoveným datem, následná meziperiodická inspekce musí být provedena nejpozději

tři roky
po tomto datu.

dva a půl roku

Tyto meziperiodické zkoušky musí zahrnovat zkoušku těsnosti nádrže s její výstrojí a ověření dobré funkce veškeré výstroje. Pro tento účel musí být cisterna vystavena efektivnímu vnitřnímu tlaku rovnajícímu se nejvyššímu provoznímu tlaku. Pro cisterny určené pro přepravu kapalin nebo tuhých látek v zrnitém nebo práškovitém stavu, pokud je plyn používán pro zkoušku těsnosti, musí být efektivní vnitřní tlak roven nejméně 25 % nejvyššího provozního tlaku. Ve všech případech musí být nejméně 20 kPa (0,2 baru) (přetlak).

Pro cisterny vybavené podtlakovými zařízeními a pojistnými zařízeními, chránícími obsah před rozlítím při převrácení cisterny, zkušební tlak zkoušky těsnosti se musí rovnat statickému tlaku naplněné látky.

Zkouška těsnosti se musí provést zvlášť na každé komoře komorových nádrží.

¹⁰ Ve zvláštních případech a se souhlasem znalce schváleného příslušným orgánem může být hydraulická zkouška nahrazena tlakovou zkouškou za použití jiné kapaliny nebo plynu, pokud tento postup nevyvolá nebezpečí.

6.8.2.4.4 Pokud mohlo v důsledku opravy, konstrukční změny nebo nehody dojít ke zhoršení bezpečnosti nádrže nebo její výstroje, musí se provést mimořádná kontrola. Pokud byla provedena mimořádná kontrola splňující požadavky 6.8.2.4.2, může být mimořádná kontrola považována za periodickou inspekci. Pokud byla provedena mimořádná kontrola splňující požadavky 6.8.2.4.3, může být mimořádná kontrola považována za meziperiodickou inspekci.

6.8.2.4.5 Zkoušky, prohlídky a kontroly podle 6.8.2.4.1 až 6.8.2.4.4 musí provést znalec schválený příslušným orgánem. Musí se vydat osvědčení, v nichž musí být uvedeny výsledky těchto zkoušek, prohlídek a kontrol dokonce i v případě negativních výsledků. Tato osvědčení se musejí odvolávat na seznam látek, které se smějí přepravovat v této cisterně nebo na kód cisterny alfanumerické kódy zvláštních ustanovení podle 6.8.2.3.

Jednu kopii tohoto osvědčení je třeba přiložit do složky dokladů k cisterně každé přezkoušené cisterny, bateriového vozu nebo MEGC (viz. 4.3.2.1.7.)

6.8.2.5 *Značení*

6.8.2.5.1 Každá nádrž musí být opatřena kovovým štítkem odolným proti korozi, který je trvale připevněn k nádrži na místě snadno přístupném při prohlídce. Na štítku musí být vyražením nebo jiným podobným způsobem vyznačeny alespoň následující údaje. Tyto údaje mohou být vyryty přímo do stěn vlastní nádrže, jsou-li stěny natolik zesílené, aby se nezměnila pevnost nádrže¹³:

- schvalovací číslo;
- jméno nebo značka výrobce;
- výrobní číslo;
- rok výroby;
- zkušební tlak (přetlak);
- vnější výpočtový tlak (viz. 6.8.2.1.7)
- vnitřní objem nádrže – u vícekomorových nádrží vnitřní objem každé komory – následovaný znakem „S“, jestliže nádrže nebo komory s více než 7500 litrů jsou rozděleny peřejníky na oddíly s vnitřním objemem nejvýše 7500 litrů;
- projektovaná teplota (pouze je-li vyšší než +50 °C nebo nižší než -20 °C),
- datum a druh naposledy provedené zkoušky:(měsíc, rok) následován písmenem „P“ , pokud se jedná o první zkoušku nebo periodickou zkoušku dle odstavců 6.8.2.4.1 a 6.8.2.4.2., nebo (měsíc, rok) , následován písmenem „L“, pokud se jedná u této zkoušky o zkoušku těsnosti provedenou v mezidobí dle odstavce 6.8.2.4.3.
- značka znalce, který provedl zkoušky;
- materiál nádrže a popřípadě ochranného povlaku;
- zkušební tlak v nádrži jako celku |
a zkušební tlak komory v MPa nebo |
barech (přetlak) tam, kde je tlak |
v komoře nižší než tlak v nádrži. |

Na nádržích plněných nebo vyprazdňovaných pod tlakem musí být kromě toho uveden maximální dovolený provozní tlak.

¹³ Uvést měrové jednotky za číselné hodnoty.

<p>6.8.2.5.2</p> <p>Následující údaje musí být napsány na cisternovém vozidle (na cisterně samé nebo na štítku)¹³:</p> <ul style="list-style-type: none"> - jméno vlastníka nebo provozovatele; - vlastní hmotnost cisternového vozidla; a - největší povolená hmotnost cisternového vozidla. <p>Následující údaje musí být napsány na snímatelné cisterně (na cisterně samé nebo na štítku)¹³:</p> <ul style="list-style-type: none"> - jméno vlastníka nebo provozovatele; - „snímatelná cisterna“; - vlastní hmotnost cisterny; - největší povolená celková hmotnost cisterny; - pro látky podle 4.3.4.1.3, oficiální pojmenování pro přepravu látky(ek); - kód cisterny podle 4.3.4.1.1; a - pro látky jiné než podle 4.3.4.1.3, alfanumerické kódy všech zvláštních ustanovení TC a TE, které jsou uvedeny ve sloupci (13) tabulky A kapitoly 3.2 pro látky přepravované v cisterně. 	<p>Následující údaje musí být napsány na cisternovém kontejneru (na cisterně samé nebo na štítku)¹³:</p> <ul style="list-style-type: none"> - jména vlastníka a provozovatele; - vnitřní objem nádrže; - vlastní hmotnost; - největší povolená hmotnost; - pro látky podle 4.3.4.1.3 oficiální pojmenování pro přepravu látky(ek); - kód cisterny podle 4.3.4.1.1; a - pro látky jiné než podle 4.3.4.1.3, alfanumerické kódy všech zvláštních ustanovení TC a TE, které jsou uvedeny ve sloupci (13) tabulky A kapitoly 3.2 pro látky přepravované v cisterně.
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6.8.2.6 Požadavky na cisterny, které jsou zkonstruovány, vyrobeny a odzkoušeny podle norem

POZNÁMKA: Osoby nebo organizace uvedené v normách jako odpovědné podle ADR musí splňovat požadavky ADR.

6.8.2.6.1 Konstrukce a výroba

Normy v níže uvedené tabulce musí být použity pro vydání typových schválení, jak je uvedeno ve sloupci (4), aby byly splněny požadavky kapitoly 6.8 dle sloupce (3). Požadavky kapitoly 6.8 dle sloupce (3) musí být ve všech případech nadřazeny. Sloupec (5) uvádí poslední datum, kdy existující schválení typu musí být odejmuto s ohledem na 1.8.7.2.4 nebo 6.8.2.3.3; pokud není datum uvedeno, typové schválení zůstává platné do vypršení jeho platnosti.

Od 1. ledna 2009 je použití norem závazné. Výjimky jsou řešeny v 6.8.2.7 nebo 6.8.3.7.

Jestliže je uvedena více než jedna norma pro použití stejných požadavků, může být použita pouze jedna z nich, ale v plném rozsahu, pokud není v tabulce níže specifikováno jinak.

¹³ Uvést měrové jednotky za číselné hodnoty

Odkaz	Název dokumentu	Příslušné pododdíly a odstavce	Použitelné pro schválení nového typu nebo obnovení	Poslední datum pro odejmutí existujícího typového schválení
(1)	(2)	(3)	(4)	(5)
Pro všechny cisterny				
EN 14025:2003 + AC:2005	Cisterny pro přepravu nebezpečných věcí – Kovové tlakové cisterny – Konstrukce a výroba	6.8.2.1	Mezi 1. lednem 2005 a 30. červnem 2009	
EN 14025:2008	Cisterny pro přepravu nebezpečných věcí – Kovové tlakové cisterny – Konstrukce a výroba	6.8.2.1 a 6.8.3.1	Až do odvolání	
EN 14432:2006	Cisterny pro přepravu nebezpečných věcí – Výstroj pro přepravu kapalných chemikálií – Vyprazdňování a ventily vstupu vzduchu	6.8.2.2.1	Až do odvolání	
EN 14433:2006	Cisterny pro přepravu nebezpečných věcí – Výstroj pro přepravu kapalných chemikálií – Zpětné ventily	6.8.2.2.1	Až do odvolání	
Pro cisterny s nejvyšším provozním tlakem nepřevyšujícím 50 kPa a určené pro přepravu látek, pro které je uveden kód cisterny s písmenem "G" ve sloupci (12) tabulky A kapitoly 3.2				
EN 13094:2004	Cisterny pro přepravu nebezpečných věcí – Kovové cisterny s provozním tlakem nepřevyšujícím 0,5 baru – Výroba a konstrukce	6.8.2.1	Mezi 1. lednem 2005 a 30. červnem 2009	
EN 13094:2008 + AC: 2008	Cisterny pro přepravu nebezpečných věcí – Kovové cisterny s provozním tlakem nepřevyšujícím 0,5 baru – Výroba a konstrukce	6.8.2.1	Až do odvolání	
Pro cisterny pro plyny třídy 2				
EN 12493:2001 (kromě Přílohy C)	Svařované ocelové cisterny pro zkvapalněný ropný plyn (LPG) – Silniční cisterny – Konstrukce a výroba POZNÁMKA: Silniční cisterny ve smyslu „nesnímatelné cisterny“ a „ snímatelné cisterny“ podle definice ADR.	6.8.2.1 (s výjimkou 6.8.2.1.17); 6.8.2.4.1(s výjimkou zkoušky těsnosti); 6.8.2.5.1, 6.8.3.1 až 6.8.3.5.1	Mezi 1. lednem 2005 a 31. prosincem 2010	31. prosinec 2012
EN 12493:2008 (kromě Přílohy C)	LPG výstroj a příslušenství - Svařované ocelové cisterny pro zkvapalněný ropný plyn (LPG) – Silniční cisterny – Konstrukce a výroba POZNÁMKA: Silniční cisterny ve smyslu „nesnímatelné cisterny“ a „ snímatelné cisterny“ podle definice ADR.	1.2.1, 6.8.1, 6.8.2.1(s výjimkou 6.8.2.1.17), 6.8.2.5, 6.8.3.1, 6.8.3.5, 6.8.5.1 až 6.8.5.3	Mezi 1. lednem 2010 a 30. červnem 2013	31. prosinec 2014
EN12493:2008 + A1:2012 (kromě Přílohy C)	LPG výstroj a příslušenství - Svařované ocelové cisterny pro zkvapalněný ropný plyn (LPG) – Silniční cisterny – Konstrukce a výroba POZNÁMKA: Silniční cisterny ve smyslu „nesnímatelné cisterny“ a „ snímatelné cisterny“ podle definice ADR.	1.2.1, 6.8.1, 6.8.2.1(s výjimkou 6.8.2.1.17), 6.8.2.5, 6.8.3.1, 6.8.3.5, 6.8.5.1 až 6.8.5.3	Až do 31. prosince 2013	31. prosinec 2015
EN 12252:2000	Výstroj silničních cisteren na LPG POZNÁMKA: Silniční cisterny ve smyslu „nesnímatelné cisterny“ a „ snímatelné cisterny“ podle definice ADR.	6.8.3.2 (s výjimkou 6.8.3.2.3)	Mezi 1. lednem 2005 a 31. prosincem 2010	31. prosinec 2012
EN 12252:2005 + A1:2008	LPG výstroj a příslušenství - Výbava silničních cisteren na LPG POZNÁMKA: Silniční cisterny ve smyslu „nesnímatelné cisterny“ a „ snímatelné cisterny“ podle definice ADR.	6.8.3.2 (s výjimkou 6.8.3.2.3) a 6.8.3.4.9	Až do odvolání	

Odkaz	Název dokumentu	Příslušné pododdíly a odstavce	Použitelné pro schválení nového typu nebo obnovení	Poslední datum pro odejmutí existujícího typového schválení
EN 13530-2:2002	Kryogenní nádrže – Velké přepravitelné nádrže s vakuovou izolací – část 2: Konstrukce, výroba, inspekce a zkoušení	6.8.2.1 (s výjimkou 6.8.2.1.17), 6.8.2.4, 6.8.3.1 a 6.8.3.4	Mezi 1. lednem 2005 a 30. červnem 2007	
EN 13530-2:2002 + A1:2004	Kryogenní nádrže – Velké přepravitelné nádrže s vakuovou izolací – část 2: Konstrukce, výroba, inspekce a zkoušení	6.8.2.1 (s výjimkou 6.8.2.1.17), 6.8.2.4, 6.8.3.1 a 6.8.3.4	Až do odvolání	
EN 14398-2:2003 (kromě Tabulky 1)	Kryogenní nádrže – Velké přepravitelné nádrže s vakuovou izolací – část 2: Konstrukce, výroba, inspekce a zkoušení	6.8.2.1 (s výjimkou 6.8.2.1.17, 6.8.2.1.19 a 6.8.2.1.20), 6.8.2.4, 6.8.3.1 a 6.8.3.4	Až do odvolání	
Pro cisterny určené pro přepravu kapalných ropných výrobků a jiných nebezpečných látek třídy 3 s tlakem par nepřesahujícím 110 kPa při 50 °C a benzínu, a které nemají jako vedlejší nebezpečí toxicitu nebo žíravost				
EN 13094:2004	Cisterny pro přepravu nebezpečných věcí – Kovové cisterny s provozním tlakem nepřevyšujícím 0.5 baru – Výroba a konstrukce	6.8.2.1	Mezi 1. lednem 2005 a 31. prosincem 2009	
EN 13094:2008 + AC:2008	Cisterny pro přepravu nebezpečných věcí – Kovové cisterny s provozním tlakem nepřevyšujícím 0.5 baru – Výroba a konstrukce	6.8.2.1	Až do odvolání	
EN 13082:2001	Cisterny pro přepravu nebezpečných věcí – Provozní výstroj cisteren – Přepouštěcí ventil par	6.8.2.2 a 6.8.2.4.1	Mezi 1. lednem 2005 a 30. červnem 2013	31. prosinec 2014
EN 13082:2008 +A1:2012	Cisterny pro přepravu nebezpečných věcí – Provozní výstroj cisteren – Přepouštěcí ventil par	6.8.2.2 a 6.8.2.4.1	Až do odvolání	
EN 13308:2002	Cisterny pro přepravu nebezpečných věcí – Provozní výstroj cisteren – Netlakový vyrovnávací zpětný ventil	6.8.2.2 a 6.8.2.4.1	Až do odvolání	
EN 13314:2002	Cisterny pro přepravu nebezpečných věcí – Provozní výstroj cisteren – Kryt plnicího otvoru	6.8.2.2 a 6.8.2.4.1	Až do odvolání	
EN 13316:2002	Cisterny pro přepravu nebezpečných věcí – Provozní výstroj cisteren – Tlakový vyrovnávací zpětný ventil	6.8.2.2 a 6.8.2.4.1	Až do odvolání	
EN 13317:2002 (výjimka pro číslici a tabulku B.2 v příloze B) (Materiál musí splňovat požadavky normy EN 13094:2004, Doložka 5.2)	Cisterny pro přepravu nebezpečných věcí – Provozní výstroj cisteren – Sestava poklopů kontrolních otvorů	6.8.2.2 a 6.8.2.4.1	Mezi 1. lednem 2005 a 31. prosincem 2010	31. prosinec 2012
EN 13317:2002 + A1:2006	Cisterny pro přepravu nebezpečných věcí – Provozní výstroj cisteren – Sestava poklopů kontrolních otvorů	6.8.2.2 a 6.8.2.4.1	Až do odvolání	
EN 14595:2005	Cisterny pro přepravu nebezpečných věcí – Provozní výstroj pro cisterny – Tlaková a podtlaková ventilace	6.8.2.2 a 6.8.2.4.1	Až do odvolání	

6.8.2.6.2 *Inspekce a zkoušky*

Normy v níže uvedené tabulce musí být použity pro inspekce a zkoušky cisteren jak je uvedeno ve sloupci (7), aby byly splněny požadavky kapitoly 6.8 uvedené ve sloupci (3), které musí být ve všech případech nadřazeny.

Použití uvedených norem je závazné.

Odkaz	Název dokumentu	Příslušné pododdíly a odstavce	Použití dovoleno
(1)	(2)	(3)	(4)
EN 12972:2007	Cisterny pro přepravu nebezpečných věcí – Zkoušení, inspekce a značení kovových cisteren	6.8.2.4 6.8.3.4	Až do odvolání

6.8.2.7 *Požadavky na cisterny, které nejsou konstruovány, vyrobeny a odzkoušeny podle norem*

S ohledem na vědecký a technický pokrok nebo kde není uvedena žádná norma v 6.8.2.6 nebo pro řešení zvláštních aspektů neobsažených v normě uvedené v 6.8.2.6, příslušný orgán může uznat použití technického předpisu zaručujícího stejnou úroveň bezpečnosti. Cisterny však musí splňovat minimální požadavky 6.8.2.

Příslušný orgán musí sekretariátu EHK OSN předat seznam technických předpisů, které uznává. Tento seznam musí obsahovat následující údaje: název a datum technického předpisu, účel předpisu a údaje o tom, kde mohou být předpisy získány. Sekretariát musí tyto informace zveřejnit na svých webových stránkách.

Norma, která byla přijata pro odkaz do příštího vydání ADR může být schválena příslušným orgánem pro použití bez oznámení sekretariátu EHK OSN.

Pro zkoušení, inspekci a značení však může být použita norma uvedená v 6.8.2.6.

6.8.3 *Zvláštní požadavky vztahující se na třídu 2***6.8.3.1** *Konstrukce nádrží***6.8.3.1.1** Nádrže určené pro přepravu stlačených nebo zkapalněných plynů nebo rozpuštěných plynů musí být vyrobeny z oceli. Odchylně od ustanovení uvedených v 6.8.2.1.12 lze připustit u bezešvých nádrží minimální prodloužení při přetržení 14 % a napětí σ nepřevyšující mezní hodnoty uvedené dále v závislosti na materiálech:

- (a) Je-li poměr Re/Rm (minimální zaručené charakteristiky po tepelném zpracování) větší než 0,66, avšak nejvýše 0,85:

$$\sigma \leq 0.75 Re;$$

- (b) je-li poměr Re/Rm (minimální zaručené charakteristiky po tepelném zpracování) větší než 0,85:

$$\sigma \leq 0.5 Rm.$$

6.8.3.1.2 Požadavky uvedené v oddílu 6.8.5 se vztahují na materiály a konstrukci svařovaných nádrží.**6.8.3.1.3** *(Vyhrazeno)*

Konstrukce bateriových vozidel a MEGC

- 6.8.3.1.4** Láhve, trubkové nádoby, tlakové sudy a svazky lahví, jakož i články bateriových vozidel nebo MEGC musí být konstruovány podle kapitoly 6.2.

POZNÁMKA 1: Svazky lahví, které nejsou články bateriových vozidel nebo MEGC musí splňovat požadavky kapitoly 6.2.

POZNÁMKA 2: Cisterny jako články bateriových vozidel a MEGC musí být konstruovány podle 6.8.2.1 a 6.8.3.1.

POZNÁMKA 3: Snímatelné cisterny¹⁴ se nepovažují za články bateriových vozidel nebo MEGC.

- 6.8.3.1.5** Články a jejich upevňovací prvky musí být schopné absorbovat při maximální dovolené užitečné hmotnosti síly uvedené v 6.8.2.1.2. Při jakékoli síle nesmí namáhání v nejvíce namáhaném bodě článku nebo jeho upevňovacích prvků nesmí překročit hodnotu uvedenou v 6.2.5.3. pro lahve, trubkové nádoby, tlakové sudy a svazky lahví a pro cisterny hodnotu σ uvedenou v 6.8.2.1.16.

6.8.3.2 Výstroj

- 6.8.3.2.1** Výpustná potrubí nádrží musí být možno uzavřít slepou přírubou nebo jiným, stejně spolehlivým zařízením. Pro nádrže určené pro přepravu hluboce zchlazených zkapalněných plynů tyto slepé příruby nebo jiná rovnocenná zařízení mohou být vybaveny tlak propouštějícími otvory průměru nejvýše 1,5 mm.

- 6.8.3.2.2** Nádrže určené k přepravě zkapalněných plynů smějí být opatřeny kromě otvorů předepsaných v 6.8.2.2.2 a 6.8.2.2.4 otvory pro umístění stavoznaků, teploměrů, tlakoměrů a odvodušňovacími otvory, jak to vyžaduje jejich provoz a bezpečnost.

- 6.8.3.2.3** Vnitřní uzavírací ventil všech plnicích a všech vyprazdňovacích otvorů cisteren

| s vnitřním objemem větším než 1 m³

určených k přepravě zkapalněných hořlavých nebo toxických plynů musí být rychleuzavíratelný a musí se automaticky uzavřít při nežádoucím pohybu nádrže nebo při požáru. Vnitřní uzavírací ventil musí být rovněž možné obsluhovat dálkovým ovládním.

Nicméně pro cisterny určené pro přepravu hořlavých netoxických zkapalněných plynů, může být vnitřní uzavírací ventil s dálkovým ovládním nahrazen zpětným ventilem pouze pro plnicí otvory v parní fázi cisterny. Zpětný ventil musí být umístěn uvnitř cisterny, musí být pružinového typu, aby se uzavřel jakmile je tlak v plnicím potrubí roven nebo nižší než tlak v cisterně a musí být vybaven vhodným těsněním¹⁵.

- 6.8.3.2.4** Cisterny určené k přepravě zkapalněných hořlavých a/nebo toxických plynů musí mít všechny otvory o jmenovitém průměru větším než 1,5 mm, s výjimkou otvorů s pojistnými ventily a s výjimkou uzavřených odvodušňovacích otvorů, vybaveny vnitřním uzavíracím zařízením.

- 6.8.3.2.5** Odchylkou od požadavků uvedených v 6.8.2.2.2, 6.8.3.2.3 a 6.8.3.2.4 mohou být cisterny určené k přepravě hluboce zchlazených zkapalněných plynů opatřeny vnějšími zařízeními namísto zařízení vnitřních, pokud jsou tato vnější zařízení vybavena ochranou proti vnějšímu poškození, která je alespoň rovnocenná ochraně stěny nádrže.

- 6.8.3.2.6** Jsou-li cisterny vybaveny stavoznakem, nesmějí být tyto stavoznaky vyrobeny z průhledného materiálu, pokud jsou v přímém styku s přepravovanou látkou. Teploměry, jsou-li jimi nádrže vybaveny, nesmějí procházet stěnou nádrže přímo do plynu nebo kapaliny.

¹⁴ Pro definici „snímatelná cisterna“ viz 1.2.1.

¹⁵ Použití kovu na kovovém těsnění není dovoleno.

- 6.8.3.2.7** Plnicí a vyprazdňovací otvory umístěné v horní části cisteren musí být opatřeny navíc k tomu, co je předepsáno v 6.8.3.2.3, druhým vnějším uzavíracím zařízením. Toto zařízení musí být možno uzavřít slepou přírubou nebo jiným, stejně spolehlivým zařízením.
- 6.8.3.2.8** Pojistné ventily musí splňovat požadavky uvedené v 6.8.3.2.9 až 6.8.3.2.12 níže.
- 6.8.3.2.9** Cisterny určené pro přepravu stlačených nebo zkapalněných plynů nebo rozpuštěných plynů mohou být opatřeny pružinovými pojistnými ventily. Tyto ventily musí být schopny automaticky se otevřít při tlaku, který se rovná 0,9 až 1,0 násobku zkušebního tlaku nádrže, na níž jsou namontovány. Musí být takového typu, aby odolaly dynamickým účinkům včetně pohybu kapalin v nádrži. Používání ventilů se zátěží nebo ventilů s protizávažím je zakázáno. Požadovaná kapacita bezpečnostních ventilů musí být vypočtena podle vzorce uvedeného v 6.7.3.8.1.1.
- 6.8.3.2.10** Pokud jsou cisterny určeny pro přepravu po moři, požadavky uvedené v 6.8.3.2.9 nezakazují montáž pojistných ventilů podle námořních předpisů IMDG Code.
- 6.8.3.2.11** Cisterny určené pro přepravu hluboce zchladených zkapalněných plynů musí být opatřeny dvěma, nebo více nezávislými pojistnými ventily schopnými otevření při nejvyšším provozním tlaku uvedeném na cisterně. Dva z těchto pojistných ventilů musí být individuálně rozloženy, aby umožnil unikání plynů, které se tvoří odpařováním při normálním provozu, z cisterny takovým způsobem, aby tlak uvnitř cisterny v žádném okamžiku nepřekročil provozní tlak vyznačený na nádrži o více než 10 %.
- Jeden z těchto pojistných ventilů může být nahrazen průtržným kotoučem, který se musí protrhnout při zkušebním tlaku.
- V případě ztráty vakua v cisternách s dvojitou stěnou nebo zničení 20 % izolace cisteren s jednoduchou stěnou musí kombinace zařízení pro vyrovnání tlaku dovolit unik takového množství plynu, aby tlak v nádrži nemohl překročit zkušební tlak. Ustanovení 6.8.2.1.7 se nepoužije pro cisterny s vakuovou izolací.
- 6.8.3.2.12** Tato zařízení pro vyrovnání tlaku cisteren určených pro přepravu hluboce zchladených zkapalněných plynů musí být zkonstruovány tak, aby fungovaly bezvadně i při své nejnižší provozní teplotě. Spolehlivost jejich funkce při této teplotě musí být zjištěna a kontrolována buď zkouškou každého zařízení, nebo zkouškou vzorku zařízení téhož konstrukčního typu.
- 6.8.3.2.13** Ventily snímatelných cisteren, které mohou být váleny, musí být opatřeny ochrannými čepičkami.

Tepelná izolace

- 6.8.3.2.14** Jsou-li cisterny určené pro přepravu zkapalněných plynů opatřeny tepelnou izolací, musí tato izolace sestávat:
- buď z krytu proti slunci pokrývajícího nejméně horní třetinu, avšak nejvýše horní polovinu povrchu cisterny a odděleného od nádrže vrstvou vzduchu o tloušťce nejméně 4 cm; nebo
 - z kompletního pláště přiměřené tloušťky z izolačních materiálů.
- 6.8.3.2.15** Cisterny určené pro přepravu hluboce zchladených zkapalněných plynů musí být tepelně izolovány. Tepelná izolace musí být zabezpečena plným pláštěm. Je-li prostor mezi nádrží a pláštěm vzduchoprázdný (vakuová izolace), musí být ochranný plášť dimenzován tak, aby odolal bez deformace vnějšímu tlaku nejméně 100 kPa (1 bar) (přetlak). Odchylkou od definice „výpočtový tlak“ v 1.2.1 lze při výpočtech brát v úvahu vnější a vnitřní zesilovací prvky. Je-li plášť uzavřen tak, že je plynotěsný, musí být opatřen zařízením, které zabrání vzniku nebezpečného tlaku v izolační vrstvě při nedostatečné těsnosti nádrže nebo její výstroje. Toto zařízení musí zabránit vnikání vlhkosti do tepelně izolačního pláště.
- 6.8.3.2.16** Cisterny určené pro přepravu hluboce zchladených zkapalněných plynů, jejichž bod varu při atmosférickém tlaku je nižší než - 182 °C, nesmějí obsahovat žádnou hořlavou látku ani v tepelně izolačním zařízení, ani v konstrukčních prvcích sloužících pro upevnění nádrže k podvozku.
- Upevňovací prvky nádrží vakuově izolovaných cisteren smějí se souhlasem příslušného orgánu obsahovat plasty mezi nádrží a pláštěm.

- 6.8.3.2.17** Odchylkou od požadavků uvedených v 6.8.2.2.4 nádrže určené pro přepravu hluboce zchlazených zkapalněných plynů nemusí mít kontrolní otvory.
- Části výstroje bateriových vozidel a MEGC
- 6.8.3.2.18** Provozní a konstrukční výstroj musí být tak uspořádána nebo konstruována, aby se předešlo poškození, které by mohlo nastat při úniku obsahu tlakové nádoby za normálních podmínek manipulace a přepravy. Pokud spojení mezi rámem a prvky bateriového vozidla nebo MEGC dovoluje relativní pohyb mezi podskupinami, výstroj musí být tak upevněna, aby dovolila takový pohyb bez poškození pracovních částí. Sběrné potrubí vedoucí k uzavíracím ventilům musí být dostatečně flexibilní (ohebné), aby ochránilo ventily a potrubí před stříhem nebo únikem obsahu tlakové nádoby. Plnicí a vyprazdňovací zařízení (včetně slepých přírub nebo šroubových uzávěrů) a všechny ochranné čepičky musí umožňovat zajištění proti nežádoucímu otevření.
- 6.8.3.2.19** Aby se zabránilo jakékoli ztrátě obsahu v případě poškození, sběrné potrubí, vyprazdňovací zařízení (přípojky potrubí, uzavírací zařízení) a uzavírací ventily musí být chráněny nebo uspořádány proti utržení vnějšími silami nebo konstruovány tak, aby jim odolaly.
- 6.8.3.2.20** Sběrné potrubí musí být konstruováno pro provoz v teplotním rozsahu -20 °C až $+50\text{ °C}$.
- Sběrné potrubí musí být konstruováno, vyrobeno a namontováno tak, aby se zabránilo nebezpečí jeho poškození způsobenému tepelnou roztlačností a smršťováním, mechanickými rázy a vibracemi. Všechna potrubí musí být z vhodného kovového materiálu. Všude, kde to je možné, musí být použito svařovaných spojů.
- Spoje měděného potrubí musí být spájeny na tvrdo nebo mít pevnostně rovnocenné kovové spojení. Bod tavení tavných materiálů musí být nižší než 525 °C . Spoje nesmějí zeslabovat potrubí, jak to může způsobit závitový spoj.
- 6.8.3.2.21** Kromě pro UN 1001 acetylen, rozpuštěný maximální dovolené napětí σ sběrného potrubí při zkušební tlaku nádob nesmí překročit 75 % zaručené meze pružnosti materiálu.
- Nezbytná tloušťka stěny sběrného potrubí pro přepravu UN 1001 acetylen, rozpuštěný, musí být vypočtena podle uznaných technických pravidel.
- POZNÁMKA:** Pro mez pružnosti viz 6.8.2.1.11.
- Základní požadavky tohoto odstavce se považují za splněné, pokud se použily následující normy: (Vyhrazeno)
- 6.8.3.2.22** Odchylkou od požadavků uvedených v 6.8.3.2.3, 6.8.3.2.4 a 6.8.3.2.7 pro láhve, trubkové nádoby, tlakové sudy a svazky lahví tvořící bateriové vozidlo nebo MEGC požadovaná uzavírací zařízení mohou být umístěna uvnitř systému sběrného potrubí.
- 6.8.3.2.23** Je-li jeden z článků bateriového vozidla opatřen pojistným ventilem a jsou-li mezi jednotlivými články uzavírací zařízení, musí být pojistným ventilem opatřen každý článek.
- 6.8.3.2.24** Plnicí a vyprazdňovací zařízení smějí být upevněna na sběrném potrubí.
- 6.8.3.2.25** Každý článek bateriového vozidla, včetně každé jednotlivé láhve svazku lahví, určený pro přepravu toxických plynů musí být možno uzavřít jednotlivě uzavíracím ventilem.
- 6.8.3.2.26** Bateriová vozidla nebo MEGC určené pro přepravu toxických plynů nesmějí mít pojistné ventily, ledaže je pojistným ventilům předřazen průtržný kotouč. V posledním případě uspořádání průtržného kotouče a pojistného ventilu musí být přijatelné pro příslušný orgán.
- 6.8.3.2.27** Pokud jsou bateriová vozidla nebo MEGC určeny pro přepravu po moři, požadavky uvedené v 6.8.3.2.26 nezakazují montáž pojistných ventilů podle námořních předpisů IMDG Code.
- 6.8.3.2.28** Nádoby, které tvoří články bateriového vozidla nebo MEGC určeného pro přepravu hořlavých plynů, musí být spojeny do skupin s celkovým vnitřním objemem nejvýše 5000 litrů, které je možno navzájem oddělit uzavíracím ventilem.

Každý článek bateriového vozidla nebo MEGC určeného pro přepravu hořlavých plynů, pokud je tvořen cisternami odpovídajícími této kapitole, musí být možno uzavřít jednotlivé uzavíracím ventilem.

6.8.3.3 *Schvalování typu*

Není zvláštních předpisů.

6.8.3.4 *Inspekce a zkoušky*

6.8.3.4.1 Materiály každé svařované nádrže, kromě válcových lahví, trubkových nádob, tlakových sudů a lahví jako částí svazku lahví, které jsou články bateriového vozidla nebo MEGC, musí být zkoušeny metodou popsanou v oddílu 6.8.5.

6.8.3.4.2 Základní požadavky na zkušební tlak jsou uvedeny v 4.3.3.2.1 až 4.3.3.2.4 a nejnižší zkušební tlaky jsou uvedeny v tabulce plynů a směsí plynů v 4.3.3.2.5.

6.8.3.4.3 První hydraulická tlaková zkouška musí být provedena před montáží tepelné izolace. Pokud nádrž, její úchyty, potrubí a části výstroje byl zkoušeny odděleně, cisterna po její kompletní montáži musí být podrobena zkoušce těsnosti.

6.8.3.4.4 Vnitřní objem každé nádrže určené k přepravě stlačených plynů plněných hmotnostně, zkapalněných plynů nebo rozpuštěných plynů musí být stanoven za dohledu znalce schváleného příslušným orgánem vážením nebo volumetrickým měřením množství vody, které naplní nádrž; chyba měření vnitřního objemu nádrží musí být nižší než 1 %. Stanovení vnitřního objemu výpočtem na základě rozměrů nádrže není dovoleno. Nejvyšší dovolené hmotnosti plnění podle pokynů pro balení P200 nebo P203 v 4.1.4.1, jakož i v 4.3.3.2.2 a 4.3.3.2.3, musí být stanoveny schváleným znalcem.

6.8.3.4.5 Kontrola svarů musí být provedena podle podmínek stanovených pro součinitel $\lambda = 1$ uvedených v 6.8.2.1.23.

6.8.3.4.6 Odchylkou od požadavků uvedených v 6.8.2.4.2 se periodické inspekce musí provádět:

nejpozději po šesti letech

nejpozději po osmi letech

provozu a potom nejpozději každých dvanáct let v případě cisteren určených pro přepravu hluboce zchlazených zkapalněných plynů;

Meziperiodické inspekce podle 6.8.2.4.3 musí být provedeny nejpozději šest let po každé periodické inspekci.

Zkouška těsnosti nebo meziperiodická inspekce podle 6.8.2.4.3 může být provedena, na žádost příslušného orgánu, mezi dvěma úspěšnými periodickými inspekci.

6.8.3.4.7 U cisteren s vakuovou tepelnou izolací smí být hydraulická zkouška a prohlídka vnitřního stavu nahrazeny se souhlasem schváleného znalce zkouškou těsnosti a měřením vakua.

6.8.3.4.8 Byly-li během periodických inspekcí udělány otvory v nádržích určených k přepravě hluboce zchlazených zkapalněných plynů, musí být způsob jejich hermetického uzavření schválen před znovuvvedením do provozu schváleným znalcem a musí zaručovat celistvost nádrže.

6.8.3.4.9 Zkouška těsnosti cisteren určených pro přepravu plynů musí být provedena při tlaku nejméně:

- pro stlačené plyny, zkapalněné plyny a rozpuštěné plyny: 20 % zkušební tlaku;
- pro hluboce zchlazené zkapalněné plyny: 90 % maximálního provozního tlaku.

Inspekce a zkoušky bateriových vozidel a MEGC

- 6.8.3.4.10** Články a části výstroje každého bateriového vozidla nebo MEGC musí být kontrolovány a zkoušeny, buď společně, nebo odděleně, před prvním uvedením do provozu (první inspekce a zkouška). Potom články tvořící bateriová vozidla nebo MEGC musí být kontrolovány v nejvýše pětiletých intervalech. Články bateriových vozidel a MEGC tvořících cisterny musí být kontrolovány podle 6.8.3.4.6. Mimořádná inspekce a zkouška musí být provedeny bez ohledu na poslední periodické inspekce a zkoušky, pokud je to nezbytné, podle 6.8.3.4.14.
- 6.8.3.4.11** První prohlídka zahrnuje:
- ověření shodnosti se schváleným prototypem;
 - ověření konstrukčních charakteristik;
 - prohlídku vnějšího a vnitřního stavu;
 - hydraulickou tlakovou zkoušku¹⁰ zkušební tlakem uvedeným na štítku předepsaném v 6.8.3.5.10;
 - zkoušku těsnosti nejvyšším provozním tlakem; a
 - ověření dobré funkce výstroje.
- Pokud byly články a jejich výstroj zkoušeny odděleně, musí být po svém sestavení podrobeny společně zkoušce těsnosti.
- 6.8.3.4.12** Láhve, trubkové nádoby a tlakové sudy, jakož i láhve jako část svazku lahví musí být zkoušeny podle pokynu pro balení P200 nebo P203 uvedených v 4.1.4.1.
- Zkušební tlak sběrného potrubí bateriového vozidla nebo MEGC musí být stejný jako zkušební tlak článků bateriového vozidla nebo MEGC. Tlaková zkouška sběrného potrubí může být provedena jako hydraulická zkouška nebo s použitím jiné kapaliny nebo plynu se souhlasem příslušného orgánu nebo jím pověřené organizace. Odchylkou od tohoto požadavku zkušební tlak sběrného potrubí bateriového vozidla nebo MEGC nesmí být menší než 300 barů pro UN 1001 acetylen, rozpuštěný.
- 6.8.3.4.13** Periodická inspekce musí zahrnovat zkoušku těsnosti nejvyšším provozním tlakem a vnější prohlídku konstrukce, článků a provozní výstroje bez demontáže. Články a potrubí musí být periodicky zkoušeny ve lhůtách uvedených v pokynech pro balení P200 v 4.1.4.1 a v souladu s požadavky uvedenými v 6.2.1.6 a případně 6.2.3.5. Pokud byly články a výstroj zkoušeny odděleně, musí být po svém sestavení podrobeny společně zkoušce těsnosti.
- 6.8.3.4.14** Mimořádná inspekce a zkouška je nezbytná, pokud bateriové vozidlo nebo MEGC vykazuje evidentně poškození nebo zkorodované plochy nebo netěsnost nebo jiné podmínky svědčící o nedostacích, které by mohly ohrozit celistvost bateriového vozidla nebo MEGC. Rozsah mimořádné inspekce a zkoušky, a pokud se jeví nezbytnou, demontáž článků, závisí na rozsahu poškození nebo opotřebení bateriového vozidla nebo MEGC. To musí zahrnovat také prohlídky požadované v 6.8.3.4.15.
- 6.8.3.4.15** Prohlídky musí zajistit, že
- (a) články jsou zvnějšku prohlédnuty, zda se nevyskytují důlky, koroze nebo oděnyiny, stopy nárazů, deformace, vady svarů nebo jiné vady, včetně netěsnosti, které by mohly učinit bateriová vozidla nebo MEGC nebezpečnými pro dopravu;
 - (b) potrubí, ventily a těsnění jsou prohlédnuty, zde se nevyskytují zkorodované plochy, závad a jiné podmínky, včetně netěsnosti, které by mohly učinit bateriová vozidla nebo MEGC nebezpečnými pro plnění, vyprazdňování nebo pro dopravu;
 - (c) chybějící nebo uvolněné šrouby nebo matice na jakémkoli přírubovém spoji nebo slepé přírubě jsou nahrazeny nebo utaženy;

¹⁰ Ve zvláštních případech a se souhlasem znalce schváleného příslušným orgánem může být hydraulická tlaková zkouška nahrazena tlakovou zkouškou za použití jiné kapaliny nebo plynu, pokud tento postup nepředstavuje žádné nebezpečí.

- (d) všechna pojistná zařízení a ventily jsou prostory koroze, deformací nebo jakéhokoli jiného poškození nebo vady, které by mohly bránit jejich normální činnosti. Dálkové uzavírací zařízení a samouzavírací ventily musí být uvedeny do provozu, aby se prokázala jejich správná činnost;
- (e) požadovaná označení bateriových vozidel nebo MEGC jsou čitelná a v souladu s příslušnými požadavky; a
- (f) nosná konstrukce (rám), podpěry a zařízení pro zvedání bateriových vozidel nebo MEGC jsou v uspokojivém stavu.

6.8.3.4.16 Zkoušky, inspekce a kontroly uvedené v 6.8.3.4.10 až 6.8.3.4.15 musejí být prováděny znalcem schváleným příslušným orgánem. Ve vydaných osvědčeních musí být uvedeny výsledky těchto operací i v případě negativních výsledků.

Tato osvědčení musí obsahovat odkaz na seznam látek dovolených pro přepravu v tomto bateriovém vozidle nebo MEGC podle 6.8.2.3.1.

Kopie těchto osvědčení musí být přiloženy ke zprávě o cisterně každé odzkoušené cisterny, bateriového vozidla MEGC (viz 4.3.2.1.7.)

6.8.3.5 *Značení*

6.8.3.5.1 Na štítku předepsaném v 6.8.2.5.1 nebo přímo na stěnách nádrže samé, pokud jsou stěny tak zesíleny, že tím není dotčena pevnost nádrže, musí být vyznačeny vyražením nebo jiným podobným způsobem kromě údajů tam uvedených ještě tyto údaje:

6.8.3.5.2 U cisteren určených pro přepravu jen jedné látky:

- oficiální pojmenování pro přepravu plynu a kromě toho u plynů zařazených pod j.n. položku technický název¹⁶.

Toto označení musí být doplněno:

- v případě cisteren určených pro přepravu stlačených plynů plněných objemově (tlakem) hodnotou nejvyššího plnicího tlaku při 15 °C, který je pro cisternu dovolen; a
- v případě cisteren určených pro přepravu stlačených plynů plněných hmotnostně a zkapalněných plynů, hluboce zchlazených zkapalněných plynů a rozpuštěných plynů nejvyšším dovoleným plněním v kg a plnicí teplotou, je-li tato teplota nižší než - 20 °C.

6.8.3.5.3 U cisteren s víceúčelovým použitím:

- oficiální pojmenování pro přepravu plynů a kromě toho u plynů zařazených pod j.n. položku, technický název¹⁶ plynů, pro jejichž přepravu je cisterna schválena.

Tyto údaje musí být doplněny o údaj nejvyšší dovolené užitečné hmotnosti v kg pro každý z těchto plynů.

6.8.3.5.4 U cisteren určených pro přepravu hluboce zchlazených zkapalněných plynů:

- nejvyšší dovolený provozní tlak.

¹⁶ Místo oficiálního pojmenování pro přepravu nebo oficiálního pojmenování pro přepravu j.n. položky následované technickým názvem je dovoleno případné používání dále uvedených názvů:

- pro UN 1078 chladicí plyn, j.n.: směs F1, směs F2, směs F3;
- pro UN 1060 methylacetylen a propadien, směsí, stabilizované: směs P1, směs P2;
- pro UN 1965 uhlovodíky, plynné, směs, zkapalněná, j.n.: směs A, směs A01, směs A02, směs A0, směs A1, směs B1, směs B2, směs B, směs C. Obchodní názvy uvedené v 2.2.2.3, klasifikační kód 2F, UN 1965, Poznámka 1 smějí být používány pouze jako doplňkové;
- pro UN 1010 butadien, stabilizovaný: 1,2-butadien, stabilizovaný, 1,3-butadien, stabilizovaný.

6.8.3.5.5 U cisteren s tepelnou izolací:

- nápis "tepelně izolováno" nebo "vakuově tepelně izolováno".

6.8.3.5.6

Kromě údajů předepsaných v 6.8.2.5.2 musí být uvedeny následující údaje na cisternovém vozidle (na cisterně samé nebo na štítku)¹³:

Kromě údajů předepsaných v 6.8.2.5.2 musí být uvedeny následující údaje na cisternovém kontejneru (na cisterně samé nebo na štítku)¹³:

- (a) - kód cisterny podle osvědčení (viz 6.8.2.3.1) se skutečným zkušebním tlakem cisterny;
 - nápis "nejnižší dovolená plnicí teplota :";
- (b) u cisteren určených pro přepravu jen jedné látky:
 - oficiální pojmenování pro přepravu plynu a kromě toho u plynů zařazených pod j.n. položku technický název¹⁶;
 - pro stlačené plyny plněné hmotnostně a pro zkapalněné plyny, hluboce zchlazené zkapalněné plyny nebo rozpuštěné plyny nejvyšší dovolené užitečné hmotnosti v kg.
- (c) u cisteren s víceúčelovým použitím:
 - oficiální pojmenování pro přepravu plynů a kromě toho u plynů zařazených pod j.n. položku technický název¹⁶ všech plynů, pro jejichž přepravu je cisterna určena.
 - s uvedením nejvyšší dovolené užitečné hmotnosti v kg pro každý z nich.
- (d) u nádrží s tepelnou izolací:
 - nápis "tepelně izolováno" nebo "vakuově tepelně izolováno" v úředním jazyce státu registrace a, není-li tímto jazykem angličtina, francouzština ani němčina, rovněž v angličtině francouzštině nebo němčině, pokud případné dohody uzavřené mezi státy zúčastněnými na přepravě nestanoví jinak.

6.8.3.5.7 *(Vyhrazeno)*

6.8.3.5.8 Tyto údaje se nevyžadují v případě vozidel |
převážujících snímatelné cisterny.

6.8.3.5.9 *(Vyhrazeno)***Značení bateriových vozidel a MEGC**

6.8.3.5.10 Každé bateriové vozidlo a každý MEGC musí být opatřen(o) kovovým štítkem odolným proti korozi, který je trvale připevněn na místě snadno přístupném při prohlídce. Na štítku musí být vyražením nebo jiným podobným způsobem vyznačeny alespoň následující údaje¹³:

- schvalovací číslo;
- jméno nebo značka výrobce;
- výrobní číslo;

¹³ Uvést měrové jednotky za číselné hodnoty.

¹⁶ Místo oficiálního pojmenování pro přepravu nebo oficiálního pojmenování pro přepravu j.n. položky následované technickým názvem je dovoleno případné používání dále uvedených názvů:

- pro UN 1078 chladicí plyn, j.n.: směs F1, směs F2, směs F3;
- pro UN 1060 methylacetylen a propadien, směsí, stabilizované: směs P1, směs P2;
- pro UN 1965 uhlovodíky, plynné, směs, zkapalněná, j.n.: směs A, směs A01, směs A02, směs A0, směs A1, směs B1, směs B2, směs B, směs C. Obchodní názvy uvedené v 2.2.2.3, klasifikační kód 2F, UN 1965, Poznámka 1 smějí být používány pouze jako doplňkové;
- pro UN 1010 butadien, stabilizovaný: 1,2-butadien, stabilizovaný, 1,3-butadien, stabilizovaný.

- rok výroby;
- zkušební tlak (přetlak);
- výpočtová teplota (pouze je-li vyšší než + 50 °C nebo nižší než - 20 °C);
- datum (měsíc a rok) první zkoušky a poslední periodické zkoušky podle 6.8.3.4.10 až 6.8.3.4.13;
- značka znalce, který provedl zkoušky.

- 6.8.3.5.11** Na bateriovém vozidle samém nebo na štítku musí být napsány tyto údaje¹³:
- jméno vlastníka nebo provozovatele,
 - počet článků;
 - celkový vnitřní objem článků;
- a pro bateriová vozidla plněná hmotnostně:
- vlastní hmotnost;
 - největší dovolená hmotnost.
- Na MEGC samém nebo na štítku musí být napsány tyto údaje¹³:
- jméno vlastníka nebo provozovatele,
 - počet článků;
 - celkový vnitřní objem článků;
 - největší dovolená celková hmotnost,
 - kód cisterny podle osvědčení o schválení (viz 6.8.2.3.1) se skutečným zkušebním tlakem MEGC;
 - oficiální pojmenování pro přepravu plynů a kromě toho pro plyny zařazené pod j.n. položku technický název¹⁶ plynů, pro jejichž přepravu je MEGC používán
- a pro MEGC plněné hmotnostně:
- vlastní hmotnost.
- 6.8.3.5.12** Rám bateriového vozidla nebo MEGC musí být v blízkosti místa plnění opatřen štítkem obsahujícím tyto údaje:
- nejvyšší plnicí tlak¹³ při 15 °C dovolený pro články určené pro stlačené plyny;
 - oficiální pojmenování pro přepravu plynu podle kapitoly 3.2 a kromě toho u plynů zařazených pod j.n.položku technický název¹⁶;
- a kromě toho v případě zkvalněných plynů:
- maximální dovolená užitečná plnění jednoho článku¹³.
- 6.8.3.5.13** Láhve, trubkové nádoby a tlakové sudy a láhve jako část svazku lahví musí být značeny podle 6.2.2.7. Tyto nádoby nemusí být jednotlivě označeny bezpečnostními značkami požadovanými v kapitole 5.2.
- Bateriová vozidla a MEGC musí být označeny velkými bezpečnostními značkami a oranžovými tabulkami podle kapitoly 5.3.

¹³ Za číselnou hodnotu připojit měrovou jednotku.

¹⁶ Místo oficiálního pojmenování pro přepravu nebo oficiálního pojmenování pro přepravu j.n. položky následované technickým názvem je dovoleno případně používání dále uvedených názvů:

- pro UN 1078 chladicí plyn, j.n.: směs F1, směs F2, směs F3;
- pro UN 1060 methylacetylen a propadien, směsí, stabilizované: směs P1, směs P2;
- pro UN 1965 uhlovodíky, plynné, směs, zkvalněná, j.n.: směs A, směs A01, směs A02, směs A0, směs A1, směs B1, směs B2, směs B, směs C. Obchodní názvy uvedené v 2.2.2.3, klasifikační kód 2F, UN 1965, Poznámka 1 smějí být používány pouze jako doplňkové;
- pro UN 1010 butadien, stabilizovaný: 1,2-butadien, stabilizovaný, 1,3-butadien, stabilizovaný.

6.8.3.6 **Požadavky na bateriová vozidla a MEGC, která jsou zkonstruována, vyrobená a odzkoušena podle norem**

POZNÁMKA: Osoby nebo organizace uvedené v normách jako odpovědné podle ADR musí splňovat požadavky ADR.

Normy v níže uvedené tabulce musí být použity pro vydání typových schválení, jak je uvedeno ve sloupci (4), aby byly splněny požadavky kapitoly 6.8 dle sloupce (3). Požadavky kapitoly 6.8 dle sloupce (3) musí být ve všech případech nadřazeny. Sloupec (5) uvádí poslední datum, kdy existující schválení typu musí být odejmuto s ohledem na 1.8.7.2.4; pokud není datum uvedeno, typové schválení zůstává platné do vypršení jeho platnosti.

Od 1. ledna 2009 je použití norem závazné. Výjimky jsou řešeny v 6.8.3.7.

Jestliže je uvedena více než jedna norma pro použití stejných požadavků, může být použita pouze jedna z nich, ale v plném rozsahu, pokud není v tabulce níže specifikováno jinak.

Odkaz	Název dokumentu	Příslušné pododdíly a odstavce	Použitelné pro schválení nového typu nebo obnovení	Poslední datum pro odejmutí existujícího typového schválení
(1)	(2)	(3)	(4)	(5)
EN 13807:2003	Převážitelné plynové nádoby – Bateriová vozidla – Konstrukce, výroba, identifikace a zkoušení	6.8.3.1.4 a 6.8.3.1.5, 6.8.3.2.18 až 6.8.3.2.26, 6.8.3.4.10 až 6.8.3.4.12 a 6.8.3.5.10 až 6.8.3.5.13	Až do odvolání	

6.8.3.7 **Požadavky na bateriová vozidla a MEGC, která nejsou konstruována, vyrobená a odzkoušena podle norem**

S ohledem na vědecký a technický pokrok nebo tam, kde není uvedena žádná norma v 6.8.3.6 nebo jde-li o specifické aspekty neuvedené v seznamu norem v 6.8.3.6, může příslušný orgán připustit používání technického předpisu zaručujícího stejnou úroveň bezpečnosti. Bateriová vozidla a MEGC však musí splňovat alespoň požadavky v 6.8.3.

V typovém schválení musí vydávající organizace specifikovat postup pro periodickou inspekci pokud normy odkazované v 6.2.2, 6.2.4 nebo 6.8.2.6 nejsou nebo nesmí být použity.

Příslušný orgán musí předat sekretariátu EHK OSN seznam technických předpisů, které připouští. Seznam by měl zahrnovat následující podrobnosti: název a datum předpisu, účel předpisu a informace, jak je možno je získat. Sekretariát musí tuto informaci zpřístupnit na svých webových stránkách.

Norma, která byla přijata pro odkaz do příštího vydání ADR může být schválena příslušným orgánem pro použití bez oznámení sekretariátu EHK OSN.

6.8.4 **Zvláštní ustanovení**

POZNÁMKA 1: Pro kapaliny mající bod vzplanutí nejvýše 60 °C a pro hořlavé plyny viz též 6.8.2.1.26, 6.8.2.1.27 a 6.8.2.2.9.

POZNÁMKA 2: Požadavky na cisterny, pro které je předepsán zkušební tlak nejméně 1 MPa (10 barů), nebo na cisterny určené pro přepravu hluboce zchlazených zkapalněných plynů, viz 6.8.5.

Pokud jsou uvedeny pod položkou ve sloupci (13) tabulky A kapitoly 3.2, platí následující zvláštní ustanovení:

(a) **Konstrukce (TC)**

- TC1** Požadavky uvedena v 6.8.5 se vztahují na materiály a konstrukci těchto nádrží.
- TC2** Nádrže a části jejich výstroje musí být vyrobeny z hliníku čistoty nejméně 99,5 % nebo vhodné oceli, která není náchylná vyvolat rozklad peroxidu vodíku. Jsou-li nádrže vyrobeny z hliníku čistoty nejméně 99,5 %, nemusí být tloušťka stěny větší než 15 mm, i když výpočet podle 6.8.2.1.17 stanoví vyšší hodnotu.
- TC3** Nádrže musí být vyrobeny z austenitické oceli.
- TC4** Nádrže musí být opatřeny smaltovaným nebo ekvivalentním vnitřním ochranným povlakem (vyložení), pokud materiál nádrže je narušován UN 3250 kyselinou chloroctovou.
- TC5** Nádrže musí být opatřeny olověným povlakem o tloušťce nejméně 5 mm nebo ekvivalentním povlakem.
- TC6** Pokud je nezbytné použít pro cisterny hliník, musí být takové cisterny vyrobeny z hliníku čistoty nejméně 99,5 %; tloušťka stěny nemusí být větší než 15 mm, i když výpočet podle 6.8.2.1.17 stanoví vyšší hodnotu.
- TC7** Účinná minimální tloušťka stěny nádrže nesmí být menší než 3 mm.

(b) **Výstroj (TE)**

- TE1** *(vypuštěno)*
- TE2** *(vypuštěno)*
- TE3** Cisterny musí navíc splňovat následující požadavky. Vyhřívací zařízení nesmí pronikat dovnitř nádrže, ale musí být vně nádrže. Avšak potrubí sloužící pro vyčerpávání fosforu může být opatřeno vyhřívacím pláštěm. Zařízení vyhřívající plášť musí být regulováno tak, aby teplota fosforu nepřekročila plnicí teplotu nádrže. Ostatní potrubí musí procházet nádrží v její horní části; otvory musí být umístěny nad nejvyšší dovolenou hladinou fosforu a být schopné úplného uzavření pod uzamykatelnými kryty. Cisterna musí být vybavena měřicím systémem pro ověření hladiny fosforu a, je-li používána voda jako ochranná látka, pevnou měrnou značkou ukazující nejvyšší dovolenou hladinu vody.
- TE4** Nádrže musí být opatřeny tepelnou izolací vyrobenou z materiálů, které nejsou snadno hořlavé.
- TE5** Pokud jsou nádrže opatřeny tepelnou izolací, taková izolace musí být vyrobena z materiálů, které nejsou snadno hořlavé.
- TE6** Cisterny mohou být vybaveny zařízením takové konstrukce, která zabrání jeho ucpání přepravovanou látkou a která zabrání úniku a nadměrnému přetlaku nebo podtlaku uvnitř nádrže.
- TE7** Vyprazdňovací systém nádrže musí být vybaven dvěma vzájemně nezávislými uzavíracími ventily namontovanými v sérii, první musí mít formu rychleuzavíracího vnitřního ventilu schváleného typu a druhý vnějšího uzavíracího ventilu, jeden na každém konci výpustného potrubí. Slepá příruba nebo jiné zařízení stejného stupně bezpečnosti musí být též upevněna na výstupu z každého vnějšího uzavíracího ventilu. Vnitřní uzavírací ventil musí být takový, aby při utržení potrubí uzavírací ventil zůstal v celku s nádrží a v uzavřené poloze.
- TE8** Přípojky vnějšího potrubí cisteren musí být vyrobeny z materiálů nenáchylných způsobit rozklad peroxidu vodíku.
- TE9** Cisterny musí být ve svých horních částech vybaveny uzavíracím zařízením zabraňujícím vytvoření jakéhokoli nadměrného tlaku uvnitř nádrže způsobenému rozkladem přepravovaných látek, úniku kapaliny a vniknutí cizích látek do nádrže.

- TE10** Uzavírací zařízení cisteren musí být konstruována tak, aby nemohlo dojít k jejich ucpání ztuhlou látkou během přepravy. Pokud jsou cisterny opláštěny tepelně izolačním materiálem, tento materiál musí být anorganický a zcela prostý hořlavých hmot.
- TE11** Nádrže a jejich provozní výstroj musí být konstruovány tak, aby se zabránilo vniknutí cizích látek, úniku kapaliny nebo vytvoření jakéhokoli nadměrného tlaku uvnitř nádrže způsobenému rozkladem přepravovaných látek. Pojistný ventil zabraňující vniknutí cizích látek musí též splňovat toto ustanovení.
- TE12** Cisterny musí být vybaveny tepelnou izolací splňující požadavky uvedené v 6.8.3.2.14. Pokud je SADT organického peroxidu v cisterně 55 °C nebo nižší, nebo je-li cisterna vyrobena z hliníku, nádrž musí být zcela tepelně izolována. Sluneční štít a jakákoli část cisterny jím nezakrytá nebo vnější kompletní tepelně izolační opláštění musí být nabarveny nabílo nebo povrchově upraveny lesklým kovem. Barva musí být vyčištěna před každou přepravou a obnovena v případě zežloutnutí nebo poškození. Tepelná izolace nesmí obsahovat žádné hořlavé materiály. Cisterny musí být vybaveny zařízením pro snímání teploty.

Cisterny musí být vybaveny pojistnými ventily a nouzovými zařízeními na vyrovnávání tlaku. Mohou být též použity dekompresní ventily. Nouzová zařízení na vyrovnávání tlaku musí fungovat při tlacích stanovených jak podle vlastností organického peroxidu, tak podle konstrukčních charakteristik cisterny. V tělese nádrže nejsou povoleny tavné prvky.

Cisterny musejí být vybaveny pružinovými pojistnými ventily, aby bylo zabráněno výraznému nárůstu tlaku uvnitř nádrže produkty rozkladu a parami, které se uvolňují při teplotě 50 °C. Objem a tlak uvádějící pojistný(é) ventil(y) v činnost za účelem vypouštění musí být stanoveny na základě výsledků zkoušek uvedených ve zvláštním ustanovení TA2. Tlak uvádějící ventil(y) v činnost však nesmí být v žádném případě takový, aby mohla kapalina z ventilu(ů) unikat, pokud se nádrž převrátí.

Zařízení na vyrovnávání tlaku smějí být pružinového nebo průtržného typu konstruované tak, aby odvětraly veškeré produkty rozkladu a páry, které se vyvinou během doby nejméně jedné hodiny hoření vypočtené podle následujícího vzorce:

$$q = 70961 \times F \times A^{0.82}$$

kde:

q = absorpce tepla [W]
 A = zvlhčená plocha [m²]
 F = izolační součinitel [-]

F = 1 pro neizolované cisterny, nebo

$$F = \frac{U(923 - T_{PO})}{47032} \text{ pro izolované cisterny}$$

kde:

K = tepelná vodivost izolační vrstvy [W·m⁻¹·K⁻¹]
 L = tloušťka izolační vrstvy [m]
 U = K/L = koeficient prostupu tepla izolací [W·m⁻²·K⁻¹]
 T_{PO} = teplota peroxidu v okamžiku dekomprese [K]

Tlak uvádějící v činnost zařízení k jeho vyrovnávání musí být vyšší než ten, který je uveden výše, a stanoven na základě výsledků zkoušek uvedených ve zvláštním ustanovení TA2. Zařízení na vyrovnávání tlaku musí být dimenzováno tak, aby nejvyšší tlak v nádrži v žádném případě nepřekročil zkušební tlak nádrže.

POZNÁMKA: Příklad postupu pro stanovení rozměru zařízení pro vyrovnávání tlaku je uveden v Dodatku 5 Příručky zkoušek a kritérií.

Pro cisterny s tepelnou izolací musí být kapacita a umístění zařízení na vyrovnání tlaku určeny za předpokladu ztráty izolace 1 % povrchu cisterny.

Dekompresní ventily a pojistné ventily pružinového typu cisteren musejí být opatřeny ochranou proti prošlehnutí plamene, kromě případů, kdy přepravované látky a produkty jejich rozkladu nejsou hořlavé. Musí se přihlídnout ke snížení vyrovnávací kapacity způsobenému ochranou proti prošlehnutí plamene.

- TE13** Cisterny musí být tepelně izolovány a vybaveny vytápěcím zařízením vně cisterny.
- TE14** Cisterny musí být vybaveny tepelnou izolací. Tepelná izolace v přímém kontaktu s nádrží musí mít zápalnou teplotu nejméně o 50 °C vyšší než je nejvyšší teplota, pro niž byla cisterna konstruována .
- TE15** *(Vypuštěno)*
- TE16** *(Vyhrazeno)*
- TE17** *(Vyhrazeno)*
- TE18** Cisterny určené pro přepravu látek plněných při teplotě vyšší než 190 °C musí být vybaveny deflektorem umístěným v pravém úhlu k vnějším plnicím otvorům tak, aby se zabránilo náhlému místnímu zvýšení teploty během plnění.
- TE19** Části výstroje umístěné v horní části cisterny musí být:
- buď vloženy do zapuštěné dutiny; nebo
 - opatřeny vnitřním pojistným ventilem; nebo
 - nebo chráněny krytem nebo příčnými a/nebo podélnými konstrukčními prvky nebo jinými zařízeními poskytujícími stejně záruky, takového průřezu, aby v případě převrácení nedošlo k poškození části výstroje.
- Části výstroje umístěné ve spodní části cisterny:
- Potrubí a všechna boční uzavírací zařízení a všechny vyprazdňovací části výstroje musí být buď umístěny nejméně o 200 mm dovnitř vzhledem k vnějšímu obrysu nádrže, nebo musí být chráněny lištou s modulem průřezu nejméně 20 cm³ příčně ke směru jízdy; jejich světlá výška musí být nejméně 300 mm při plné cisterně.
- Části výstroje umístěné na zadní straně cisterny musí být chráněny nárazníkem předepsaným v oddílu 9.7.6. Jejich výška nad zemí musí být taková, aby byly vhodně chráněny nárazníkem.
- TE20** Bez ohledu na jiné kódy cisteren, které jsou povoleny v hierarchii cisteren racionálního přiblížení uvedeného v 4.3.4.1.2, cisterny musí být vybaveny pojistným ventilem.
- TE21** Uzávěry musí být chráněny uzamykatelnými kryty.
- TE22** *(Vyhrazeno)*

- TE23** Cisterny musí být vybaveny zařízením takové konstrukce, která zabrání jeho ucpání přepravovanou látkou a která zabrání úniku a nadměrnému přetlaku nebo podtlaku uvnitř nádrže.
- TE24** Jestliže jsou cisterny určeny pro přepravu a zpracování kapalných dehtů vybaveny rozstříkovačem na konci vyprazdňovacího potrubí, může být uzavírací zařízení požadované v 6.8.2.2.2 nahrazeno uzavíracím ventilem umístěným na vyprazdňovacím potrubí před rozstříkovače.
- TE25** (vyhrazeno)
(c) **Schvalování typu (TA)**
- TA1** Cisterny nesmějí být schváleny pro přepravu organických látek.
- TA2** Tato látka smí být přepravována ve snímatelných nebo nesnímatelných cisternách nebo cisternových kontejnerech podle podmínek stanovených příslušným orgánem země původu, pokud se na základě dále uvedených zkoušek příslušný orgán přesvědčí o tom, že taková přeprava může být provedena bezpečně. Jestliže země původu není smluvní stranou ADR, tyto podmínky musejí být uznány příslušným orgánem první země ADR dotčené touto přepravou.
- Pro schválení typu musejí být provedeny zkoušky za účelem:
- ověření snášenlivosti všech materiálů, které jsou během přepravy normálně ve styku s přepravovanými látkami;
 - opatření údajů usnadňujících konstrukci nouzových pro vyrovnávání tlaku a pojistných ventilů s ohledem na charakteristické konstrukční prvky cisterny; a
 - stanovení zvláštních požadavků nezbytných pro bezpečnou přepravu látek.
- Výsledky zkoušek musejí být uvedeny v protokolu pro schválení typu.
- TA3** Tato látka může být přepravována pouze v cisternách s kódem cisterny LGAV nebo SGAV; hierarchie v 4.3.4.1.2 se na tento případ nevztahuje.
- TA4** Shodné stanovené postupy oddílu 1.8.7 musí být použity příslušným orgánem, jeho zástupcem nebo inspekční organizací odpovídající 1.8.6.2, 1.8.6.4, 1.8.6.5 a 1.8.6.8 a pověřeným podle EN ISO/IEC 17020:2004 typ A.
- TA5** Tato látka může být přepravována pouze v cisternách s kódem cisterny S2.65AN(+); hierarchie v 4.3.4.1.2 se na tento případ nevztahuje.
- (d) **Zkoušky (TT)**
- TT1** Cisterny z čistého hliníku je třeba podrobit prvním a periodickým hydraulickým tlakovým zkouškám tlakem pouze 250 kPa (2,5 baru) (přetlak).
- TT2** Podmínka povlaku (vyložení) nádrží musí být kontrolována každý rok znalcem schváleným příslušným orgánem, který musí provést inspekci vnitřku nádrže.
- TT3** Odlišně od požadavků uvedených v 6.8.2.4.2 periodické inspekce musí být provedeny nejméně každých osm roků a musí zahrnovat kontrolu tloušťky stěny použitím vhodných přístrojů. U takových cisteren zkouška těsnosti a kontrola, na kterou se vztahuje ustanovení uvedené v 6.8.2.4.3, musí být provedeny nejméně každé čtyři roky.
- TT4** (Vyhrazeno)
- TT5** Hydraulické tlakové zkoušky musí být provedeny nejméně každé
3 roky. | 2½ roku.

- TT6** Periodické zkoušky, včetně hydraulické tlakové zkoušky musí být provedeny nejméně každé 3 roky.
- TT7** Bez ohledu na požadavky uvedené v 6.8.2.4.2 periodická vnitřní inspekce může být nahrazena programem schváleným příslušným orgánem.
- TT8** Cisterny, na nichž je uvedeno oficiálního pojmenování pro přepravu UN čísla 1005 amoniak (čpavek) bezvodý podle 6.8.3.5.1 až 6.8.3.5.3 a vyrobené z jemnozrnné oceli s mezí průtažnosti vyšší než 460 N/mm² podle materiálové normy, musí být při každé periodické zkoušce podle 6.8.2.4.2 podrobeny magnetickým práškovým inspekčním za účelem zjištění povrchových trhlin.
- Dolní část každé nádrže, nejméně ve 20 % délky každého obvodového a podélného svaru, musí být zkontrolovány společně se všemi svary nástavců a všemi opravovanými a broušenými místy.
- Pokud je označení látky na cisterně nebo štítku cisterny odstraněno, musí být provedena magnetická prášková inspekce a tato činnost zaznamenána ve zkušebním protokolu připojeným ke složce dokladů cisterny.
- Takové práškové magnetické inspekce musí být prováděny kompetentní osobou kvalifikovanou pro tuto metodu podle EN 473 (Nedestruktivní zkoušení – Kvalifikace a osvědčení personálu NDT – Všeobecné zásady).
- TT9** Pro inspekce a zkoušky (včetně dohledu výrobce) postupy oddílu 1.8.7 musí být použity příslušným orgánem, jeho zástupcem nebo inspekční organizací odpovídajícím 1.8.6.2, 1.8.6.4, 1.8.6.5 a 1.8.6.8 a pověřeným podle EN ISO/IEC 17020:2004 typ A.
- TT10** Periodické inspekce podle 6.8.2.4.2 se musí provádět
- nejméně každé tři roky. | nejméně každého dva a půl roku

(e) **Značení (TM)**

POZNÁMKA: *Nápisy a bezpečnostní značky musí být v úředním jazyce země registrace a, není-li tímto jazykem angličtina, francouzština ani němčina, rovněž v angličtině francouzštině nebo němčině, pokud případné dohody uzavřené mezi státy zúčastněnými na přepravě nestanoví jinak.*

- TM1** Cisterny musí být kromě údajů předepsaných v 6.8.2.5.2 opatřeny nápisem: „Neotvírat během přepravy. Náchylné k samozapálení“ (viz též Poznámka výše).
- TM2** Cisterny musí být kromě údajů předepsaných v 6.8.2.5.2 opatřeny nápisem: „Neotvírat během přepravy. Vyvíjí hořlavé plyny při styku s vodou“ (viz též Poznámka výše).
- TM3** Cisterny musí být též opatřeny na štítku předepsaném v 6.8.2.5.1 oficiálními pojmenováními pro přepravu schválených látek a nejvyšší dovolenou užitečnou hmotností cisterny v kg.
- TM4** U cisteren musí být uvedeny následující doplňkové údaje vyražením nebo jiným podobným způsobem na štítku předepsaném v 6.8.2.5.2 nebo přímo na nádrži samé, pokud stěny jsou tak zesíleny, že pevnost cisterny není zmenšena: chemický název se schválenou koncentrací příslušné látky.
- TM5** Cisterny musí být opatřeny, kromě údajů uvedených v 6.8.2.5.1, datem (měsíc, rok) poslední inspekce vnitřku cisterny.
- TM6** (Vyhrazeno)
- TM7** Stylizovaný trojlístek uvedený v 5.2.1.7.6 musí být vyznačen vyražením nebo jiným rovnocenným způsobem na štítku předepsaném v 6.8.2.5.1. Tento trojlístek může být vyryt přímo na stěně nádoby samé, jestliže stěny jsou tak zesíleny, že pevnost cisterny není zmenšena.

6.8.5 Požadavky na materiály a konstrukci svařovaných nesnímatelných cisteren, svařovaných snímatelných cisteren a svařovaných nádrží cisternových kontejnerů, pro které je požadován zkušební tlak nejméně 1 MPa (10 barů) a svařovaných nesnímatelných cisteren, svařovaných snímatelných cisteren a svařovaných nádrží cisternových kontejnerů určených pro přepravu hluboce zchlazených zkvapalněných plynů třídy 2

6.8.5.1 Materiály a nádrže

- 6.8.5.1.1** (a) Nádrže určené pro přepravu:
- stlačených, zkvapalněných plynů nebo rozpuštěných plynů třídy 2;
 - UN 1380, 2845, 2870, 3194, 3391 až 3394 třídy 4.2; a
 - UN 1052 fluorovodík, bezvodý a UN 1790 kyselina fluorovodíková s více než 85 % fluorovodíku třídy 8
- musí být vyrobeny z oceli.
- (b) Nádrže vyrobené z jemnozrné oceli určené pro přepravu:
- Žíravých plynů třídy 2 a UN 2073 čpavek, roztok; a
 - UN 1052 fluorovodík, bezvodý a UN 1790 kyselina fluorovodíková s více než 85 % fluorovodíku třídy 8
- musí být podrobeny tepelnému zpracování k odstranění tepelných napětí.
- (c) Nádrže určené pro přepravu hluboko zchlazených zkvapalněných plynů třídy 2 musí být vyrobeny z oceli, hliníku, slitiny hliníku, mědi nebo slitiny mědi (např. mosazi). Nádrže vyrobené z mědi nebo slitiny mědi jsou však dovoleny jen pro plyny, které neobsahují acetylen; ethylen, smí však obsahovat nanejvýše 0,005 % acetylenu.
- (d) Je dovoleno použít pouze materiálů vhodných pro nejnižší a nejvyšší provozní teplotu nádrží a jejich příslušenství.
- 6.8.5.1.2** Pro výrobu nádrží jsou dovoleny tyto materiály:
- (a) oceli, které nejsou náchylné ke křehkému lomu při nejnižší provozní teplotě (viz 6.8.5.2.1):
- měkké oceli (kromě pro hluboce zkvapalněné plyny třídy 2);
 - jemnozrné nelegované oceli do teploty - 60 °C;
 - legované niklové oceli (s obsahem niklu 0,5 až 9 %) do teploty - 196 °C v závislosti na obsahu niklu;
 - austenitické chromniklové oceli do teploty - 270 °C;
- (b) hliník čistoty nejméně 99,5 % nebo hliníková slitina (viz 6.8.5.2.2);
- (c) dezoxidovaná měď čistoty nejméně 99,9 % nebo slitiny mědi s obsahem mědi nad 56 % (viz 6.8.5.2.3).
- 6.8.5.1.3** (a) Nádrže vyrobené z oceli, hliníku nebo slitiny hliníku musí být buď bezešvé, nebo svařované.
- (b) Nádrže vyrobené z austenitické oceli, z mědi nebo ze slitiny mědi smějí být natvrdo spájené.
- 6.8.5.1.4** Příslušenství může být k nádržím přišroubováno, nebo připevněno takto:

- (a) nádrže vyrobené z oceli, hliníku nebo hliníkové slitiny: svařením;
- (b) nádrže z austenitické oceli, mědi nebo slitiny mědi: svařením nebo spájením natvrdo.

6.8.5.1.5 Konstrukce nádrží a jejich upevnění na vozidlo, na podvozek nebo do kontejnerového rámu musí být takové, aby se bezpečně zamezilo snížení teploty nosných konstrukčních částí, které by mohlo způsobit jejich zkřehnutí. Upevňovací prvky nádrží musí být samy konstruovány tak, aby si zachovaly potřebné mechanické vlastnosti, i když nádrž dosáhne své nejnižší provozní teploty.

6.8.5.2 Zkušební požadavky

6.8.5.2.1 Ocelové nádrže

Materiály použité k výrobě nádrží a svarové housenky musí při své nejnižší provozní teplotě, avšak nejméně při $-20\text{ }^{\circ}\text{C}$, splňovat z hlediska vrubové houževnatosti nejméně dále uvedené požadavky:

- Zkoušky se provádějí na zkušebních vzorcích s vrubem tvaru V.
- Nejnižší vrubová houževnatost (viz 6.8.5.3.1 až 6.8.5.3.3) zkušebních vzorků, jejichž podélná osa je kolmá ke směru válcování a které mají vrub tvaru V (v souladu s ISO R 148) kolmý k povrchu plechu, musí mít minimální hodnotu 34 J/cm^2 pro měkkou ocel (přitom zkoušky mohou být provedeny na základě existujících norem ISO se zkušebními vzorky, jejichž podélná osa je ve směru válcování); jemnozrnnou ocel; feritickou legovanou ocel ($\text{Ni} < 5\%$); feritickou legovanou ocel ($5\% \leq \text{Ni} \leq 9\%$) nebo austenitickou Cr-Ni ocel;
- U austenitických ocelí se podrobí zkoušce vrubové houževnatosti pouze svarová housenka.
- Pro provozní teploty nižší než $-196\text{ }^{\circ}\text{C}$ se zkouška vrubové houževnatosti neprovádí při nejnižší provozní teplotě, nýbrž při teplotě $-196\text{ }^{\circ}\text{C}$.

6.8.5.2.2 Nádrže z hliníku nebo hliníkové slitiny

Spoje nádrží musí vyhovět podmínkám stanoveným příslušným orgánem.

6.8.5.2.3 Nádrže z mědi nebo slitiny mědi

Není nutné provádět zkoušky ke zjištění, zda je vrubová houževnatost dostatečná.

6.8.5.3 Zkoušky vrubové houževnatosti

6.8.5.3.1 U plechů tloušťky menší než 10 mm, avšak alespoň 5 mm, se použije zkušebních vzorků o příčném průřezu 10 mm x e mm, přičemž "e" je tloušťka plechu. Je-li to potřebné, je dovoleno předválcování na 7,5 mm nebo 5 mm. Nejmenší hodnota 34 J/cm^2 musí být ve všech případech dodržena.

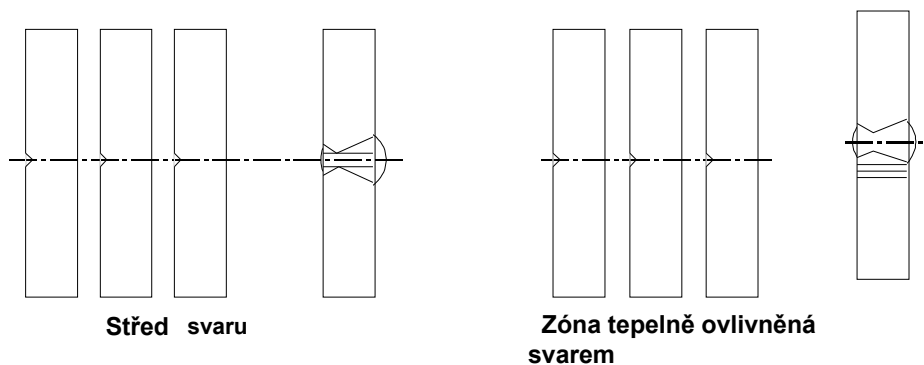
POZNÁMKA: Zkouška vrubové houževnatosti se neprovádí u plechů tloušťky menší než 5 mm ani u jejich spojů.

- 6.8.5.3.2**
- (a) U plechů se vrubová houževnatost zjišťuje na třech zkušebních vzorcích. Zkušební vzorky se odebírají ve směru příčném ke směru válcování; jedná-li se však o měkkou ocel, mohou se odebírat ve směru válcování.
 - (b) Pro zkoušení svarových spojů se zkušební vzorky odebírají takto:

kdýž $e \leq 10\text{ mm}$

tři zkušební vzorky s vrubem ve středu svaru;

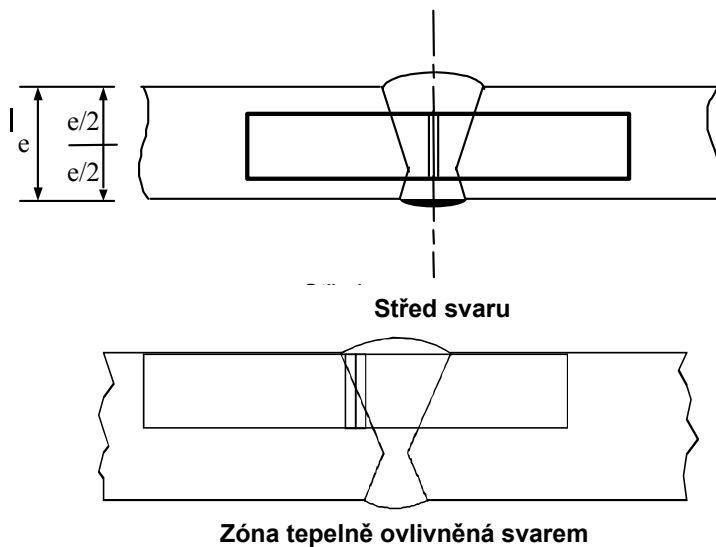
tři zkušební vzorky s vrubem ve středu zóny tepelně ovlivněné svarem (vrub tvaru V musí procházet okrajem tavné zóny ve středu zkušební vzorku);



když $10 \text{ mm} < e \leq 20 \text{ mm}$

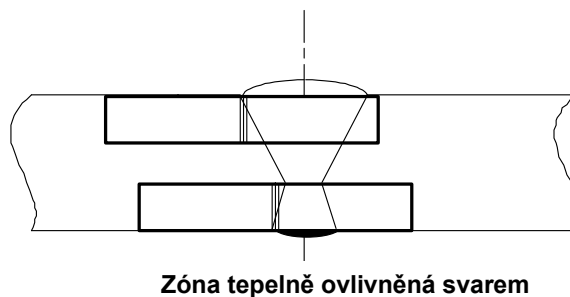
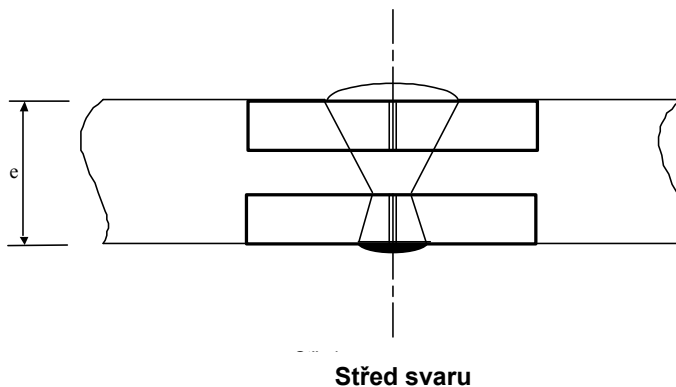
tři zkušební vzorky s vrubem ve středu svaru;

tři zkušební vzorky s vrubem ve středu zóny tepelně ovlivněné svarem (vrub tvaru V musí procházet okrajem tavné zóny ve středu zkušební vzorku);



když $e > 20 \text{ mm}$

dvě sady po třech zkušebních vzorcích, jedna sada na horní straně, jedna sada na dolní straně v každém z dále uvedených míst (u zkušebních vzorků odebraných v zóně tepelně ovlivněné svarem musí vrub tvaru V procházet okrajem tavné zóny ve středu zkušební vzorku).



- 6.8.5.3.3**
- (a) U plechů musí průměr ze tří zkoušek vyhovovat minimální hodnotě 34 J/cm^2 uvedené v 6.8.5.2.1; nejvýše jedna z hodnota smí být nižší než udaná minimální hodnota, avšak ne nižší než 24 J/cm^2 .
 - (b) U svarů průměrná hodnota získaná ze 3 zkušebních vzorků odebraných ze středu svaru nesmí být nižší než minimální hodnota 34 J/cm^2 , nejvýše jedna z hodnot smí být nižší než udané minimum, avšak ne nižší než 24 J/cm^2 .
 - (c) Pro zónu tepelně ovlivněnou svarem (příčměž vrub tvaru V musí procházet okrajem tavné zóny ve středu zkušebního vzorku) smí být hodnota získaná nejvýše u jednoho ze tří zkušebních vzorků nižší než minimální hodnota 34 J/cm^2 , avšak ne nižší než 24 J/cm^2 .

6.8.5.3.4 Nejsou-li požadavky předepsané v 6.8.5.3.3 splněny, může se provést jedna nová zkouška jestliže:

- (a) průměrná hodnota vycházející ze tří prvních zkoušek je nižší než minimální hodnota 34 J/cm^2 ; nebo
- (b) více než jedna z jednotlivých hodnot je nižší než minimální hodnota 34 J/cm^2 , avšak ne nižší než 24 J/cm^2 .

6.8.5.3.5 Při opakování zkoušky vrubové houževnatosti u plechů nebo svarů nesmí být žádná z jednotlivých hodnot nižší než 34 J/cm^2 . Průměrná hodnota ze všech výsledků původní zkoušky a opakované zkoušky musí být rovná minimu 34 J/cm^2 nebo vyšší.

Při opakování zkoušky vrubové houževnatosti zóny tepelně ovlivněné svarem nesmí být žádná z jednotlivých hodnot nižší než 34 J/cm^2 .

6.8.5.4 Odvolávka na normy

Požadavky pododdílů 6.8.5.2 a 6.8.5.3 se považují za splněné, pokud byly uplatněny dále uvedené příslušné normy:

EN 1252-1:1998 Kryogenní nádoby - Materiály - část 1: Pevnostní požadavky pro teplotu pod -80 °C

EN 1252-2:2001 Kryogenní nádoby - Materiály - část 1: Pevnostní požadavky pro teplotu mezi -80 °C a -20 °C.

KAPITOLA 6.9

POŽADAVKY NA KONSTRUKCI, VÝROBU, VÝSTROJ, SCHVALOVÁNÍ TYPU, ZKOUŠENÍ A ZNAČENÍ NESNÍMATELNÝCH CISTEREN (CISTERNOVÝCH VOZIDEL), SNÍMATELNÝCH CISTEREN, CISTERNOVÝCH KONTEJNERŮ A VÝMĚNNÝCH CISTERNOVÝCH NÁSTAVEB Z VYZTUŽENÝCH PLASTU (FRP)

POZNÁMKA: Pro přemístitelné cisterny a UN MEGC viz kapitola 6.7; pro nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny, cisternové kontejnery a cisternové výměnné nástavby s nádržemi vyrobenými z kovových materiálů, bateriová vozidla a vícečlánkové kontejnery na plyn (MEGC) viz kapitola 6.8; pro cisterny pro podtlakové vyčerpávání odpadů viz kapitola 6.10.

6.9.1 Všeobecně

6.9.1.1 Cisterny FRP musí být konstruovány, vyrobeny a zkoušeny podle programu zajištění kvality uznaného příslušným orgánem; zejména laminovací práce a svařování termoplastových vyložení musí být prováděny odborně kvalifikovanými pracovníky podle postupů uznaných příslušným orgánem.

6.9.1.2 Na konstrukci a zkoušení cisteren FRP se vztahují též ustanovení 6.8.2.1.1, 6.8.2.1.7, 6.8.2.1.13, 6.8.2.1.14 (a) a (b), 6.8.2.1.25, 6.8.2.1.27, 6.8.2.1.28 a 6.8.2.2.3.

6.9.1.3 Pro cisterny FRP nesmějí být použity žádné ohřívací prvky

6.9.1.4 Na stabilitu cisternových vozidel se vztahují požadavky 9.7.5.1.

6.9.2 Konstrukce

6.9.2.1 Nádrže musí být vyrobeny z vhodných materiálů, které jsou snášitelné s přepravovanými látkami při provozní teplotě mezi -40 °C a +50 °C, pokud teplotní rozsah není stanoven pro specifické klimatické podmínky příslušným orgánem státu, ve které je přeprava prováděna.

6.9.2.2 Stěny nádrží musí tvořit tři dále uvedené elementy:

- vnitřní vrstva
- konstrukční vrstva,
- vnější vrstva.

6.9.2.2.1 Vnitřní potah je zóna vnitřní stěny nádrže tvořící prvotní překážku poskytující dlouhodobou chemickou odolnost proti přepravovaným látkám a zabraňující jakékoli nebezpečné reakci s obsahem cisterny nebo tvoření nebezpečných sloučenin a jakémukoli podstatnému zeslabení konstrukční vrstvy v důsledku pronikání látek skrze vnitřní vyložení.

Vnitřní potah může být potah z vyztužených plastů nebo potah z termoplastů.

6.9.2.2.2 Potahy z vyztužených plastů musí tvořit:

- (a) povrchová vrstva („gelový potah“): povrchová vrstva s přiměřeným obsahem pryskyřice vyztužená tkaninou snášitelnou s pryskyřicí a plnidla. Tato vrstva smí mít hmotnost obsahu vláken nejvýše 30 % a tloušťku mezi 0,25 a 0,60 mm;
- (b) vyztužující vrstva(y): vrstva nebo několik vrstev s minimální tloušťkou 2 mm obsahující nejméně 900 g/m² skelné výtzuže nebo řezaných vláken s nejmenší hmotností obsahu skla 30 %, pokud dostatečná bezpečnost není prokázána pro nižší obsah skla.

- 6.9.2.2.3** Termoplastické vyložení musí tvořit termoplastický tenký materiál, jak je uvedeno v 6.9.2.3.4, svařeny do požadovaného tvaru, který je spojen s konstrukčními vrstvami. Trvalého spojení mezi vyloženími a konstrukční vrstvou musí být dosaženo použitím vhodného lepidla.

POZNÁMKA: Pro přepravu hořlavých kapalin se pro vnitřní vrstvu mohou požadovat dodatečná opatření podle 6.9.2.14 pro ochranu proti akumulaci elektrostatických nábojů.

- 6.9.2.2.4** Konstrukční vrstva nádrže je zóna zvláště zkonstruovaná podle 6.9.2.4 až 6.9.2.6, aby odolala mechanickým namáháním. Tuto část tvoří normálně několik vrstev vyztužených vláken orientovanými ve stanovených směrech.

- 6.9.2.2.5** Vnější vrstva je část nádrže, která je přímo vystavena klimatickým vlivům musí být tvořena vrstvou bohatou na pryskyřici o tloušťce nejméně 0,2 mm. Pro tloušťky větší než 0,5 mm musí být použito výtuz. Tato vrstva musí obsahovat méně než 30 % hmotnosti skla a musí být schopna odolat vnějším podmínkám, zejména náhodnému styku s přepravovanou látkou. Pryskyřice musí obsahovat plnidla nebo přísady zajišťující ochranu proti zhoršení konstrukční vrstvy nádrže ultrafialovým zářením.

6.9.2.3 Suroviny

- 6.9.2.3.1** Všechny materiály použité pro výrobu cisteren FRP musí být známého původu a známých vlastností.

6.9.2.3.2 Pryskyřice

Příprava směsi pryskyřice musí být prováděna přesně podle doporučení dodavatele. To se týká především tužidel, iniciátorů a urychlovačů. Tyto nenasyčené polyesterové pryskyřice mohou být:

- nenasyčené polyesterové pryskyřice;
- vinylesterové pryskyřice;
- epoxidové pryskyřice;
- fenolové pryskyřice.

Teplota tepelné deformace (HTD) pryskyřice stanovená podle ISO 75-1:1993 musí být nejméně o 20 °C vyšší než nejvyšší provozní teplota cisterny, avšak v žádném případě nesmí být nižší než 70 °C.

6.9.2.3.3 Vyztužovací vlákna

Vyztužovací materiál konstrukčních vrstev musí být vhodné kategorie skelných vláken, jako skelná vlákna typu E nebo ERC podle ISO 2078:1993. Pro vnitřní povrchový potah mohou být použita skelná vlákna typu C podle ISO 2078:1993. Termoplastická vyztužení smějí být použita pro vnitřní potah pouze tehdy, pokud je prokázána jejich snášenlivost s jejich předem určeným obsahem.

6.9.2.3.4 Materiál pro termoplastické vyložení

Termoplasty, takové jako neměkčený polyvinylchlorid (PVC-U), polypropylen (PP), polyvinylidenfluorid (PVFD), polytetrafluorethylen (PTFE) atd., smějí být použity pro potahové materiály.

6.9.2.3.5 Přísady

Přísady nezbytné pro zušlechťování pryskyřice, takové jako katalyzátory, urychlovače, tužidla a tixotropní látky, jakož i materiály používané pro zlepšení parametrů cisterny, takové jako plnidla, barvy, pigmenty atd. nesmějí způsobit zeslabení materiálu, při uvážení životnosti a očekávané provozní teploty dané konstrukce.

- 6.9.2.4** Nádrže, jejich výbava a jejich provozní a konstrukční výstroj musí být konstruovány tak, aby odolaly beze ztráty obsahu (jiné než množství plynu unikajícího jakýmkoli odplyňovacím otvorem) během životnosti konstrukce:

- statickým a dynamickým zatížením při normálních podmínkách přepravy;

- předepsaným minimálním zatížením uvedeným v 6.9.2.5 až 6.9.2.10.

6.9.2.5

Při tlacích uvedených v 6.8.2.1.14 (a) a (b) a při statických gravitačních silách tíže obsahu s maximální hustotou stanovenou pro konstrukci a při nejvyšším stupni plnění konstrukční napětí σ v podélném a obvodovém směru jakékoli vrstvy nádrže nesmí překročit dále uvedené hodnoty:

$$\sigma \leq \frac{R_m}{K}$$

kde:

R_m = hodnota pevnosti v tahu daná střední hodnotou výsledků zkoušek po odečtení dvojnásobku standardní odchylky výsledků zkoušek. Zkoušky musí být provedeny v souladu s požadavky EN 61:1977 na nejméně šesti reprezentativních vzorcích konstrukčního typu a výrobních metod;

$K = S \times K_0 \times K_1 \times K_2 \times K_3$

kde:

K musí mít minimální hodnotu 4 a

S = koeficient bezpečnosti. Pro všeobecnou konstrukci, jestliže cisterny jsou uvedeny ve sloupci (12) tabulky A kapitoly 3.2 kódem cisterny zahrnujícím písmeno „G“ v jeho druhé části (viz 4.3.4.1.1), hodnota S musí být rovna nebo větší než 1,5. Pro cisterny určené pro přepravu látek, které vyžadují zvýšenou úroveň bezpečnosti, tj. jestliže cisterny jsou uvedeny ve sloupci (12) tabulky A kapitoly 3.2 kódem cisterny zahrnujícím číslici „4“ v jeho druhé části (viz 4.3.4.1.1), hodnota S musí být znásobena dvěma, pokud nádrž není opatřena ochranou proti poškození tvořenou celistvou kovovou kotrrou včetně podélných a příčných konstrukčních členů;

K_0 = součinitel zhoršení vlastností materiálu vlivem tečení a stárnutí a jako výsledek chemického působení přepravovaných látek. Stanoví se podle tohoto vzorce:

$$K_0 = \frac{1}{\alpha \cdot \beta}$$

kde „ α „ je součinitel tečení a „ β „ je součinitel stárnutí stanovený podle EN 978:1997 po provedení zkoušek podle EN 977:1997. Alternativně je možno použít normální hodnotu $K_0 = 2$. Pro stanovení α a β prvotní odchylka musí odpovídat 2 σ ;

K_1 = součinitel vlivu provozní teploty a tepelných vlastností pryskyřice stanovený podle dále uvedené rovnice:

$$K_1 = 1,25 - 0,0125 (HDT - 70)$$

kde HTD je teplota tepelné deformace pryskyřice ve °C;

K_2 = součinitel únavy materiálu; hodnota $K_2 = 1,75$ musí být použita, pokud není dohodnuto jinak s příslušným orgánem. Pro dynamickou konstrukci, jak je uvedeno v pododdílu 6.9.2.6, musí být použita hodnota $K_2 = 1,1$;

K_3 = součinitel vytvrzování má následující hodnoty:

- 1.1 kde vytvrzení je provedeno podle schváleného a zdokumentovaného postupu;

- 1,5 v jiných případech.

- 6.9.2.6** Při dynamických namáháních, jak je uvedeno v 6.8.2.1.2, konstrukční napětí nesmí překročit hodnotu uvedenou v 6.9.2.5 dělenou součinitelem α .
- 6.9.2.7** Při jakémkoli jiném napětí, jak je uvedeno v 6.9.2.5 a 6.9.2.6, výsledné prodloužení v jakémkoli směru nesmí překročit nižší z těchto dvou hodnot: 0,2 % nebo jednu desetinu prodloužení při přetržení pryskyřice.
- 6.9.2.8** Při stanoveném zkušebním tlaku, který nesmí být nižší než příslušný výpočtový tlak, jak je uvedeno v 6.8.2.1.14 (a) a (b), nejvyšší napětí v nádrži nesmí být větší než prodloužení při přetržení pryskyřice.
- 6.9.2.9** Nádrž musí být schopna odolat zkoušce pádem podle 6.9.4.3.3 bez jakéhokoli viditelného vnitřního nebo vnějšího poškození.
- 6.9.2.10** Vnější laminované potahy používané ve spojích, včetně konců spojů, spoje peřejníků a přepážek s nádrží musí být schopny odolat statickým a dynamickým namáháním uvedeným výše. Pro zabránění koncentracím napětí v tenkých laminovaných potazích použité šroubení nesmí mít závitové stoupání větší než 1:6.

Pevnost ve stříhu mezi laminovaným potahem a částmi cisterny, k nimž jsou připojeny, nesmí být menší než:

$$\tau = \frac{Q}{l} \leq \frac{\tau_R}{K}$$

kde:

τ_R = ohybová pevnost ve stříhu podle EN ISO 14125:1998 (tříbodová metoda) s minimálním $\tau_R = 10 \text{ N/mm}^2$, jestliže žádná naměřená hodnota není k dispozici;

Q = zatížení na jednotku šířky, které musí spoj přenášet pod statickým a dynamickým zatížením;

K = součinitel výpočtený podle 6.9.2.5 pro statická a dynamická namáhání;

l = délka laminované vrstvy.

- 6.9.2.11** Otvory v nádrži musí být zesíleny, aby bylo dosaženo nejméně téchže bezpečnostních součinitelů proti statickým a dynamickým namáháním, jak je uvedeno v 6.9.2.5 a 6.9.2.6 pro samotné nádrže. Počet otvorů musí být co možno nejmenší. Poměr délek os oválných otvorů nesmí být větší než 2.
- 6.9.2.12** Pro konstrukci přírub a potrubí připojených k nádrži musí být též vzaty v úvahu manipulační síly a přítlak šroubů.
- 6.9.2.13** Cisterna musí být zkonstruována tak, aby odolala bez znatelných úniků účinkům otevřeného ohně po dobu 30 minut, jak je uvedeno ve zkušebních požadavcích v 6.9.4.3.4. Od zkoušek může být upuštěno se souhlasem příslušného orgánu, pokud dostatečná těsnost může být prokázána zkouškou srovnatelných cisternových konstrukcí.
- 6.9.2.14** ***Zvláštní požadavky na přepravu látek s bodem vzplanutí nejvýše 60 °C***
- Cisterny FRP používané pro přepravu látek s bodem vzplanutí nejvýše 60 °C musí být konstruovány tak, aby bylo zajištěno vyloučení statické elektřiny z různých částí a tak zabráněno akumulaci nebezpečných nábojů.
- 6.9.2.14.1** Povrchový elektrický odpor vnitřku a vnitřku nádrže zjištěný měřením nesmí být vyšší než 10^9 ohmů. Toho může být dosaženo použitím přísad v pryskyřici nebo zalaminovanými vnitřními proklady, takovými jako kovová nebo uhlíková síť.
- 6.9.2.14.2** Vybíjecí odpor vůči zemi stanovený měřením nesmí být vyšší než 10^7 ohmů.

- 6.9.2.14.3** Všechny prvky nádrže musí být elektricky propojeny vzájemně mezi sebou a připojeny ke kovovým částem provozní a konstrukční výstroje cisterny a k vozidlu. Elektrický odpor mezi prvky a výstrojí ve vzájemných spojích nesmí překročit 10 ohmů.
- 6.9.2.14.4** Elektrický povrchový odpor a vybíjecí odpor musí být měřen nejprve na každé vyrobené cisterně nebo na vzorku nádrže v souladu s postupem uznávaným příslušným orgánem.
- 6.9.2.14.5** Vybíjecí odpor do země každé cisterny musí být měřen jako část periodické prohlídky v souladu s postupem uznávaným příslušným orgánem.

6.9.3 Části výstroje

- 6.9.3.1** Požadavky uvedené v 6.8.2.2.1, 6.8.2.2.2 a 6.8.2.2.4 až 6.8.2.2.8 musí být splněny.
- 6.9.3.2** Kromě toho musí být použita též zvláštní ustanovení uvedená v 6.8.4 (b) (TE), pokud jsou uvedena u položky ve sloupci (13) tabulky A kapitoly 3.2

6.9.4 Zkoušení a schválení typu

- 6.9.4.1** Pro každý konstrukční typ cisterny FRP musí být materiály cisterny a její reprezentativní prototyp podroben zkoušce konstrukčního typu, jak je uvedeno dále.

6.9.4.2 Zkoušení materiálů

- 6.9.4.2.1** Pro použitou pryskyřici musí být stanoveno prodloužení při přetržení podle EN ISO 527-5:1997 a teplota tepelné deformace podle ISO 75-1:1993.
- 6.9.4.2.2** Následující charakteristiky musí být stanoveny pro vzorky vyříznuté z nádrže. Vzorky vyrobené souběžně smějí být použity pouze tehdy, jestliže není možné použití výřezů z nádrže. Před zkouškou musí být sejmuto jakéhokoli vyložení.

Zkoušky musí zahrnovat zkoušky:

- tloušťky vrstev střední stěny nádrže a jejich den;
- hmotnostního obsahu a složení skla, směrování a uspořádání výtuzných vrstev;
- pevnosti v tahu, prodloužení při přetržení a modulu pružnosti podle EN ISO 527-5:1997 ve směru namáhání. Kromě toho prodloužení při přetržení pryskyřice musí být stanoveno ultrazvukovou metodou;
- pevnosti v ohybu a odolnosti proti deformaci zkouškou ohybového tečení podle EN ISO 14125:1998 po dobu 1000 hodin s použitím vzorku o nejmenší šířce 50 mm při vzdálenosti mezi podpěrami rovnající se nejméně 20 násobku tloušťky stěny. Kromě toho součinitel tečení α a součinitel stárnutí β musí být stanoveny zkouškou podle EN 978:1977.

- 6.9.4.2.3** Mezivrstvá stříhová pevnost spojů musí být změřena zkouškou reprezentativních vzorků v tahu podle EN ISO 14130:1997.

- 6.9.4.2.4** Chemická snášenlivost nádrže s přepravovanými látkami musí být prokázána jednou z následujících metod se souhlasem příslušného orgánu. Toto prokázání musí vzít v úvahu všechna hlediska slučitelnosti materiálů nádrže a její výstroje s přepravovanými látkami, včetně chemického zhoršování nádrže, vzniku kritických reakcí obsahů a nebezpečných reakcí mezi nimi.

- Pro stanovení jakéhokoli zhoršení nádrže musí být reprezentativní vzorky vyjmuté z nádrže, včetně jakéhokoli vnitřního vyložení se svary, podrobeny zkoušce chemické snášenlivosti podle EN 977:1997 po dobu 1000 hodin při 50 °C. Ve srovnání s čerstvým vzorkem ztráta pevnosti a modulu pružnosti změřená ohybovou zkouškou podle EN 978:1997 nesmí překročit 25 %. Praskliny, výdutě, vypoukliny, jakož i separace vrstev a vyložení a nerovnosti nejsou přípustné.

- Snášeniivost může být stanovena rovněž na základě osvědčených a dokumentovaných údajů o kladných zkušenostech se snášeniivostí plněných látek s materiály nádrže, s nimiž přicházejí do styku při dané teplotě, po určitou dobu a za jakýchkoli jiných provozních podmínek.
- Mohou být použity též technické údaje uveřejněné v příslušné literatuře, normách nebo jiných zdrojích, přijatelné pro příslušný orgán.

6.9.4.3 Zkouška typu

Reprezentativní prototyp cisterny musí být podroben zkouškám uvedeným dále. Pro tento účel může být provozní výstroj nahrazena jinými prostředky, pokud je to nezbytné.

6.9.4.3.1 Prototyp musí být zkontrolován na shodnost se specifikací konstrukčního typu. Tato kontrola musí zahrnovat vnitřní a vnější vizuální prohlídku a změření hlavních rozměrů.

6.9.4.3.2 Prototyp opatřený tenzometry na všech místech, kde je požadováno srovnání s konstrukčním výpočtem, musí být podroben dále uvedeným zatížením a jimi vyvolané napětí musí být zaznamenáváno:

- Cisterna musí být naplněna vodou na nejvyšší stupeň plnění. Výsledky měření musí být použity pro ověření konstrukčních výpočtů podle 6.9.2.5;
- Cisterna musí být naplněna vodou na nejvyšší stupeň plnění a vystavena zrychlením ve všech třech směrech jízdní a brzdovou zkouškou s prototypem upevněným na vozidle. Pro porovnání skutečných výsledků s konstrukčním výpočtem podle 6.9.2.6 zaznamenaná napětí musí být extrapolována ve vztahu ke kvocientu zrychlení požadovaných v 6.8.2.1.2 a změřených;
- Cisterna musí být naplněna vodou a podrobena stanovené tlakové zkoušce. Při tomto zatížení nádrží nesmí vykazovat žádné viditelné poškození nebo netěsnost.

6.9.4.3.3 Prototyp musí být podroben zkoušce pádem podle EN 976-1:1997, č. 6.6. Nesmí se objevit žádné viditelné poškození vnějšku nebo vnitřku cisterny.

6.9.4.3.4 Prototyp zkompletovaný se svojí provozní a konstrukční výstrojí a naplněný vodou na 80 % svého maximálního vnitřního objemu musí být vystaven plnému ohni po dobu 30 minut, kterým je hoření topného oleje v otevřené vaně nebo jiný druh ohně s tímže účinkem. Rozměry vany musí přesahovat rozměry nádrže nejméně o 50 cm na každou stranu a vzdálenost mezi hladinou paliva a cisternou musí být mezi 50 a 80 cm. Zbytek cisterny pod hladinou kapaliny, včetně otvorů a uzávěrů, musí zůstat těsný kromě odkapů.

6.9.4.4 Schválení typu

6.9.4.4.1 Příslušný orgán nebo jím pověřená organizace vydá pro každý nový typ cisterny nebo cisternového kontejneru schválení osvědčující, že konstrukce je vhodná pro účel, pro který je určena, a splňuje požadavky této kapitoly na konstrukci a výstroj, jakož i zvláštní ustanovení vztahující se na přepravované látky.

6.9.4.4.2 Schválení typu musí být založeno na výpočtech a zkušebními protokoly, včetně všech výsledků materiálových a prototypových zkoušek a jejich srovnání s konstrukčními výpočty, a musí obsahovat specifikaci konstrukčního typu a programu zajištění kvality.

6.9.4.4.3 Schválení typu musí zahrnovat látky nebo skupiny látek, jejichž snášeniivost s nádrží je zaručena. Musí v něm být uvedeny chemické názvy nebo hromadná pojmenování (viz 2.1.1.2) a jejich třída a klasifikační kód.

6.9.4.4.4 Kromě toho musí obsahovat stanovené hodnoty konstrukční a zaručené mezní hodnoty (takové jako doba životnosti, rozsah provozní teploty, provozní a zkušební tlak, údaje materiálu) a všechna bezpečnostní opatření, které je třeba učinit pro výrobu, zkoušení, schvalování typu, označování a používání jakékoli cisterny vyrobené podle schváleného konstrukčního typu.

6.9.5 Inspekce

6.9.5.1 Pro každou cisternu vyrobenou podle schváleného prototypu musí být provedeny zkoušky materiálů a inspekce, jak je uvedeno níže:

6.9.5.1.1 Zkoušky materiálů podle 6.9.4.2.2, kromě zkoušky v tahu a zkrácení doby ohybové zkoušky tečení na 100 hodin, musí být provedeny se vzorky vyříznutými z nádrže. Vzorky vyrobené souběžně smějí být použity pouze tehdy, jestliže výřezy z nádrže nejsou možné. Schválené konstrukční hodnoty musí být dodrženy.

6.9.5.1.2 Nádrže a jejich výstroj musí být společně nebo odděleně podrobeny první prohlídce před jejich uvedením do provozu. Tato prohlídka zahrnuje:

- kontrolu shodnosti se schválenou konstrukcí;
- kontrolu konstrukčních charakteristik;
- vnitřní a vnější prohlídku;
- hydraulickou tlakovou zkoušku při zkušebním tlaku uvedeném na štítku předepsaném v 6.8.2.5.1;
- kontrolu provozuschopnosti výstroje;
- zkoušku těsnosti, pokud nádrž a její výstroj byly tlakově zkoušeny odděleně.

6.9.5.2 Na periodickou inspekci a zkoušku cisteren se vztahují požadavky uvedené v 6.8.2.4.2 až 6.8.2.4.4. Zkouška podle odst. 6.8.2.4.3 musí navíc zahrnovat prohlídku vnitřního stavu nádrže.

6.9.5.3 Inspekce a zkoušky podle 6.9.5.1 a 6.9.5.2 musí být prováděny znalci schválenými příslušným orgánem. Ve vydaných osvědčeních musí být uvedeny výsledky těchto inspekcí. V osvědčeních musí být uveden podle 6.9.4.4 seznam látek, jejichž přeprava je v této nádrži dovolena.

6.9.6 Značení

6.9.6.1 Požadavky 6.8.2.5 se vztahují na značení cisteren FRP s následujícími změnami:

- štítek cisterny může být též nalaminován na nádrž nebo může být vyroben z vhodného plastu;
- vždy musí být vyznačen projektovaný teplotní rozsah.

6.9.6.2 Kromě toho musí být dodržena zvláštní ustanovení uvedená v 6.8.4 (e) (TM), pokud jsou uvedena u některé položky ve sloupci (13) tabulky A kapitoly 3.2.

KAPITOLA 6.10

POŽADAVKY NA KONSTRUKCI, VÝSTROJ, SCHVALOVÁNÍ TYPU, INSPEKCI A ZNAČENÍ CISTEREN PRO PODTLAKOVÉ VYČERPÁVÁNÍ ODPADŮ

POZNÁMKA 1: Pro přemístitelné cisterny a UN MEGC viz kapitolu 6.7; pro nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny, cisternové kontejnery a cisternové výměnné nástavby s nádržemi vyrobenými z kovových materiálů a pro bateriová vozidla a vícečlánkové kontejnery na plyn (MEGC) viz kapitola 6.8; pro cisterny z vyztužených plastů viz kapitola 6.9.

POZNÁMKA 2: Tato kapitola se vztahuje na nesnímatelné a snímatelné cisterny, cisternové kontejnery a cisternové výměnné nástavby.

6.10.1 Všeobecně

6.10.1.1 Definice

POZNÁMKA: Cisterna, která plně odpovídá požadavkům kapitoly 6.8, se nepovažuje za „cisternu pro podtlakové vyčerpávání odpadů“.

6.10.1.1.1 Pojmem "chráněná zóna" se rozumí tyto zóny:

- (a) Spodní část cisterny v sektoru ohraničeném vně úhlem 60° a obě strany od nejnižšího obrysu cisterny;
- (b) Horní část cisterny v sektoru ohraničeném vně úhlem 30° na obě strany od nejvyššího obrysu cisterny;
- (c) Přední dno cisterny na motorovém vozidle;
- (d) Zadní dno cisterny v chráněném prostoru tvořeném zařízením uvedeným v 9.7.6.

6.10.1.2 Rozsah platnosti

6.10.1.2.1 Zvláštní požadavky 6.10.2 až 6.10.4 doplňují nebo pozměňují kapitolu 6.8 a vztahují se na cisterny pro podtlakové vyčerpávání odpadů.

Cisterny pro podtlakové vyčerpávání odpadů smějí být vybaveny otevíratelnými dny, pokud požadavky kapitoly 4.3 dovolují vyprazdňování přepravovaných látek spodem (označených písmeny „A“ nebo „B“ v části 3 kódu cisterny uvedeném ve sloupci (12) tabulky A kapitoly 3.2 v souladu s 4.3.4.1.1).

Cisterny pro podtlakové vyčerpávání odpadů musí odpovídat všem požadavkům kapitoly 6.8, kromě požadavků upravených zvláštním ustanovením této kapitoly. Požadavky 6.8.2.1.19, 6.8.2.1.20 a 6.8.2.1.21 se však na ně nevztahují.

6.10.2 Konstrukce

6.10.2.1 Cisterny musí být konstruovány pro výpočtový tlak rovný 1,3 násobku plnicího nebo vyprazdňovacího tlaku, avšak nejméně 400 kPa (4 bary) (přetlak). Pro přepravu látek, pro které je v 6.8 předepsán vyšší výpočtový tlak, musí být použit tento vyšší tlak.

6.10.2.2 Cisterny musí být konstruovány tak, aby odolaly vnitřnímu podtlaku 100 kPa (1 bar).

6.10.3 Části výstroje

6.10.3.1 Části výstroje musí být uspořádány tak, aby byly chráněny proti nebezpečí utržení nebo poškození během přepravy a manipulace. Tento požadavek může být splněn umístěním výstroje v tzv. "chráněné zóně" (viz 6.10.1.1.1).

6.10.3.2 Spodní vyprazdňování nádrží může být tvořeno vnějším potrubím s uzavíracím ventilem umístěným co možno nejbliže k nádrži a druhým uzávěrem, kterým může být slepá příruba nebo jiné stejně účinné zařízení.

6.10.3.3 Poloha a směr uzavírání uzavíracího(ch) ventilu(ů) připojeného(ných) k nádrži nebo k jakékoli komoře vícekomorové nádrže musí být jednoznačné a musí být kontrolovatelné ze země.

6.10.3.4 K zamezení úniku obsahu při poškození vnějších plnicích a vyprazdňovacích zařízení (potrubí, boční uzavírací zařízení) musí být vnitřní uzavírací ventil nebo (popřípadě) první vnější uzavírací ventil a jeho sedlo chráněny proti nebezpečí utržení vnějším namáháním, nebo musí být konstruovány tak, aby těmto namáháním odolaly. Plnicí a vyprazdňovací zařízení (včetně přírub nebo šroubových uzávěrů) a ochranné kryty (pokud jsou) musí umožňovat zajištění proti jakémukoli nežádoucímu otevření.

6.10.3.5 Cisterny smějí být vybaveny otevíratelnými dny. Otevíratelná dna musí odpovídat těmto podmínkám:

- (a) Dna musí být konstruována tak, aby byla zajištěna jejich těsnost po uzavření;
- (b) Nežádoucí otevření nesmí být možné;
- (c) Pokud je otevírací mechanismus ovládán silovým pohonem, dno musí zůstat bezpečně uzavřeno v případě poruchy tohoto pohonu;
- (d) Je nutno zabudovat pojistné nebo blokovací zařízení zajišťující, aby se otevíratelné dno nemohlo otevřít, pokud je v cisterně ještě zbytkový přetlak. Tento požadavek se nevztahuje na otevíratelná dna, která jsou ovládána silovým pohonem, kde pohyb je pozitivně řízen. V tomto případě musí být ovládání typu "mrtvého muže" a musí být v takovém místě, aby obsluha mohla pozorovat neustále pohyb dna, aniž by byla ohrožena během otevírání a zavírání dna; a
- (e) Je nutno učinit opatření k ochraně otevíratelného dna, které musí zůstat uzavřeno v případě převrácení vozidla, cisternového kontejneru nebo cisternové výměnné nástavby.

6.10.3.6 Cisterny pro podtlakové vyčerpávání odpadů vybavené vnitřním pístem pro usnadnění čištění nebo vyprazdňování musí být opatřeny uzavíracími zařízeními zabraňujícími, aby píst v žádné provozní poloze nebyl vytažen z cisterny, když na píst působí síla rovná nejvyššímu provoznímu tlaku cisterny. Nejvyšší provozní tlak pro cisterny nebo komory s pneumaticky ovládaným pístem nesmí překročit 100 kPa (1 bar). Vnitřní píst musí být vyroben takovým způsobem a z takového materiálu, aby nezapříčinil vznik zdroje vznícení, pokud se píst pohybuje.

Vnitřní píst může být použit jako přepážka komory, pokud je v zajištěné poloze. Pokud jakákoli část prostředků, jimiž je vnitřní píst zajištěn, je na vnějšku cisterny, musí být umístěna v poloze vylučující jakékoli riziko náhodného poškození.

6.10.3.7 Cisterny mohou být vybaveny sacími nástavci, jestliže

- (a) nástavec je opatřen vnitřním nebo vnějším uzavíracím ventilem upevněným přímo na nádrži, nebo přímo ke kolenu, které je přivařeno k nádrži. Mezi nádrží, nebo kolenem a vnějším uzavíracím ventilem může být namontováno rotační talířové kolo, je-li toto rotační kolo umístěno v chráněné zóně a ovládací ústrojí uzavíracího ventilu je chráněno krytem/víkem proti nebezpečí vytržení vnějším namáháním.
- (b) uzavírací ventil uvedený výše v odstavci a) je uspořádán tak, aby bylo zabráněno přepravě s ventilem v otevřené poloze; a
- (c) nástavec je vyroben takovým způsobem, že z cisterny nedojde k úniku následkem náhodného nárazu do nástavce.

6.10.3.8 Cisterny musí být vybaveny dále uvedenou doplňkovou provozní výstrojí:

- (a) Výstup z čerpadlové/sací jednotky musí být uspořádán tak, aby zajistil, že jakékoli hořlavé nebo jedovaté páry jsou odvedeny na místo, kde nemohou způsobit nebezpečí.
- (b) Zařízení zamezující bezprostřednímu proniknutí plamene musí být upevněno jak ke vstupu, tak výstupu z čerpadlové/sací jednotky, která může vyvolat jiskření a která je upevněna na cisternu používanou pro přepravu hořlavých odpadů.
- (c) Čerpadla, která mohou dodávat přetlak, musí být vybavena bezpečnostním zařízením připojeným k potrubí, které může být natlačováno. Bezpečnostní zařízení musí být nastaveno na vyprazdňování při tlaku nepřevyšujícím nejvyšší dovolený provozní tlak cisterny.
- (d) Uzavírací ventil musí být vložen mezi nádrž, nebo výstup ze zařízení zabraňujícího přeplnění, upevněného k nádrži, a potrubí spojující nádrž s čerpadlovou/sací jednotkou.
- (e) Cisterna musí být vybavena vhodným přetlakovým/podtlakovým tlakoměrem, který musí být namontován v poloze, v níž může být snadno čitelný osobou obsluhující čerpadlovou/sací jednotku. Na stupnici musí být rozlišovací čarou vyznačen nejvyšší provozní tlak cisterny.
- (f) Cisterna, nebo v případě komorových cisteren každá komora, musí být vybavena hladinoměrem. Průzorná skla mohou být použita jako zařízení ukazující hladinu, pokud:
 - (i) tvoří část stěny cisterny a mají odolnost proti tlaku srovnatelnou s cisternou; nebo jsou upevněny na vnější stranu cisterny;
 - (ii) vrchní a spodní připojení k cisterně je vybaveno uzavíracími ventily upevněnými přímo k nádrži a uspořádanými tak, aby bylo zabráněno přepravě s ventily v otevřené poloze;
 - (iii) jsou vhodné pro provoz při nejvyšším provozním tlaku cisterny; a
 - (iv) jsou umístěny v zóně, v níž je vyloučeno jakékoli riziko náhodného poškození.

6.10.3.9 Nádrže cisteren pro podtlakové vyčerpávání odpadů musí mít pojistný ventil s předřazeným průtržným kotoučem.

Tento ventil musí být schopen automaticky se otevřít při tlaku rovném 0,9 až 1,0 násobku zkušebního tlaku nádrže, na kterou je namontován. Používání ventilů se zátěží nebo ventilů s protizávažím je zakázáno.

Průtržný kotouč se musí protrhnout nejdříve při dosažení počátečního otevíracího tlaku a nejpozději při dosažení zkušebního tlaku cisterny, na které je namontován.

Bezpečnostní zařízení musí být takového typu, aby odolaly dynamickým účinkům včetně pohybu kapalin v nádrži.

Prostor mezi průtržným kotoučem a pojistným ventilem musí být vybaven tlakoměrem nebo vhodným indikátorem pro zjištění protržení kotouče, vzniku trhlin nebo úniku, který může zapříčinit špatnou funkci pojistného ventilu.

6.10.4 Inspekce

Cisterny pro podtlakové vyčerpávání odpadů musí být podrobeny zkouškám předepsaným v 6.8.2.4.3 pro nesnímatelné a snímatelné cisterny nejméně každé tři roky a pro cisternové kontejnery a cisternové výměnné nástavby každého dva a půl roku, a kromě toho ještě prohlídce svého vnitřního stavu.

KAPITOLA 6.11

POŽADAVKY NA KONSTRUKCI, VÝROBU, INSPEKCE A ZKOUŠENÍ KONTEJNERŮ PRO VOLNĚ LOŽENÉ LÁTKY

6.11.1 Definice

Pro účely této kapitoly:

„Uzavřený kontejner pro volně ložené látky“ plně uzavřený kontejner s pevnou střechou, pevnými bočními stěnami, pevnými koncovými stěnami a pevnou podlahou (včetně výsypných den). Tento pojem zahrnuje kontejner pro volně ložené látky s otevíratelnou střechou, boční stěnou nebo koncovou stěnou, která může být během přepravy uzavřena. Kontejnery pro volně ložené látky mohou mít otvory dovolující výměnu par a plynů za vzduch a které zabraňují za normálních podmínek přepravy úniku tuhých obsahů, jakož i pronikání deště a rozstříkované vody.

„Kontejner s plachtou pro volně ložené látky“ nezakrytý kontejner pro volně ložené látky s pevnou podlahou (včetně výsypného dna), s pevnými bočními stěnami a pevnými koncovými stěnami a pružným zakrytím.

6.11.2 Platnost a všeobecné požadavky

6.11.2.1 Kontejnery pro volně ložené látky a jejich provozní a konstrukční výstroj musí být tak konstruovány a vyrobeny, aby odolávaly, beze ztráty obsahu, vnitřnímu tlaku obsahu a namáháním při normální manipulaci a přepravě.

6.11.2.2 Pokud je namontován vyprazdňovací ventil, musí se dát zajistit v uzavřené poloze a celý vyprazdňovací systém musí být vhodně chráněn proti poškození. Ventily mající pákové uzávěry musí být zajištěny proti nežádoucímu otevření a poloha jeho otevření nebo uzavření musí být zřetelně vyznačena.

6.11.2.3 Kód pro značení typů kontejnerů pro volně ložené látky

Následující tabulka uvádí kódy, které je nutno používat pro značení typů kontejnerů pro volně ložené látky:

Typy kontejnerů pro volně ložené látky	Kód
Kontejner s plachtou pro volně ložené látky	BK1
Uzavřený kontejner pro volně ložené látky	BK2

6.11.2.4 S ohledem na vědecký a technický pokrok, použití alternativních uspořádání, která nabízejí nejméně rovnocennou bezpečnost jako požadavky uvedené v této kapitole, mohou být příslušným orgánem považována za vyhovující.

6.11.3 Požadavky na konstrukci, výrobu, inspekce a zkoušení kontejnerů odpovídajících KBK používaných jako BK1 nebo BK2 kontejnery pro volně ložené látky

6.11.3.1 Konstrukční a výrobní požadavky

6.11.3.1.1 Všeobecné konstrukční a výrobní požadavky tohoto pododdílu musí být splněny, jestliže kontejner pro volně ložené látky splňuje požadavky normy ISO 1496-4:1991 "Série 1 Nákladní kontejnery – Specifikace a zkoušení – část 4: Netlakové kontejnery pro volně ložené suché látky" a kontejner je prachotěsný.

- 6.11.3.1.2** Kontejnery konstruované a zkoušené podle normy ISO 1496-1:1990 "Série 1 Nákladní kontejnery – Specifikace a zkoušení – část 1: Všeobecné nákladní kontejnery pro všeobecné účely" musí být vybaveny provozní výstrojí, která je, včetně jejího připojením ke kontejneru, konstruována, aby vyztužovala konec stěn a zlepšovala podélné uchycení, jak je to nutné pro splnění zkušebních požadavků normy ISO 1496-4:1991.
- 6.11.3.1.3** Kontejnery pro volně ložené látky musí být prachotěsné. Pokud je použito vyložení pro zajištění prachotěsnosti kontejneru, musí být toto vyložení vyrobeno z vhodného materiálu. Pevnost a konstrukce použitého materiálu vyložení musí být přiměřená vnitřnímu objemu kontejneru a jeho předpokládanému použití. Spoje a uzávěry vyložení musí odolat tlakům a rázům, ke kterým může docházet během normální manipulace a přepravy. Pro větrané kontejnery pro volně ložené látky jakékoli vyložení nesmí omezovat provoz ventilačních zařízení.
- 6.11.3.1.4** Provozní výstroj kontejnerů pro volně ložené látky konstruovaných pro vyprazdňování sklápěním musí být schopna odolat celkové naplněné hmotnosti ve sklápěcí poloze.
- 6.11.3.1.5** Jakákoli posuvná střecha nebo postranní stěna nebo koncová stěna musí být vybavena uzamykatelnými zařízeními se zabezpečovacími zařízeními ukazujícími uzamčený stav viditelně pozorovatelně z úrovně země.

6.11.3.2 Provozní výstroj

- 6.11.3.2.1** Plnicí a vyprazdňovací zařízení musí být tak konstruováno a uspořádáno, aby bylo chráněno proti riziku vytržení nebo poškození během přepravy a manipulace. Plnicí a vyprazdňovací zařízení musí být schopny zajištění proti nežádoucímu otevření. Otevřená a uzavřená poloha a směr uzavření musí být zřetelně vyznačeny.
- 6.11.3.2.2** Těsnění otvorů musí být uspořádána tak, aby se zabránilo jakémukoli poškození při provozu, plnění a vyprazdňování kontejnerů pro volně ložené látky.
- 6.11.3.2.3** Jestliže je vyžadováno větrání, kontejnery pro volně ložené látky musí být vybaveny prostředky pro výměnu vzduchu, buď přírodním způsobem, např. pouze otvory, nebo aktivními prvky, např. ventilátory. Větrání musí být konstruováno tak, aby se po celou dobu zabránilo podtlakům v kontejneru. Větrací prvky kontejnerů pro volně ložené látky pro přepravu hořlavých látek nebo látek vyvíjejících hořlavé plyny nebo páry musí být konstruovány tak, aby nebyly zápalným zdrojem.

6.11.3.3 Inspekce a zkoušení

- 6.11.3.3.1** Kontejnery používané, udržované a schválené jako kontejnery pro volně ložené látky v souladu s požadavky tohoto oddílu musí být zkoušeny a schváleny podle KBK.
- 6.11.3.3.2** Kontejnery používané a kvalifikované jako kontejnery pro volně ložené látky musí být podrobeny periodickým inspekcím podle KBK.

6.11.3.4 Značení

- 6.11.3.4.1** Kontejnery používané jako kontejnery pro volně ložené látky musí být označeny bezpečnostním schvalovacím štítkem podle KBK.

6.11.4 Požadavky na konstrukci, výrobu a schválení BK1 nebo BK2 kontejnerů pro volně ložené látky jiných než kontejnerů odpovídajících KBK

POZNÁMKA: Pokud kontejnery odpovídající ustanovením tohoto oddílu jsou používány pro přepravu tuhých volně ložených látek, v nákladním listu musí být uveden tento zápis:

"Kontejner pro volně ložené látky BK(x) schválený příslušným orgánem” (viz 5.4.1.1.17)".

- 6.11.4.1** Kontejnery pro volně ložené látky podle tohoto oddílu zahrnují skipové nádoby, kontejnery pro přepravu volně ložených látek v systému off shore, zásobníky na volně ložené látky, výměnné nástavby, náspyné kontejnery, válivé kontejnery a ložné komory vozidel.

POZNÁMKA: Tyto kontejnery pro volně ložené látky zahrnují též kontejnery odpovídající vyhláškám UIC , 591 a 592-2 až 592-4, jak je uvedeno v 7.1.3, které neodpovídají KBK.

- 6.11.4.2** Tyto kontejnery pro volně ložené látky musí být konstruovány a vyrobeny tak, aby byly dostatečně odolné proti rázům a namáháním normálně se vyskytujícím během přepravy případně včetně překládky mezi různými druhy dopravy.
- 6.11.4.3** *(Vyhrazeno)*
- 6.11.4.4** Tyto kontejnery pro volně ložené látky musí být schváleny příslušným orgánem a schválení musí zahrnovat kód pro značení typů kontejnerů pro volně ložené látky podle 6.11.2.3 a případně požadavky pro inspekce a zkoušení.
- 6.11.4.5** Pokud je nezbytné použití vyložení pro udržení nebezpečných věcí, toto vyložení musí plnit ustanovení uvedené v 6.11.3.1.3.

KAPITOLA 6.12

POŽADAVKY NA VÝROBU, VÝSTROJ, SCHVALOVÁNÍ TYPU, INSPEKCE A ZKOUŠENÍ A ZNAČENÍ CISTEREN, KONTEJNERŮ PRO VOLNĚ LOŽENÉ LÁTKY A ZVLÁŠTNÍCH KOMOR PRO VÝBUŠNINY MOBILNÍCH JEDNOTEK PŘIPRAVUJÍCÍCH VÝBUŠNINY (MEMU)

POZNÁMKA 1: Pro přemístitelné cisterny viz kapitola 6.7; pro nesnímatelné cisterny (cisternová vozidla), snímatelné cisterny, cisternové kontejnery a cisternové výměnné nástavby s nádržemi z kovových materiálů viz kapitola 6.8; pro cisterny z vyztužených plastů viz kapitola 6.9; pro cisterny pro podtlakové vyčerpávání odpadů viz kapitola 6.10; pro kontejner pro volně ložené látky viz kapitola 6.11.

POZNÁMKA 2: Tato kapitola se vztahuje na nesnímatelné cisterny, snímatelné cisterny, cisternové kontejnery a cisternové výměnné nástavby, které nesplňují požadavky kapitol uvedených v Poznámce 1, jakož i cisternové kontejnery a zvláštní komory pro výbušniny.

6.12.1 Rozsah použití

Požadavky této kapitoly se vztahují na cisterny, cisternové kontejnery a zvláštní komory určené pro přepravu nebezpečných věcí na MEMU.

6.12.2 Všeobecná ustanovení

6.12.2.1 Cisterny musí splňovat ustanovení třídy 6.8, neodporující minimálnímu vnitřnímu objemu definovanému v oddílu 1.2.1 pro nesnímatelné cisterny, jak je uvedeno ve zvláštních ustanoveních této kapitoly.

6.12.2.2 Kontejnery pro volně ložené látky určené pro přepravu nebezpečných věcí na MEMU musí splňovat požadavky na kontejnery pro volně ložené látky typu BK2.

6.12.2.3 Pokud jednotlivá cisterna nebo kontejner pro volně ložené látky obsahuje více než jednu látku, každá musí být oddělena nejméně dvěma stěnami s odvětraným prostorem mezi nimi.

6.12.3 Cisterny

6.12.3.1 Cisterny s vnitřním objemem 1 000 litrů nebo více

6.12.3.1.1 Tyto cisterny musí splňovat požadavky oddílu 6.8.2.

6.12.3.1.2 Pro UN 1942 a 3375 musí cisterna splňovat požadavky kapitol 4.3 a 6.8 týkající se podtlakových zařízení, a kromě toho musí mít průtržné kotouče nebo jiné vhodné prostředky nouzových zařízení pro vyrovnávání tlaku schválené příslušným orgánem země používání.

6.12.3.1.3 U nádrží nekruhového průřezu, např. pravouhlých nebo elipsovitých nádrží, které nemohou být zkonstruovány podle 6.8.2.1.4 a norem nebo technického předpisu v nich uvedeného, schopnost odolat dovolenému napětí může být prokázána tlakovou zkouškou stanovenou příslušným orgánem.

Tyto cisterny musí splňovat požadavky pododdílu 6.8.2.1 kromě 6.8.2.1.3, 6.8.2.1.4 a 6.8.2.1.13 až 6.8.2.1.22.

Tloušťka těchto nádrží nesmí být menší než hodnoty v níže uvedené tabulce:

Materiál	Minimální tloušťka
Nerezavějící austenitické oceli	2,5 mm
Jiné oceli	3 mm
Hliníkové slitiny	4 mm
Hliník 99,80 % čistoty	6 mm

Musí být provedena ochrana proti poškození při bočním nárazu nebo převrácení. Vybavení ochranou musí být provedeno podle 6.8.2.1.20 nebo příslušný orgán musí schválit alternativní ochranná opatření.

- 6.12.3.1.4** Odchylně od požadavků 6.8.2.5.2 cisterny nemusí být označeny kódem cisterny a zvláštním ustanovením, pokud je to vhodné.

6.12.3.2 Cisterny s vnitřním objemem menším než 1 000 litrů

- 6.12.3.2.1** Konstrukce těchto cisteren musí splňovat požadavky pododdílu 6.8.2.1 kromě 6.8.2.1.3, 6.8.2.1.4, 6.8.2.1.6, 6.8.2.1.10 až 6.8.2.1.23 a 6.8.2.1.28.

- 6.12.3.2.2** Výstroj těchto cisteren musí splňovat požadavky 6.8.2.2.1. Pro UN 1942 a 3375 musí cisterna splňovat požadavky kapitol 4.3 a 6.8 týkající se podtlakových zařízení, a kromě toho musí mít průtržné kotouče nebo jiné vhodné prostředky nouzových zařízení pro vyrovnávání tlaku schválené příslušným orgánem země používání.

- 6.12.3.2.3** Tloušťka těchto nádrží nesmí být menší než hodnoty v níže uvedené tabulce:

Materiál	Minimální tloušťka
Nerezavějící austenitické oceli	2,5 mm
Jiné oceli	3 mm
Hliníkové slitiny	4 mm
Hliník 99,80 % čistoty	6 mm

- 6.12.3.2.4** Cisterny mohou mít konstrukční části bez poloměru vypouklosti. Alternativní podpůrná opatření mohou být zakřivené stěny, vlnité stěny nebo žebra. V nejméně jednom směru vzdálenost mezi dvěma paralelními podpěrami na každé straně cisterny nesmí být větší než 100 násobek tloušťky stěny.

- 6.12.3.2.5** Svary musí být odborně provedené a musí zaručit naprostou bezpečnost. Svářečské operace musí provádět kvalifikovaní svářeči používající svářecí postup, jehož kvalita (včetně potřebného tepelného zpracování) byla prokázána technologickou zkouškou.

- 6.12.3.2.6** Požadavky 6.8.2.4 se nepoužijí. Avšak první a periodické inspekce těchto cisteren musí být provedeny pod odpovědností uživatele nebo vlastníka MEMU. Nádrže a jejich výstroj musí být podrobeny vizuální prohlídce jejich vnějšího a vnitřního stavu a zkoušce těsnosti pro uspokojení příslušného orgánu nejméně každé tři roky.

- 6.12.3.2.7** Požadavky na schválení typu 6.8.2.3 a na značení 6.8.2.5 se nepoužijí.

6.12.4 Části výstroje

- 6.12.4.1** Cisterny se spodním vyprazdňováním pro UN 1942 a UN 3375 musí mít nejméně dva uzávěry. Jeden z těchto uzávěrů může být čerpadlo mísící nebo nabíjecí produkt nebo šnek.

- 6.12.4.2** Jakékoli potrubí za prvním uzávěrem musí být z tavného materiálu (tj. gumová hadice) nebo mít jiný tavný prvek.

- 6.12.4.3** K zamezení jakékoli ztráty obsahu v případě poškození vnějších čerpadel a vyprazdňovacích prvků (potrubí), první uzávěr a jeho sedla musí být chráněny proti nebezpečí utržení vnějšími namáháními nebo musí být tak konstruovány, aby jim odolaly. Plnicí a vyprazdňovací zařízení (včetně slepých přírub nebo šroubových uzávěrů) a ochranné kryty (pokud jsou) musí být zajištěny proti jakémukoli nežádoucímu otevření.

- 6.12.4.4** Podtlaková zařízení podle 6.8.2.2.6 na cisternách pro UN 3375 může být nahrazen „labutími krky“. Taková výstroj musí být chráněna proti nebezpečí utržení vnějšími namáháními nebo musí být tak konstruována, aby jim odolala.

6.12.5 Zvláštní komory pro výbušniny

Komory pro kusy s výbušninami obsahující rozbušky a/nebo skupiny rozbušek a ty, které obsahují látky a předměty skupiny snášenlivosti D musí být konstruovány pro zabezpečení účinného oddělení tak, že zde není žádné nebezpečí přenosu výbuchu z rozbušek a/nebo skupiny rozbušek na látky a předměty skupiny snášenlivosti D. Oddělení musí být dosaženo použitím oddělených komor nebo uložení jednoho nebo dvou typů výbušnin ve zvláštním ochranném systému. Jedna z obou metod oddělení musí být schválena příslušným orgánem. Pokud materiál použitý pro komory je kov, celý vnitřek komory musí být pokryt materiálem zajišťujícím uspokojivou ohnivzdornost. Komory pro výbušniny musí být umístěny tam, kde jsou chráněny před nárazem a před poškozením na nerovném terénu a nebezpečným vzájemným působením s ostatními nebezpečnými věcmi ve vozidle a před zápalnými zdroji na vozidle, např. výfuky atd.

POZNÁMKA: *Materiály zařazené jako třída B-s3-d2 podle normy EN 13501-1:2002 se považují za splňující požadavek ohnivzdornosti.*

ČÁST 7

USTANOVENÍ O PODMÍNKÁCH PŘEPRAVY, NAKLÁDKY, VYKLÁDKY A MANIPULACE

KAPITOLA 7.1

VŠEOBECNÁ USTANOVENÍ

7.1.1 Přeprava nebezpečných věcí musí být prováděna stanovenými dopravními a přepravními prostředky v souladu s ustanoveními této kapitoly a kapitoly 7.2 pro přepravu kusů, kapitoly 7.3 pro přepravu ve volně loženém stavu a kapitoly 7.4 pro přepravu v cisternách. Kromě toho musí být dodržena ustanovení kapitoly 7.5 týkající se nakládky, vykládky a manipulace.

Sloupce (16), (17) a (18) tabulky A kapitoly 3.2 udávají příslušná ustanovení této části, která se vztahují na jednotlivé nebezpečné věci.

7.1.2 Kromě ustanovení této části musí vozidla používaná pro přepravu nebezpečných věcí z hlediska své konstrukce, výroby, a pokud je to předepsáno, svého schválení splňovat příslušná ustanovení části 9.

7.1.3 Velké kontejnery, přemístitelné cisterny a cisternové kontejnery, které odpovídají definici "kontejner" uvedené v Mezinárodní konvenci o bezpečných kontejnerech (KBK, 1972) ve znění pozdějších změn a doplňků, nebo ve vyhlášce UIC, 591 (z 1.10.2007, 3. vydání), 592-2 (z 1.10.2004, 6. vydání), 592-3 (z 1.1.1998, 2. vydání) a 592-4 (z 1.5.2007, 3. vydání) nesmějí být používány pro přepravu nebezpečných věcí, pokud velký kontejner nebo rám přemístitelné cisterny nebo cisternového kontejneru nespĺňuje ustanovení KBK, nebo vyhlášek UIC, 591 a 592-2 až 592-4.

7.1.4 Velký kontejner smí být předán k přepravě, jen pokud je konstrukčně provozuschopný.

"Konstrukčně provozuschopný" znamená, že kontejner je bez vážných závad na svých konstrukčních prvcích, např. horních a dolních podélnících, horních a dolních příčnicích, dveřních prazích a překladech, podlahových příčnicích, rohových sloupcích a rohových prvcích. "Vážné závady" jsou vruby nebo ohyby v konstrukčních prvcích hlubší než 19 mm, bez ohledu na délku této deformace; praskliny nebo lomy v konstrukčních prvcích; více než jeden spoj nebo nevhodně provedené spoje (např. přeplátování) na horních nebo spodních příčnicích nebo překladech dveří nebo více než dva spoje na jakémkoli horním nebo dolním podélníku nebo jakýkoli spoj v dveřním práhu nebo rohovém sloupcu; utržené, zkroucené, zlomené, chybějící nebo jinak neprovozuschopné dveřní závěsy a kování; netěsné švy (spoje) a těsnění nebo jakákoli deformace kontejneru znemožňující správné umístění manipulačního zařízení, uložení a zajištění kontejneru na podvozku nebo vozidle.

Kromě toho poškození jakékoli části kontejneru, jako je zrezivělý kov v bočních stěnách nebo uvolněné části v prvcích ze skelných vláken, je nepřipustné bez ohledu na konstrukční materiál. Normální opotřebení, včetně oxidace (rez), drobné stopy po nárazu a škrábance a jiná poškození, která neovlivňují provozuschopnost kontejneru nebo jeho těsnost vůči povětrnosti, jsou však přípustná.

Před nakládkou kontejneru musí být provedena jeho kontrola, aby bylo zajištěno, že neobsahuje zbytky předchozího nákladu a že podlaha a vnitřní stěny nemají výčnělky.

7.1.5 Velké kontejnery musí splňovat požadavky na nastavbu vozidla uvedené v této části a, pokud je to vhodné, požadavky týkající se dotyčného nákladu uvedené v části 9; nastavba vozidla pak nemusí tato ustanovení splňovat.

Avšak velké kontejnery přepravované na vozidlech, jejichž podlahy mají izolační vlastnosti a odolnost proti teplu splňující tyto požadavky, nemusí uvedené požadavky splňovat.

Toto ustanovení se vztahuje též na malé kontejnery pro přepravu výbušných látek a předmětů třídy 1.

7.1.6

S výhradou ustanovení poslední části první věty oddílu 7.1.5, skutečnost, že nebezpečné věci jsou uloženy v jednom nebo více kontejnerech, nemá vliv na podmínky, které musí splňovat vozidlo z důvodů povahy a množství přepravovaných nebezpečných věcí.

KAPITOLA 7.2

USTANOVENÍ O PŘEPRAVĚ V KUSECH

- 7.2.1** Pokud není v oddílech 7.2.2 až 7.2.4 stanoveno jinak, smějí být kusy přepravovány
- (a) v uzavřených vozidlech nebo v uzavřených kontejnerech; nebo
 - (b) ve vozidlech s plachtou nebo v kontejnerech s plachtou; nebo
 - (c) v nekrytých vozidlech nebo v nekrytých kontejnerech.
- 7.2.2** Kusy obsahující obaly zhotovené z materiálů citlivých na vlhkost musí být přepravovány v uzavřených vozidlech nebo vozidlech s plachtou, nebo v uzavřených kontejnerech nebo kontejnerech s plachtou.
- 7.2.3** (Vyhrazeno)
- 7.2.4** Pokud jsou uvedena u položky ve sloupci (16) tabulky A kapitoly 3.2, použijí se tato zvláštní ustanovení:
- V1 Kusy musí být přepravovány v uzavřených vozidlech nebo vozidlech s plachtou, nebo v uzavřených kontejnerech nebo kontejnerech s plachtou.
- V2 (1) Kusy musí být přepravovány pouze ve vozidlech EX/II nebo EX/III, která splňují příslušné požadavky části 9. Volba vozidla závisí na množství určeném k přepravě, které je na jednu dopravní jednotku omezeno podle ustanovení týkajících se nakládky (viz 7.5.5.2).
- (2) Přípojná vozidla, kromě návěsů, která splňují požadavky na vozidla EX/II nebo EX/III, smějí být tažena motorovými vozidly, která tyto požadavky nesplňují.
- K přepravě v kontejnerech viz též 7.1.3 až 7.1.6.
- Pokud jsou látky nebo předměty třídy 1 přepravovány v množstvích vyžadujících dopravní jednotku tvořenou vozidlem(y) EX/III v kontejnerech do nebo z přístavu, železničních stanic nebo příletových nebo odletových letišť jako část multimodální (kombinované) přepravy, smí být použito dopravní jednotky tvořené vozidlem(y) EX/II, jestliže přepravované kontejnery splňují příslušné požadavky námořních (IMDG Code), železničních (RID) nebo leteckých (ICAO Technical Instructions) předpisů.
- V3 Pro volně sypané práškové látky a pro výroby zábavné pyrotechniky musí mít kontejner podlahu s nekovovým povrchem nebo potahem.
- V4 (Vyhrazeno)
- V5 Kusy nesmějí být přepravovány v malých kontejnerech.
- V6 Flexibilní IBC musí být přepravovány v uzavřených vozidlech nebo uzavřených kontejnerech, nebo ve vozidlech nebo kontejnerech s plachtou. Plachta musí být z nepromokavého a nehořlavého materiálu.
- V7 (Vyhrazeno)
- V8 (1) Látky stabilizované řízením teploty musí být přepravovány takovým způsobem, aby řízené teploty uvedené v 2.2.41.1.17 a 2.2.41.4 nebo v 2.2.52.1.16 a 2.2.52.4, které se na ně vztahují, nebyly nikdy překročeny.

- (2) Vybrané prostředky řízení teploty pro přepravu závisejí na řadě faktorů, jako jsou:
- řízená(é) teplota(y) přepravované(ých) látky(ek);
 - rozdíl mezi řízenou teplotou a očekávanou teplotou okolí;
 - účinnost tepelné izolace;
 - doba trvání přepravy; a
 - míra bezpečnosti s ohledem na zpoždění během přepravy.
- (3) Vhodné metody pro zamezení překročení řízené teploty v posloupném pořadí podle jejich účinnosti jsou uvedeny dále:
- R1 Tepelná izolace, pokud je počáteční teplota látky(tek) dostatečně nižší než řízená teplota;
- R2 Tepelná izolace a chladicí systém, pokud:
- je přepravováno dostatečné množství nehořlavé chladicí látky (např. kapalného dusíku nebo tuhého oxidu uhličitého) dovolující rozumnou míru bezpečnosti s ohledem na zdržení během přepravy, nebo je zajištěn způsob jejího doplnění;
 - jako chladivo nejsou použity zkapalněný kyslík nebo zkapalněný vzduch;
 - účinek chladicího systému je stálý, dokonce i když je většina chladiva spotřebována; a
 - nutnost vyvětrat dopravní jednotku před vstupem do ní je jasně uvedena ve varovném upozornění na dveřích.
- R3 Tepelná izolace a jedno strojní chlazení, pokud pro látky s bodem vzplanutí nižším než je kritická teplota zvýšená o 5 °C je v chlazeném prostoru použito nevybušné elektrické příslušenství EEx IIB T3, aby se předešlo nebezpečí vznícení hořlavých par látek;
- R4 Tepelná izolace a kombinovaný strojní chladicí systém a systém s chladicí látkou, pokud:
- tyto dva systémy jsou na sobě nezávislé; a
 - požadavky metod R2 a R3 výše jsou splněny;
- R5 Tepelná izolace a dvojitý strojní chladicí systém, pokud:
- nehledě na integrální pohonnou jednotku jsou tyto dva systémy na sobě nezávislé;
 - každý systém sám o sobě je schopen udržet dostatečnou regulaci teploty; a
 - pro látky s bodem vzplanutí nižším než je kritická teplota zvýšená o 5 °C je v chlazeném prostoru použito nevybušné elektrické příslušenství EEx IIB T3, aby se předešlo nebezpečí vznícení hořlavých par látek.
- (4) Metody R4 a R5 mohou být použity pro všechny organické peroxidy a samovolně se rozkládající látky.

Metoda R3 může být použita pro organické peroxidy a samovolně se rozkládající látky typů C, D, E a F a, pokud nejvyšší teplota okolí očekávaná během přepravy nepřekročí řízenou teplotu o více než 10 °C, pro organické peroxidy a samovolně se rozkládající látky typu B.

Metoda R2 může být použita pro organické peroxidy a samovolně se rozkládající látky typů C, D, E a F, pokud nejvyšší teplota okolí očekávaná během přepravy nepřekročí řízenou teplotu o více než 30 °C.

Metoda R1 může být použita pro organické peroxidy a samovolně se rozkládající látky typů C, D, E a F, pokud nejvyšší teplota okolí očekávaná během přepravy je nejméně o 10 °C nižší než řízená teplota.

- (5) Pokud látky vyžadují přepravu v izotermických, chlazených nebo chladicích a mrazicích vozidlech nebo kontejnerech, tato vozidla nebo kontejnery musí splňovat ustanovení kapitoly 9.6.
- (6) Jestliže jsou látky obsaženy v ochranných obalech naplněných chladicí látkou, musí být přepravovány v uzavřených vozidlech nebo vozidlech s plachtou, nebo v uzavřených kontejnerech nebo kontejnerech s plachtou. Pokud jsou používána uzavřená vozidla nebo kontejnery, musí být přiměřeně větrána. Vozidla a kontejnery s plachtou musí být vybaveny bočnicemi a zadním čelem. Plachty těchto vozidel a kontejnerů musí být z nepromokavých a těžko hořlavých materiálů.
- (7) Každé zařízení řídicí a snímající teplotu v chladicím systému musí být snadno přístupné a všechna elektrická spojení musí být odolná proti povětrnostním vlivům. Teplota vzduchu uvnitř dopravní jednotky musí být snímána dvěma nezávislými snímači (čidly) a údaje musí být zaznamenávány tak, aby jakákoli změna teploty byla snadno identifikovatelná. Jestliže jsou přepravovány látky mající řízenou teplotu nižší než + 25 °C, dopravní jednotka musí být vybavena vizuálním a akustickým poplašným zařízením napájeným nezávisle na chladicím systému a seřizovaným tak, aby fungovalo při teplotě rovnající se řízené teplotě nebo nižší.
- (8) Nouzový chladicí systém nebo náhradní díly musí být k dispozici.

POZNÁMKA: Toto ustanovení V8 se nepoužije pro látky zmíněné v pododdílu 3.1.2.6, jsou-li tyto látky stabilizovány přidáním chemických inhibitorů tak, že SADT je vyšší než 50 °C. V tomto případě může být řízení teploty vyžadováno za podmínek přepravy, kdy teplota může přesáhnout 55 °C.

- V9 (Vyhrazeno)
- V10 IBC musí být přepravovány v uzavřených vozidlech nebo vozidlech s plachtou, nebo v uzavřených kontejnerech nebo kontejnerech s plachtou.
- V11 IBC, jiné než IBC z kovu nebo tuhého plastu, musí být přepravovány v uzavřených vozidlech nebo vozidlech s plachtou, nebo v uzavřených kontejnerech nebo kontejnerech s plachtou.
- V12 IBC typu 31HZ2, 31HA2, 31HB2, 31HN2, 31HD2 a 31HH2 musí být přepravovány v uzavřených vozidlech nebo kontejnerech.
- V13 Jsou-li zabaleny do pytlů 5H1, 5L1 nebo 5M1, musí být přepravovány v uzavřených vozidlech nebo kontejnerech.
- V14 Aerosoly přepravované pro účely recyklace nebo likvidace podle zvláštního ustanovení 327 musí být přepravovány v odvětrávaných nebo nekrytých vozidlech nebo kontejnerech.

KAPITOLA 7.3

USTANOVENÍ O PŘEPRAVĚ VE VOLNĚ LOŽENÉM STAVU

7.3.1 Všeobecná ustanovení

7.3.1.1 Věci nesmějí být přepravovány volně ložené v kontejnerech pro volně ložené látky, kontejnerech nebo vozidlech, ledaže

- (a) zvláštní ustanovení označené kódem BK, výslovně dovolující tento způsob přepravy, je uvedeno ve sloupci (10) tabulky A kapitoly 3.2 a kromě ustanovení tohoto oddílu jsou splněna rovněž zvláštní ustanovení oddílu 7.3.2; nebo
- (b) zvláštní ustanovení označené kódem VV, výslovně dovolující tento způsob přepravy, je uvedeno ve sloupci (17) tabulky A kapitoly 3.2 a jsou splněny podmínky tohoto zvláštního ustanovení, jak jsou uvedeny v oddílu 7.3.3, navíc k podmínkám tohoto oddílu.

Avšak prázdné nevyčištěné obaly smějí být přepravovány volně ložené, jestliže tento způsob přepravy není výslovně zakázán jinými ustanoveními ADR.

POZNÁMKA: *K přepravě v cisternách viz kapitoly 4.2 a 4.3.*

7.3.1.2 Látky, které mohou zkapalnit při teplotách, které se mohou vyskytnout během přepravy, není dovoleno přepravovat ve volně loženém stavu.

7.3.1.3 Kontejnery pro volně ložené látky, kontejnery nebo nástavby vozidel musí být prachotěsné a musí být uzavřeny tak, aby nic z obsahu nemohlo uniknout za normálních podmínek přepravy, včetně účinku vibrací, nebo změn teploty, vlhkosti nebo tlaku.

7.3.1.4 Volně ložené tuhé látky musí být naloženy a rovnoměrně rozloženy způsobem, který minimalizuje pohyb, který by mohl vyústit v poškození kontejneru pro volně ložené látky, kontejneru nebo vozidla nebo únik nebezpečných věcí.

7.3.1.5 Jsou-li namontována odvětrávací zařízení, musí být udržována v průchodném a funkčním stavu.

7.3.1.6 Volně ložené tuhé látky nesmějí nebezpečně reagovat s materiálem kontejneru pro volně ložené látky, kontejneru, vozidla, těsnění, výstroje včetně vík a plachet ani s ochranným vyložení, které je ve styku s obsahem, nebo významně snižovat jejich odolnost. Kontejnery pro volně ložené látky, kontejnery nebo vozidla musí být konstruovány nebo uzpůsobeny tak, aby látky nemohly vniknout mezi části krytu dřevěné podlahy nebo přijít do styku s těmi částmi kontejneru pro volně ložené látky, kontejneru nebo vozidla, které by mohly být poškozeny těmito látkami nebo jejich zbytky.

7.3.1.7 Před naplněním a podáním k přepravě musí být každý kontejner pro volně ložené látky, kontejner nebo vozidlo prohlédnut(o) a vyčištěn(o), aby bylo zajištěno, že neobsahuje žádné zbytky na vnitřní nebo vnější straně kontejneru pro volně ložené látky, kontejneru nebo vozidla, které by mohly

- vyvolat nebezpečnou reakci s látkou určenou k přepravě;
- poškodit konstrukci kontejneru pro volně ložené látky, kontejneru nebo vozidla; nebo
- zhoršit zádržné schopnosti kontejneru pro volně ložené látky, kontejneru nebo vozidla vůči nebezpečným látkám.

7.3.1.8 Během přepravy nesmějí na vnějších površích kontejnerů pro volně ložené látky, kontejnerů nebo nástavb vozidel ulpívat žádné nebezpečné zbytky.

- 7.3.1.9** Je-li namontováno více uzávěrů za sebou, musí se před plněním uzavřít jako první ten, který je nejbližší k látce, která se má přepravovat.
- 7.3.1.10** Prázdné kontejnery pro volně ložené látky, kontejnery nebo vozidla, které přepravovaly tuhou nebezpečnou látku ve volně loženém stavu, podléhají stejným předpisům ADR jako naplněný kontejner pro volně ložené látky, kontejner nebo naložené vozidlo, ledaže byla učiněna přiměřená opatření k vyloučení jakéhokoli nebezpečí.
- 7.3.1.11** Jsou-li kontejnery pro volně ložené látky, kontejnery nebo vozidla používány pro přepravu volně ložených látek náchylných k vyvolání výbuchu prachu nebo k vyvíjení hořlavých par (např. některé odpady), musí být učiněna opatření k vyloučení zápalných zdrojů a k zamezení nebezpečnému elektrostatickému výboji během přepravy, plnění nebo vyprazdňování látky.
- 7.3.1.12** Látky, např. odpady, které spolu mohou nebezpečně reagovat a látky různých tříd a věci nepodléhající ADR, které jsou náchylné k vzájemné nebezpečné reakci, nesmějí být smíchány v jednom kontejneru pro volně ložené látky, kontejneru nebo vozidle. Nebezpečné reakce jsou:
- (a) hoření a/nebo vývin značného tepla;
 - (b) vyvíjení hořlavých a/nebo toxických plynů;
 - (c) tvoření žíravých kapalin;
 - (d) tvoření nestabilních látek.
- 7.3.1.13** Kontejner pro volně ložené látky, kontejner nebo vozidlo musí být před naplněním (nakládkou) podroben(o) vizuální prohlídce za účelem ověření, že je konstrukčně provozuschopný(é), že vnitřní stěny, strop a podlaha jsou bez výčnělků nebo poškození a že vnitřní vyložení nebo zádržné prostředky látek jsou prosty děr, trhlin nebo jakýchkoli poškození, které by zhoršily jejich zádržnou schopnost vůči nákladu. Konstrukčně provozuschopný(é) znamená, že kontejner pro volně ložené látky, kontejner nebo vozidlo nemá vážné závady na svých konstrukčních prvcích, jako jsou horní a dolní podélníky, horní a dolní koncové příčnický, dveřní prahy a překlady, podlahové příčnický, rohové sloupky a rohové prvky u kontejneru. Vážné závady zahrnují:
- (a) ohyby, praskliny nebo lomy konstrukčních nebo podpěrných prvků, které mají vliv na integritu kontejneru pro volně ložené látky, kontejneru nebo nástavby vozidla;
 - (b) více než jeden spoj nebo nevhodně provedený spoj (např. přeplátování) na horních nebo spodních koncových příčnicích nebo překladech dveří;
 - (c) více než dva spoje na jakémkoli horním nebo dolním podélníku;
 - (d) jakýkoli spoj v dveřním prahu nebo rohovém sloupku;
 - (e) dveřní závěsy a kování, které jsou zadřené, zkroucené, zlomené, chybějící nebo jinak nefunkční;
 - (f) švy (spoje) a těsnění, které jsou netěsné;
 - (g) jakákoli deformace kontejneru pro volně ložené látky, kontejneru, zabraňující správnému umístění manipulačního zařízení, uložení a zajištění kontejneru na podvozku nebo vozidle, nebo uložení do komory plavidla.
 - (h) jakékoli poškození úchytů pro zdvihání nebo úchytného rámu manipulačního zařízení;
 - (i) jakékoli poškození obslužné a provozní výstroje.

7.3.2 **Dodatečná ustanovení pro přepravu ve volně loženém stavu, použijí-li se ustanovení pododdílu 7.3.1.1 (a)**

7.3.2.1 Kódy BK1 a BK2 ve sloupci (10) tabulky A kapitoly 3.2 mají tento význam:

BK1:Přeprava ve volně loženém stavu v kontejnerech pro volně ložené látky s plachtou je dovolena;
BK2:Přeprava ve volně loženém stavu v uzavřených kontejnerech pro volně ložené látky je dovolena.

7.3.2.2 Použitý kontejner pro volně ložené látky musí odpovídat požadavkům kapitoly 6.11.

7.3.2.3 *Věci třídy 4.2*

Celková hmotnost nákladu přepravovaného v kontejneru pro volně ložené látky musí být taková, aby samozápalná teplota nákladu byla vyšší než 55°C.

7.3.2.4 *Věci třídy 4.3*

Tyto věci musí být přepravovány v kontejnerech pro volně ložené látky (kód BK2), které jsou vodotěsné.

7.3.2.5 *Věci třídy 5.1*

Kontejnery pro volně ložené látky musí být konstruovány nebo upraveny tak, aby se věci nemohly dostat do styku se dřevem nebo jakýmkoli jiným hořlavým materiálem.

7.3.2.6 *Věci třídy 6.2*

7.3.2.6.1 Materiál živočišného původu obsahující infekční látky (UN čísel 2814, 2900 a 3373) je dovoleno přepravovat v kontejnerech pro volně ložené látky, pokud jsou splněny následující podmínky:

- (a) Jsou dovoleny kontejnery pro volně ložené látky s plachtou BK1 za podmínky, že nejsou naplněny do své maximální kapacity, aby se zamezilo dotyku látek s plachtou. Uzavřené kontejnery pro volně ložené látky BK2 jsou rovněž dovoleny;
- (b) Uzavřené kontejnery pro volně ložené látky, nebo kontejnery pro volně ložené látky plachtou a jejich otvory musí být těsně svou konstrukcí nebo jejich opatřením vhodným vnitřním vyložení;
- (c) Materiál živočišného původu musí být před naložením pro přepravu důkladně napuštěn vhodným dezinfekčním prostředkem;
- (d) Kontejnery pro volně ložené látky s plachtou musí být přikryty přídatným potahem zatíženým absorpčním materiálem napuštěným vhodným desinfekčním prostředkem;
- (e) Uzavřené kontejnery pro volně ložené látky, nebo kontejnery pro volně ložené látky s plachtou nesmějí být znovu použity, dokud nebyly řádně vyčištěny a desinfikovány.

POZNÁMKA: *Dodatečná opatření mohou být vyžadována příslušnými národními zdravotnickými orgány.*

7.3.2.6.2 Odpady třídy 6.2 (UN 3291)

- (a) *(Vyhrazeno)*

- (b) Uzavřené kontejnery pro volně ložené látky a jejich otvory musí být těsné svou konstrukcí. Tyto kontejnery pro volně ložené látky musí mít neporézní vnitřní povrchy a musí být prosty prasklin nebo jiných vad, které by mohly poškodit obaly uvnitř, bránit desinfekci nebo dovolit nežádoucí únik odpadů.
- (c) Odpady UN čísla 3291 musí být uloženy v uzavřeném kontejneru pro volně ložené látky v těsných, hermeticky uzavřených plastových pytlích konstrukčního typu odzkoušeného a schváleného podle OSN, které vyhověly příslušným zkouškám pro přepravu tuhých látek obalové skupiny II, a značených podle 6.1.3.1. Takové plastové pytle musí z hlediska odolnosti proti nárazu a proti roztržení vyhovět normám ISO 7765-1:1988 „Plastový film a fólie – Určení odolnosti proti nárazu metodou volného pádu tělesa – Část 1: Metody zvané „schodiště“ a ISO 6383-2:1983 „Plasty – Film a fólie – Určení odolnosti proti roztržení – Část 2: Elmendorfova metoda“. Každý pytel musí mít odolnost proti nárazu nejméně 165 g a odolnost proti roztržení nejméně 480 g jak v rovnoběžné, tak i v kolmé rovině vzhledem k podélné rovině pytle. Nejvyšší čistá (netto) hmotnost každého plastového pytle musí být 30 kg.
- (d) Jednotlivé předměty překračující 30 kg, jako jsou znečištěné matrace, smějí být přepravovány bez plastového pytle, pokud to povolí příslušný orgán.
- (e) Odpady UN čísla 3291, které obsahují kapaliny, musí být přepravovány jen v plastových pytlích obsahujících dostatečné množství absorpčního materiálu, aby pohltily všechnu kapalinu, bez jejího úniku do kontejneru pro volně ložené látky.
- (f) Odpady UN čísla 3291 obsahující ostré předměty, musí být přepravovány jen v tuhých obalech konstrukčního typu odzkoušeného a schváleného podle OSN, které vyhovují ustanovením pokynů pro balení P621, IBC620 nebo LP621.
- (g) Tuhé obaly uvedené v pokynech pro balení P621, IBC620 nebo LP621 mohou být rovněž použity. Musí být řádně zajištěny, aby se zamezilo poškození za normálních podmínek přepravy. Odpady přepravované v tuhých obalech a plastových pytlích společně v tomtéž uzavřeném kontejneru pro volně ložené látky musí být přiměřeně navzájem odděleny, např. vhodnými tuhými přepážkami, kovovými mřížkami nebo jinými zajišťovacími prostředky, aby se zamezilo poškození obalů za normálních podmínek přepravy.
- (h) Odpady UN čísla 3291 v plastových pytlích nesmějí být napěchovány do uzavřeného kontejneru pro volně ložené látky takovým způsobem, že by se pytle mohly stát netěsnými.
- (i) Uzavřené kontejnery pro volně ložené látky musí být po každé jízdě prohlédnuty, aby se odhalil každý případný únik nebo rozlítí. Jestliže odpady UN čísla 3291 unikly nebo se rozlily do uzavřeného kontejneru pro volně ložené látky, smí být znovu použit až po důkladném vyčištění a, pokud je to nutné, po desinfekci a dekontaminaci vhodným prostředkem. S odpady UN čísla 3291 nesmějí být společně přepravovány žádné jiné věci, než jsou medicínální nebo veterinární odpady. Tyto jiné odpady přepravované v tomtéž uzavřeném kontejneru pro volně ložené látky musí být prohlédnuty, aby se odhalila případná kontaminace.

7.3.2.7 Látky třídy 7

K přepravě nebalených radioaktivních látek viz 4.1.9.2.3.

7.3.2.8 Věci třídy 8

Tyto věci musí být přepravovány v kontejnerech pro volně ložené látky, které jsou vodotěsné.

7.3.3 Zvláštní ustanovení pro přepravu ve volně loženém stavu, použijí-li se ustanovení pododdílu 7.3.1.1 (b)

Pokud jsou uvedena ve sloupci (17) tabulky A kapitoly 3.2, musí být uplatněna tato zvláštní ustanovení:

- VV1 Přeprava ve volně loženém stavu je povolena v uzavřených vozidlech nebo vozidlech s plachtou, v uzavřených kontejnerech nebo ve velkých kontejnerech s plachtou.
- VV2 Přeprava ve volně loženém stavu je povolena v uzavřených vozidlech s kovovou nástavbou, v uzavřených kovových kontejnerech a ve vozidlech a velkých kontejnerech zakrytých nehořlavou plachtou, jejichž nástavba (těleso kontejneru) je z kovu, nebo mají podlahu a stěny chráněny proti nákladu.
- VV3 Přeprava ve volně loženém stavu je povolena ve vozidlech a velkých kontejnerech s plachtou, s přiměřeným větráním.
- VV4 Přeprava ve volně loženém stavu je povolena ve vozidlech s kovovou nástavbou, uzavřených nebo s plachtou, a v uzavřených kovových kontejnerech nebo velkých kovových kontejnerech s plachtou.
- Pro UN čísla 2008, 2009, 2210, 2545, 2546, 2881, 3189 a 3190 je povolena pouze přeprava volně ložených tuhých odpadů.
- VV5 Přeprava ve volně loženém stavu je povolena ve speciálně upravených vozidlech a kontejnerech. Otvory používané pro nakládku a vykládku musí být možno hermeticky uzavřít.
- VV6 *(Vyhrazeno)*
- VV7 Přeprava ve volně loženém stavu je povolena v uzavřených vozidlech nebo vozidlech s plachtou, v uzavřených kontejnerech nebo ve velkých kontejnerech s plachtou pouze tehdy, pokud je látka kusovitá.
- VV8 Přeprava ve volně loženém stavu je povolena jako vozová zásilka v uzavřených vozidlech, uzavřených kontejnerech nebo vozidlech nebo velkých kontejnerech zakrytých nepromokavou nehořlavou plachtou.
- Vozidla a kontejnery musí být zkonstruována tak, aby buď obsažené látky nemohly přijít do styku s dřevem, nebo jiným hořlavým materiálem, nebo aby celý povrch podlahy a stěn, jestliže je vyroben ze dřeva nebo jiného hořlavého materiálu, byl opatřen nepropustným a nehořlavým povlakem nebo byl napuštěn křemičitanem sodným nebo podobnou látkou.
- VV9 Přeprava ve volně loženém stavu je povolena jako vozová zásilka ve vozidlech s plachtou, uzavřených kontejnerech nebo v plnostěnných velkých kontejnerech s plachtou.
- Pro látky třídy 8 nástavba vozidla nebo těleso kontejneru musí být opatřeny vhodným a dostatečně pevným vnitřním vyložení.
- VV10 Přeprava ve volně loženém stavu je povolena jako vozová zásilka ve vozidlech s plachtou, uzavřených kontejnerech nebo velkých plnostěnných kontejnerech s plachtou.
- Nástavba vozidel nebo těleso kontejnerů musí být nepropustné, nebo musí být utěsněny, např. pomocí vhodného a dostatečně pevného vnitřního vyložení.
- VV11 Přeprava ve volně loženém stavu je povolena ve vozidlech a kontejnerech speciálně vybavených způsobem, který vylučuje nebezpečí pro lidi, zvířata a životní prostředí, např. uložení odpadů do pytlů nebo díky vzduchotěsným spojům.
- VV12 Látky, pro které je přeprava v cisternových vozidlech, v přemístitelných cisternách nebo v cisternových kontejnerech nevhodná pro jejich vysokou teplotu a hustotu, mohou být přepravovány ve speciálních vozidlech nebo kontejnerech podle norem stanovených příslušným orgánem země původu. Jestliže země původu není smluvní stranou ADR,

stanovené podmínky musí být uznány příslušným orgánem prvního státu smluvní strany ADR, do kterého se zásilka dostane.

VV13 Přeprava ve volně loženém stavu je povolena ve speciálně vybavených vozidlech nebo kontejnerech podle norem stanovených příslušným orgánem země původu. Jestliže země původu není smluvní stranou ADR, stanovené podmínky musí být uznány příslušným orgánem prvního státu smluvní strany ADR, do kterého se zásilka dostane.

VV14 (1) Použité akumulátory mohou být přepravovány volně ložené ve speciálně vybavených vozidlech nebo kontejnerech. Velké kontejnery z plastů nejsou dovoleny. Malé kontejnery z plastů musí být schopny odolat, plně naložené, volnému pádu z výšky 0,8 m na tvrdý povrch při teplotě $-18\text{ }^{\circ}\text{C}$, bez prasknutí.

(2) Ložné prostory vozidel nebo kontejnerů musí být z oceli odolné proti žíravým látkám obsaženým v akumulátorech. Méně odolné oceli mohou být použity, pokud jsou dostatečně velké tloušťky stěn nebo jsou opatřeny vnitřním vyložení nebo potahem z plastů odolných proti žíravým látkám.

Ložné prostory vozidel nebo kontejnerů musí být zkonstruovány tak, aby odolaly jakýmkoli zbytkovým elektrickým proudům a jakémukoli nárazu akumulátorů.

POZNÁMKA: Ocel vykazující nejvyšší stupeň progresivního zeslabení působením žíravých látek 0,1 mm za rok může být považována za odolnou.

(3) Konstrukčně musí být zajištěno, že z ložných prostorů vozidel nebo kontejnerů nedojde během přepravy k žádnému úniku. Otevřené ložné prostory musí být zakryty. Materiál krytu musí být odolný proti žíravým látkám.

(4) Ložné prostory vozidel nebo kontejnerů, včetně jejich vybavení, musí být před naložením zkontrolovány, zda nejsou poškozeny. Vozidla nebo kontejnery s poškozenými ložnými prostory nesmějí být naloženy.

Ložné prostory vozidel nebo kontejnerů nesmějí být naloženy nad horní okraje jejich bočních stěn.

(5) Žádné akumulátory obsahující různé látky ani žádné jiné věci schopné spolu nebezpečně reagovat nesmějí být naloženy do ložných prostorů vozidel nebo kontejnerů (viz definice " *Nebezpečná reakce* " v 1.2.1).

Během přepravy nesmí žádný nebezpečný zbytek žíravých látek obsažených v akumulátorech ulpívat na vnějším povrchu ložných prostorů vozidel nebo kontejnerů.

VV15 Přeprava ve volně loženém stavu je povolena v uzavřených vozidlech nebo vozidlech s plachtou, v uzavřených kontejnerech nebo velkých plnostěnných kontejnerech s plachtou pro tuhé látky (látky nebo směsi, jako přípravky nebo odpady) obsahující v průměru nejvýše 1000 mg/kg látky, k níž je toto UN číslo přiřazeno. V žádném místě nákladu nesmí být koncentrace této látky nebo těchto látek vyšší než 10 000 mg/kg.

VV16 Přeprava ve volně loženém stavu je povolena podle ustanovení 4.1.9.2.3.

VV17 Přeprava SCO-I-předmětů ve volně loženém stavu je povolena podle ustanovení 4.1.9.2.3.

KAPITOLA 7.4

USTANOVENÍ O PŘEPRAVĚ V CISTERNÁCH

7.4.1

Nebezpečné věci smějí být přepravovány v cisternách, jen pokud je ve sloupcích (10) nebo (12) tabulky A kapitoly 3.2 uveden kód cisterny, nebo pokud je uděleno schválení příslušného orgánu, jak je podrobně uvedeno v pododdílu 6.7.1.3. Přeprava musí být v souladu s ustanoveními kapitol 4.2, 4.3, 4.4 nebo 4.5, jak je to vhodné. Vozidla, ať už jsou to vozidla bez přívěsu, tažná vozidla, přívěsy nebo návěsy, musí splňovat příslušná ustanovení kapitol 9.1, 9.2 a 9.7.2 týkající se vozidel, která se mají použít, jak je udáno ve sloupci (14) tabulky A v kapitole 3.2.

7.4.2

Vozidla označená kódy EX/III, FL, OX nebo AT v pododdílu 9.1.1.2 musí být používána takto:

- Kde je předepsáno vozidlo EX/III, smí být použito pouze vozidlo EX/III;
- Kde je předepsáno vozidlo FL, smí být použito pouze vozidlo FL;
- Kde je předepsáno vozidlo OX, smí být použito pouze vozidlo OX;
- Kde je předepsáno vozidlo AT, smí být použita vozidla AT, FL a OX.

KAPITOLA 7.5

USTANOVENÍ O NAKLÁDCE, VYKLÁDCE A MANIPULACI

7.5.1 Všeobecná ustanovení o nakládce, vykládce a manipulaci

POZNÁMKA: Ve smyslu tohoto oddílu se uložení kontejneru, kontejneru pro volně ložené látky, cisternového kontejneru nebo přemístitelné cisterny na vozidlo považuje za nakládku a jeho(její) sejmutí z vozidla se považuje za vykládku.

7.5.1.1 Vozidlo a jeho řidič, jakož i velký(é) kontejner(y), kontejner(y) pro volně ložené látky, cisternový(é) kontejner(y) nebo přemístitelná(é) cisterna(y), jsou-li, musí při příjezdu na místa nakládky a vykládky, která zahrnují kontejnerové terminály, splňovat příslušné předpisy (zejména týkající se bezpečnosti, zabezpečení, čistoty a správné činnosti zařízení používaného při nakládce a vykládce).

7.5.1.2 Pokud není v ADR stanoveno jinak, nakládka nesmí být provedena, jestliže

- (a) kontrola dokladů; nebo
- (b) vizuální kontrola vozidla nebo velkého(ých) kontejneru(ů), kontejneru(ů) pro volně ložené látky, cisternového(ých) kontejneru(ů) nebo přemístitelné(ých) cisterny(en), jsou-li, jakož i jejich výbavy používané při nakládce a vykládce,

prokazuje, že vozidlo, řidič, velký kontejner, kontejner pro volně ložené látky, cisternový kontejner, přemístitelná cisterna nebo jejich výbava nesplňují příslušné předpisy. Před nakládkou musí být prohlédnut vnitřek a vnějšek vozidla nebo kontejneru, aby se zajistilo, že neexistuje žádné poškození, které by mohlo ovlivnit jejich celistvost nebo celistvost kusů, které se do něj mají naložit.

7.5.1.3 Pokud není v ADR stanoveno jinak, vykládka nesmí být provedena, jestliže výše uvedené kontroly odkryjí nedostatky, které by mohly ohrozit bezpečnost nebo zabezpečení vykládky.

7.5.1.4 Podle zvláštních ustanovení uvedených v oddílu 7.3.3 nebo 7.5.11, v souladu s údaji ve sloupcích (17) a (18) tabulky A kapitoly 3.2, smějí být určité nebezpečné věci přepravovány pouze jako „vozová zásilka“ (viz definici v oddílu 1.2.1). V takovém případě může příslušný orgán požadovat, aby vozidlo nebo velký kontejner používané pro takovou přepravu byly pouze na jednom místě naloženy a pouze na jednom místě vyloženy.

7.5.1.5 Jsou-li vyžadovány směrové šipky, musí být kusy a přepravní obalové soubory orientovány v souladu s takovým označením.

POZNÁMKA: Pokud je to možné, musí být kapalné nebezpečné věci naloženy pod suché nebezpečné věci.

7.5.2 Zákaz společné nakládky

7.5.2.1 Kusy označené rozdílnými bezpečnostními značkami nesmějí být naloženy společně do téhož vozidla nebo kontejneru, ledaže je společná nakládka dovolena podle následující tabulky na základě bezpečnostních značek, jimiž jsou kusy označeny.

POZNÁMKA: Podle 5.4.1.4.2 musí být vystaveny samostatné přepravní doklady pro zásilky, které nesmějí být naloženy společně do téhož vozidla nebo kontejneru.

Bezpečnost- ní značka č.	1	1.4	1.5	1.6	2.1, 2.2, 2.3	3	4.1	4.1 + 1	4.2	4.3	5.1	5.2	5.2 + 1	6.1	6.2	7 A, 7 B, 7 C	8	9	
1	Viz 7.5.2.2										d								b
1.4	Viz 7.5.2.2				a	a	a		a	a	a	a		a	a	a	a	a	a b c
1.5	Viz 7.5.2.2																		b
1.6	Viz 7.5.2.2																		b
2.1, 2.2, 2.3		a			X	X	X		X	X	X	X		X	X	X	X	X	X
3		a			X	X	X		X	X	X	X		X	X	X	X	X	X
4.1		a			X	X	X		X	X	X	X		X	X	X	X	X	X
4.1 + 1								X											
4.2		a			X	X	X		X	X	X	X		X	X	X	X	X	X
4.3		a			X	X	X		X	X	X	X		X	X	X	X	X	X
5.1	d	a			X	X	X		X	X	X	X		X	X	X	X	X	X
5.2		a			X	X	X		X	X	X	X	X	X	X	X	X	X	X
5.2 + 1												X	X						
6.1		a			X	X	X		X	X	X	X		X	X	X	X	X	X
6.2		a			X	X	X		X	X	X	X		X	X	X	X	X	X
7A, 7B, 7C		a			X	X	X		X	X	X	X		X	X	X	X	X	X
8		a			X	X	X		X	X	X	X		X	X	X	X	X	X
9	b	a b c	b	b	X	X	X		X	X	X	X		X	X	X	X	X	X

X Společná nakládka povolena.

a Společná nakládka povolena s látkami a předměty 1.4S.

b Společná nakládka věcí třídy 1 a záchranných prostředků třídy 9 (UN čísel 2990, 3072 a 3268) povolena.

c Společná nakládka povolena mezi plynovými generátory airbagů nebo moduly airbagů nebo předpínači bezpečnostních pásů podtřídy 1.4, skupiny snášlivosti G (UN číslo 0503) a plynovými generátory airbagů nebo moduly airbagů nebo předpínači bezpečnostních pásů třídy 9 (UN číslo 3268).

d Společná nakládka povolena mezi tržavinami (kromě UN 0083 tržavina, typ C) a dusičnanem amonným (UN čísel 1942 a 2067) a dusičnany alkalických kovů a dusičnany kovů alkalických zemin za podmínky, že se celý náklad pro účely označování velkými bezpečnostními značkami, oddělování, ukládání a nejvyšší přípustné hmotnosti nákladu považuje za tržavinu třídy 1.

Dusičnany alkalických kovů včetně dusičnanu cesného (UN 1451), dusičnanu lithného (UN 2722), dusičnanu draselného (UN 1486), dusičnanu rubidného (UN 1477) a dusičnanu sodného (UN 1498). Dusičnany kovů alkalických zemin včetně dusičnanu barnatého (UN 1446), dusičnanu berylnatého (UN 2464), dusičnanu vápenatého (UN 1454), dusičnanu hořečnatého (UN 1474) a dusičnanu strontnatého (UN 1507).

7.5.2.2

Kusy obsahující látky nebo předměty třídy 1 označené bezpečnostní značkou podle vzorů č. 1, 1.4, 1.5 nebo 1.6, které jsou zařazeny do rozdílných skupin snášenlivosti, nesmějí být nakládány společně do téhož vozidla nebo kontejneru, ledaže je společná nakládká povolena podle následující tabulky pro odpovídající skupiny snášenlivosti.

Skupina snášenlivosti	A	B	C	D	E	F	G	H	J	L	N	S
A	X											
B		X		a								X
C			X	X	X		X				b c	X
D		a	X	X	X		X				b c	X
E			X	X	X		X				b c	X
F						X						X
G			X	X	X		X					X
H								X				X
J									X			X
L										d		
N			b c	b c	b c						b	X
S		X	X	X	X	X	X	X	X		X	X

X Společná nakládká povolena.

- a Kusy obsahující předměty skupiny snášenlivosti B a látky nebo předměty skupiny snášenlivosti D smějí být nakládány společně do jednoho vozidla nebo do jednoho kontejneru, pokud jsou účinně navzájem odděleny tak, že není žádné nebezpečí přenosu výbuchu z předmětů skupiny snášenlivosti B na látky nebo předměty skupiny snášenlivosti D. Vzájemného oddělení musí být dosaženo použitím oddělených komor nebo umístěním jednoho z těchto dvou druhů výbušniny do speciálního kontejnerového systému. Každý způsob vzájemného oddělení musí být schválen příslušným orgánem.
- b Rozdílné druhy předmětů podtřídy 1.6, skupiny snášenlivosti N mohou být přepravovány společně jako předměty podtřídy 1.6, skupiny snášenlivosti N pouze tehdy, je-li prokázáno zkouškou nebo obdobou, že neexistuje dodatečné nebezpečí výbuchu přenosem mezi těmito předměty. Jinak musí být považovány za předměty podtřídy 1.1.
- c Jestliže jsou předměty skupiny snášenlivosti N přepravovány s látkami nebo předměty skupin snášenlivosti C, D nebo E, předměty skupiny snášenlivosti N musí být považovány za předměty mající charakteristiky skupiny snášenlivosti D.
- d Kusy obsahující látky a předměty skupiny snášenlivosti L smějí být nakládány společně do jednoho vozidla nebo do jednoho kontejneru s kusy obsahujícími tentýž druh látek nebo předmětů této skupiny snášenlivosti.

7.5.2.3 Pro účely uplatnění zákazů společné nakládky do jednoho vozidla se neberou v úvahu látky obsažené v uzavřených plnostěnných kontejnerech. Nicméně zakazy společné nakládky uvedené v pododdílu 7.5.2.1, týkající se společné nakládky kusů označených bezpečnostními značkami podle vzorů č. 1, 1.4, 1.5 nebo 1.6 s jinými kusy, a v pododdílu 7.5.2.2 týkající se společné nakládky výbušných látek a předmětů různých skupin snášenlivosti musí být dodrženy rovněž mezi nebezpečnými věcmi obsaženými v kontejneru a jinými nebezpečnými věcmi naloženými v tomtéž vozidle, ať jsou nebo nejsou posledně jmenované věci uloženy v jednom nebo více jiných kontejnerech.

7.5.2.4 Společná nakládka nebezpečných věcí balených v omezených množstvích s jakýmkoli druhem výbušných látek a předmětů, s výjimkou podtřídy 1.4 a UN čísel 0161 a 0499, je zakázána.

7.5.3 *(Vyhrazeno)*

7.5.4 Preventivní opatření se zřetelem na potraviny, poživatiny a krmiva

Pokud je pro látky nebo předměty uvedeno ve sloupci (18) tabulky A kapitoly 3.2 zvláštní ustanovení CV28, musí být dodržena preventivní opatření se zřetelem na potraviny, poživatiny a krmiva, jak je uvedeno dále.

Kusy, jakož i prázdné nevyčištěné obaly, včetně velkých obalů a IBC, označené bezpečnostními značkami podle vzorů č. 6.1 nebo 6.2, a ty, které jsou označeny bezpečnostními značkami podle vzoru č. 9 a obsahují věci UN čísel 2212, 2315, 2590, 3151, 3152 nebo 3245, nesmějí být ukládány na kusy nebo do bezprostřední blízkosti kusů, o nichž je známo, že obsahují potraviny, poživatiny nebo krmiva ve vozidlech, v kontejnerech a na místech nakládky, vykládky nebo překládky.

Pokud jsou tyto kusy označené uvedenými bezpečnostními značkami ukládány do bezprostřední blízkosti kusů, o nichž je známo, že obsahují potraviny, poživatiny nebo krmiva, musí být od nich odděleny tímto způsobem:

- (a) plnostěnnými přepážkami, které musí být tak vysoké jako kusy označené uvedenými bezpečnostními značkami;
- (b) kusy neoznačenými bezpečnostními značkami podle vzorů č. 6.1, 6.2 nebo 9 nebo kusy označenými bezpečnostními značkami podle vzoru č. 9, ale neobsahujícími věci UN čísel 2212, 2315, 2590, 3151, 3152 nebo 3245, nebo
- (c) volným prostorem nejméně 0.8 m,

pokud tyto kusy opatřené uvedenými bezpečnostními značkami nejsou přepravovány v dodatečném obalu nebo nejsou úplně zakryty (např. fólií, lepenkovým krytem nebo jiným způsobem).

7.5.5 Omezení přepravovaných množství

7.5.5.1 Pokud ustanovení uvedená níže nebo dodatečná ustanovení v oddílu 7.5.11 vyžadují omezení přepravovaných množství pro určité věci podle údajů ve sloupci (18) tabulky A kapitoly 3.2, skutečnost, že nebezpečné věci jsou obsaženy v jednom nebo více kontejnerech, nemá vliv na hmotnostní omezení na dopravní jednotku uvedená v těchto ustanoveních.

7.5.5.2 Omezení pro výbušné látky a předměty

7.5.5.2.1 Látky a přepravovaná množství

Celková čistá hmotnost (v kg) výbušné látky (nebo v případě výbušných předmětů celková čistá hmotnost výbušné látky obsažené ve všech předmětech zásilky), která smí být přepravována jednou dopravní jednotkou, je omezena, jak je uvedeno v následující tabulce (viz též pododíl 7.5.2.2 pokud jde o zákaz společné nakládky).

Nejvyšší přípustná čistá hmotnost (v kg) výbušné látky obsažené ve věcech třídy 1 naložených do dopravní jednotky

Dopravní jednotka	Podtřída	1.1		1.2	1.3	1.4		1.5 a 1.6	Prázdné nevyčištěné obaly
	Skupina snášenlivosti	1.1A	Jiná než 1.1A			Jiná než 1.4S	1.4S		
EX/II <u>1/</u>		6,25	1 000	3 000	5 000	15 000	Neomezeno	5 000	Neomezeno
EX/III <u>1/</u>		18,75	16 000	16 000	16 000	16 000	Neomezeno	16 000	Neomezeno

1/ Definice vozidel EX/II a EX/III viz část 9.

7.5.5.2.2 Pokud jsou do téže dopravní jednotky naloženy látky a předměty rozdílných podtříd třídy 1, při dodržení zákazů společné nakládky uvedených v pododílu 7.5.2.2, musí se náklad posuzovat jako celek tak, jakoby celý patřil do nejnebezpečnější podtřídy (v pořadí 1.1, 1.5, 1.2, 1.3, 1.6, 1.4). Nepřihlíží se však k čisté hmotnosti výbušných látek skupiny snášenlivosti S z hlediska omezení přepravovaných množství.

Pokud jsou látky zařazené jako 1.5D přepravovány v jedné dopravní jednotce společně s látkami nebo předměty podtřídy 1.2, musí se celý náklad pro přepravu posuzovat, jakoby patřil do podtřídy 1.1.

7.5.5.2.3 Přeprava výbušnin v MEMU

Přeprava výbušnin v MEMU je povolena pouze za následujících podmínek:

- Příslušný orgán musí povolit přepravu na svém území;
- Druh a množství přepravovaných balených výbušnin musí být omezeny na druh a množství potřebné pro množství materiálu, které se má připravit v MEMU, a v žádném případě nesmí překročit:
 - 200 kg výbušnin skupiny snášenlivosti D; a
 - celkem 400 jednotek rozbušek nebo rozbuškových sestav, nebo směsi obou,
 pokud není schváleno jinak příslušným orgánem;
- Balené výbušniny musí být přepravovány jen v komorách, které splňují požadavky uvedené v 6.12.5;
- Žádné jiné nebezpečné věci nesmějí být přepravovány v téže komoře než balené výbušniny;
- Balené výbušniny musí být naloženy do MEMU, jakmile byla dokončena nakládka jiných nebezpečných věcí, a bezprostředně před přepravou;

- (f) Je-li dovolena společná nakládka výbušnin a látek třídy 5.1 (UN 1942 a UN 3375) celý náklad se považuje pro účely oddělování, ukládání a nejvyšší přípustné hmotnosti nákladu za trhaviny třídy 1.

7.5.5.3 Největší množství organických peroxidů třídy 5.2 a samovolně se rozkládajících látek třídy 4.1, typů B, C, D, E nebo F je omezeno na 20 000 kg na dopravní jednotku.

7.5.6 (Vyhrazeno)

7.5.7 Manipulace a ukládání

7.5.7.1 Kde je to vhodné, musí být vozidlo nebo kontejner vybaven(o) prostředky usnadňujícími zajištění a manipulaci s nebezpečnými věcmi. Kusy obsahující nebezpečné věci a nebalené nebezpečné předměty musí být ve vozidle nebo v kontejneru zajištěny vhodnými prostředky schopnými zadržet věci (jako jsou upínací pásy, posuvné přepážky, stavitelné opěrky) takovým způsobem, aby se zabránilo jakémukoli pohybu během přepravy, který by mohl změnit orientaci kusů nebo je poškodit. Jsou-li nebezpečné věci přepravovány s jinými věcmi (např. těžkými stroji nebo laťovými bednami), musí být všechny věci bezpečně uloženy a upevněny ve vozidlech nebo kontejnerech, aby se zabránilo uvolnění nebezpečných věcí. Pohybu kusů může být zabráněno také vyplněním všech mezer za použití zaklíňovacích nebo blokačních a fixačních prostředků. Pokud se používají zadržovací prostředky, jako pásy nebo popruhy, nesmějí být tyto prostředky příliš utaženy, aby nezpůsobily poškození nebo deformaci kusů¹. Požadavky tohoto odstavce se považují za splněné, je-li náklad zajištěn v souladu s normou EN 12195-1:2010.

7.5.7.2 Kusy se nesmějí stohovat, pokud nejsou pro tento účel konstruovány. Mají-li se společně nakládat různé druhy kusů konstruovaných pro stohování, je třeba vzít v úvahu jejich kompatibilitu z hlediska stohování. Je-li to nutné, musí se zabránit poškození spodních kusů použitím nosných prostředků.

7.5.7.3 Během nakládky a vykládky musí být kusy obsahující nebezpečné věci chráněny před poškozením.

POZNÁMKA: *Zvláštní pozornost musí být věnována manipulaci s kusy během jejich přípravy k přepravě, druhu vozidla nebo kontejneru, v němž se mají přepravovat a způsobu nakládky nebo vykládky tak, aby nedošlo k poškození kusů jejich vlečením po zemi nebo nesprávným zacházením.*

7.5.7.4 Ustanovení pododdílu 7.5.7.1 se vztahují též na nakládku a uložení kontejnerů, cisternových kontejnerů, přemístitelných cisteren a MEGC ve vozidlech, jakož i na jejich vykládku z vozidel.

7.5.7.5 Členové osádky vozidla nesmí otevřít kus obsahující nebezpečné věci.

7.5.8 Čištění po vykládce

7.5.8.1 Bylo-li po vykládce vozidla nebo kontejneru, v němž byly naloženy balené nebezpečné věci, zjištěno, že část obsahu z obalů unikla, vozidlo nebo kontejner musí být pokud možno co nejdříve a v každém případě před novou nakládkou vyčištěn(o).

Pokud není možno provést vyčištění na místě, vozidlo nebo kontejner musí být přepraven(o) s přiměřenou bezpečností do nejbližšího vhodného místa, kde může být vyčištění provedeno.

¹ Návod k ukládání nebezpečných věcí je možno nalézt v publikaci Evropské komise *European Best Practice Guidelines on Cargo Securing for Road Transport*. Jiné návody jsou rovněž k dispozici u příslušných orgánů a průmyslových institucí.

Přeprava je přiměřeně bezpečná, jestliže byla provedena vhodná opatření, aby se zabránilo nekontrolovanému úniku nebezpečných látek.

7.5.8.2 Vozidla nebo kontejnery, v nichž byly nebezpečné látky volně loženy, musí být před další nakládkou řádně vyčištěny, ledaže nový náklad sestává z téže nebezpečné látky jako předcházející náklad.

7.5.9 Zákaz kouření

Při provádění ložných operací je zakázáno kouřit ve vozidlech nebo kontejnerech a v jejich blízkosti.

7.5.10 Preventivní opatření proti elektrickým nábojům

V případě hořlavých plynů nebo kapalin s bodem vzplanutí 60°C nebo nižším nebo UN 1361 uhlí nebo uhlí černé, obalové skupiny II, musí být před plněním nebo vyprazdňováním cisteren zajištěno dobré elektrické spojení mezi podvozkem vozidla, přemístitelnou cisternou nebo cisternovým kontejnerem a zemí (uzemnění). Kromě toho musí být omezena rychlost plnění.

7.5.11 Dodatečná ustanovení vztahující se na určité třídy nebo věci

Kromě ustanovení oddílů 7.5.1 až 7.5.10 se musí dodržovat následující ustanovení, pokud jsou uvedena u položky ve sloupci (18) tabulky A kapitoly 3.2.

- CV1 (1) Následující operace jsou zakázány:
- (a) Nakládka a vykládka věcí na veřejném prostranství v zastavěném území bez zvláštního povolení příslušných orgánů;
 - (b) Nakládka a vykládka věcí na veřejném prostranství mimo zastavěné území bez předchozího oznámení příslušným orgánům, pokud tyto operace nejsou nezbytné z důvodů bezpečnosti.
- (2) Pokud ložné operace z jakýchkoli důvodů musí být prováděny na veřejném prostranství, pak látky a předměty různých druhů musí být odděleny podle bezpečnostních značek.
- CV2 (1) Před nakládkou musí být ložný prostor vozidla nebo kontejneru řádně vyčištěn.
- (2) Použití ohně nebo otevřeného plamene ve vozidlech a kontejnerech přepravujících věci, v jejich blízkosti a během nakládky a vykládky těchto věcí je zakázáno.
- CV3 Viz pododdíl 7.5.5.2.
- CV4 Látky a předměty skupiny snášenlivosti L smějí být přepravovány jen jako vozová zásilka.
- CV5 až CV8 (Vyhrazeno)
- CV9 Kusy nesmějí být házeny ani vystaveny nárazům.
- Nádoby musí být ve vozidle nebo v kontejneru uloženy tak, aby se nemohly převrátit ani padnout.

CV10 Láhve definované v oddílu 1.2.1 musí být uloženy souběžně nebo příčně k podélné ose vozidla nebo kontejneru; avšak láhve v blízkosti předního čela musí být uloženy příčně k podélné ose vozidla nebo kontejneru.

Krátké láhve velkého průměru (asi 30 cm a více) smějí být uloženy podélně, svými ochrannými zařízeními ventilů směrem ke středu vozidla nebo kontejneru.

Láhve, které jsou dostatečně stabilní nebo jsou přepravovány ve vhodných zařízeních, která je účinně chrání proti převrácení, smějí být uloženy nastojato.

Láhve, které jsou položeny, musí být zaklíněny, přivázány nebo připevněny bezpečným a vhodným způsobem tak, aby se nemohly posunout.

CV11 Nádoby musí být vždy uloženy v té poloze, pro níž byly konstruovány, a musí být chráněny proti jakékoli možnosti poškození jinými kusy.

CV12 Jsou-li předměty uloženy na paletách a jsou-li tyto palety stohovány, musí být každá vrstva palet rozložena rovnoměrně na nižší vrstvě, v případě nezbytnosti s proložkou z materiálu přiměřené pevnosti.

CV13 Pokud jakékoli látky unikly a rozsypaly se nebo se rozlily ve vozidle nebo v kontejneru, nesmí být toto vozidlo ani kontejner znovu použit(o) před tím, než byl(o) řádně vyčištěn(o) a, pokud je to nezbytné, desinfikován(o) a dekontaminován(o). Jakékoli jiné věci a předměty, které byly přepravovány v tomtéž vozidle nebo kontejneru, musí být překontrolovány z hlediska jejich možné kontaminace.

CV14 Věci musí být chráněny před slunečním zářením a ohříváním během přepravy.

Kusy musí být skladovány pouze na chladných, dobře větraných místech, vzdáleny od tepelných zdrojů.

CV15 Viz pododdíl 7.5.5.3.

CV16 až CV19 *(Vyhrazeno)*

CV20 Ustanovení kapitoly 5.3 a zvláštní ustanovení V1 a V8(5) a (6) kapitoly 7.2 se nepoužijí, pokud je látka balena podle způsobu balení OP1 nebo OP2 pokynu pro balení P520 v pododdílu 4.1.4.1 a celkové množství látek, na které se vztahuje tato odchylka, nepřekročí 10 kg na dopravní jednotku.

CV21 Dopravní jednotka musí být před nakládkou řádně prohlédnuta.

Před přepravou musí být dopravce informován o:

- provozu chladicího systému, popřípadě včetně seznamu dodavatelů chladicí látky na přepravní trase;
- postupech v případě poruchy řízení teploty.

V případě řízení teploty podle metod R2 nebo R4 zvláštního ustanovení V8(3) kapitoly 7.2, musí být přepravováno dostatečné množství nehořlavé chladicí látky (např. kapalného dusíku nebo suchého ledu), včetně přiměřené zásoby pro možná zpoždění, pokud není zajištěno její doplňování.

Kusy musí být ukládány tak, aby byly snadno přístupné.

Předepsaná řízená teplota musí být udržována během celé přepravy, včetně nakládky a vykládky, jakož i během případných provozních zastávek.

- CV22 Kusy musí být naloženy tak, aby volné proudění vzduchu v ložném prostoru zajišťovalo stejnou teplotu nákladu. Jestliže obsah jednoho vozidla nebo velkého kontejneru převyšuje 5 000 kg hořlavých tuhých látek a/nebo organických peroxidů, náklad musí být rozdělen do stohů o hmotnosti nejvýše 5 000 kg oddělených vzduchovými mezerami nejméně 0,05 m.
- CV23 Při manipulaci s kusy musí být učiněna zvláštní opatření zajišťující, že nepřijdou do styku s vodou.
- CV24 Před nakládkou musí být vozidla a kontejnery řádně vyčištěny a musí být zbaveny zejména jakýchkoli hořlavých zbytků (slámy, sena, papíru atd.).
- Používání snadno hořlavých materiálů pro fixaci kusů ve vozidle nebo kontejneru je zakázáno.
- CV25 (1) Kusy musí být ukládány tak, aby byly snadno přístupné.
- (2) Pokud mají být kusy přepravovány při teplotě okolí nepřevyšující 15 °C nebo zchlazené, tato teplota musí být udržována během vykládky a skladování.
- (3) Kusy musí být skladovány pouze na chladných místech, vzdálené od tepelných zdrojů.
- CV26 Dřevěné části vozidla nebo kontejneru, které přišly do styku s těmito látkami, musí být sejmuty a spáleny.
- CV27 (1) Kusy musí být ukládány tak, aby byly snadno přístupné.
- (2) Pokud jsou kusy přepravovány zchlazené, provoz chladicího systému musí být zajištěn během vykládky a skladování.
- (3) Kusy musí být skladovány pouze na chladných místech, vzdálené od tepelných zdrojů.
- CV28 Viz oddíl 7.5.4.

CV29 až CV32 (Vyhrazeno)

CV33 **POZNÁMKA 1:** „Kritická skupina“ je skupina členů veřejnosti, která je důvodně homogenní z hlediska jejího vystavení danému zdroji záření a dané dráze vystavení a je typická individuální nejvyšší účinnou dávkou z dané dráhy vystavení z daného zdroje.

POZNÁMKA 2: „Členové veřejnosti“ jsou v obecném smyslu jakékoli osoby z populace kromě těch, které jsou vystaveny záření v zaměstnání nebo v lékařství.

POZNÁMKA 3: „Pracovníci“ jsou jakékoli osoby, které pracují plně, částečně nebo příležitostně pro zaměstnavatele, které mají právo a povinnost na ochranu proti záření v zaměstnání.

(1) Oddělování

(1.1) Kusy, přepravní obalové soubory, kontejnery a cisterny obsahující radioaktivní látky a nebalené radioaktivní látky musí být odděleny během přepravy:

(a) od pracovníků řádně zaměstnaných v pracovních prostorech buď:

(i) podle tabulky A níže; nebo

(ii) vzdálenostmi vypočtenými použitím dávkového limitu 5 mSv za rok při konzervativních parametrech výpočtového modelu;

POZNÁMKA: Pracovníci podléhající individuálnímu monitorování za účelem radiační ochrany nesmějí být bráni v úvahu za účelem oddělování.

- (b) od členů kritické skupiny obyvatelstva v prostorech veřejně přístupných:
- (i) podle tabulky A níže; nebo
 - (ii) vzdálenostmi vypočtenými použitím dávkového limitu 1 mSv za rok při konzervativních parametrech výpočtového modelu;
- (c) od nevyvolaných fotografických filmů a poštovních pytlů:
- (i) podle tabulky B níže; nebo
 - (ii) vzdálenostmi vypočtenými použitím dávkového limitu působení přepravy radioaktivních látek na nevyvolané fotografické filmy dávkou 0.1 mSv na zásilku takových filmů; a
- POZNÁMKA:** U poštovních pytlů se musí předpokládat, že obsahují nevyvolané filmy a desky a proto musí být odděleny od radioaktivních látek tímtéž způsobem.
- (d) od ostatních nebezpečných věcí v souladu s oddílem 7.5.2

Tabulka A: Nejmenší vzdálenosti mezi kusy kategorie II-ŽLUTÁ nebo kategorie III-ŽLUTÁ a osobami

Součet přepravních indexů nejvýše	Doba expozice za rok (hodiny)			
	Prostory normálně veřejně přístupné		Normálně obsazované pracovní prostory	
	50	250	50	250
	Vzdálenost oddělení v metrech, žádný stínící materiál, od:			
2	1	3	0,5	1
4	1,5	4	0,5	1,5
8	2,5	6	1,0	2,5
12	3	7,5	1,0	3
20	4	9,5	1,5	4
30	5	12	2	5
40	5,5	13,5	2,5	5,5
50	6,5	15,5	3	6,5

Tabulka B: Nejmenší vzdálenosti mezi kusy kategorie II-ŽLUTÁ nebo kategorie III-ŽLUTÁ a kusy označenými slovem "FOTO", nebo poštovními pytlí

Celkový počet kusů nejvýše		Součet převážných indexů nejvýše	Doba trvání přepravy nebo uskladnění, v hodinách							
			1	2	4	10	24	48	120	240
KATEGORIE ŽLUTÁ			Nejmenší vzdálenost, v metrech							
III	II									
		0,2	0,5	0,5	0,5	0,5	1	1	2	3
		0,5	0,5	0,5	1	1	2	3	5	7
	1	1	0,5	0,5	1	1	2	3	5	7
	2	2	0,5	1	1	1,5	3	4	7	9
	4	4	1	1	1,5	3	4	6	9	13
	8	8	1	1,5	2	4	6	8	13	18
1	10	10	1	2	3	4	7	9	14	20
2	20	20	1,5	3	4	6	9	13	20	30
3	30	30	2	3	5	7	11	16	25	35
4	40	40	3	4	5	8	13	18	30	40
5	50	50	3	4	6	9	14	20	32	45

(1.2) Kusy nebo přepravní obalové soubory kategorie II-ŽLUTÁ nebo III-ŽLUTÁ nesmějí být přepravovány v odděleních obsazených cestujícími, kromě oddělení výlučně vyhrazených pro průvodce zvlášť pověřené doprovázet takové kusy nebo přepravní obalové soubory.

(1.3) Žádným osobám, kromě členů osádky vozidla, není dovoleno být ve vozidlech přepravujících kusy, přepravní obalové soubory nebo kontejnery označené bezpečnostními značkami kategorie II-ŽLUTÁ nebo III-ŽLUTÁ.

(2) *Meze aktivity*

Celková aktivita ve vozidle při přepravě látek LSA nebo SCO v průmyslových kusech typu 1 (Typ IP-1), typu 2 (Typ IP-2), typu 3 (Typ IP-3) nebo nebalených nesmí překročit meze dále uvedené v tabulce C.

Tabulka C: Meze aktivity ve vozidle pro látky LSA a SCO v průmyslových kusech nebo nebalené

Druh látky nebo předmětů	Meze aktivity ve vozidle
LSA-I	Žádné omezení
LSA-II a LSA-III nehořlavé tuhé látky	Žádné omezení
LSA-II a LSA-III hořlavé tuhé látky a všechny kapaliny a plyny	100 A ₂
SCO	100 A ₂

- (3) *Uložení během přepravy a skladování při tranzitu*
- (3.1) Zásilky musejí být bezpečně uloženy.
- (3.2) Pokud střední tepelný tok na vnějším povrchu nepřekročí 15 W/m^2 a pokud věci nacházející se v bezprostřední blízkosti nejsou zabaleny v pytlích, kus nebo přepravní obalový soubor může být přepravován nebo uložen s jinými balenými věcmi bez jakýchkoli zvláštních ustanovení o ukládání, kromě těch, které může požadovat příslušný orgán v příslušném osvědčení o schválení.
- (3.3) Nakládky kontejnerů a shromažďování kusů, přepravních obalových souborů a kontejnerů se řídí těmito předpisy:
- (a) Kromě přepravy za podmínek výlučného použití a pro zásilky látek LSA-I, celkový počet kusů, přepravních obalových souborů a kontejnerů v jednom vozidle musí být omezen tak, aby součet přepravních indexů ve vozidle nepřekročil hodnoty uvedené v tabulce D dále;
- (b) Dávková intenzita za běžných podmínek přepravy nesmí přesáhnout 2 mSv/h v jakémkoli místě vnějšího povrchu vozidla a $0,1 \text{ mSv/h}$ ve vzdálenosti 2 m od něho;
- (c) Celkový součet kritických bezpečnostních indexů v kontejneru a ve vozidle nesmí překročit hodnoty v tabulce E dále.

Tabulka D: Mezní hodnoty přepravních indexů pro kontejnery a vozidla bez výlučného použití

Druh kontejneru nebo vozidla	Meze součtu přepravních indexů v kontejneru nebo ve vozidle
Malý kontejner	50
Velký kontejner	50
Vozidlo	50

Tabulka E: Kritický bezpečnostní index pro kontejnery a vozidla obsahující štěpné látky

Druh kontejneru nebo vozidla	Meze součtů kritických bezpečnostních indexů	
	Bez výlučného použití	Pod výlučným použitím
Malý kontejner	50	Bezpečnostní
Velký kontejner	50	100
Vozidlo	50	100

- (3.4) Jakýkoli kus nebo přepravní obalový soubor mající buď přepravní index větší než 10 nebo jakákoli zásilka mající kritický bezpečnostní index větší než 50 musí být přepravovány pouze pod výlučným použitím.
- (3.5) Pro zásilky pod výlučným použitím nesmějí meze aktivity překročit:
- (a) 10 mSv/h v jakémkoli místě vnějšího povrchu jakéhokoli kusu nebo přepravního obalového souboru a smějí překročit 2 mSv/h jen pokud:

- (i) vozidlo je vybaveno uzávěrem, který během běžných podmínek přepravy zabraňuje přístupu nepovolaných osob do vnitřku pod uzávěr, a
 - (ii) jsou učiněna opatření, která zabezpečují kus nebo přepravní obalový soubor tak, že jejich poloha ve vozidle zůstává nezměněna během běžných podmínek přepravy, a
 - (iii) není žádná nakládká nebo vykládká během přepravy;
- (b) 2 mSv/h v jakémkoli místě vnějšího povrchu vozidla, včetně horních a spodních povrchů, nebo, v případě nekrytého vozidla v jakémkoli místě na svislých rovinách promítnutých z vnějších hran vozidla, na vnějším místě povrchu nákladu a na spodním vnějším povrchu vozidla; a
- (c) 0.1 mSv/h v jakémkoli místě vzdáleném 2 m od svislých rovin tvořených vnějšími podélnými povrchy vozidla nebo, jestliže náklad je přepravován v nekrytém vozidle, v jakémkoli místě vzdáleném 2 m od svislých rovin promítnutých z vnějších hran vozidla.
- (4) Oddělení kusů obsahujících štěpnou látku během přepravy a skladování při tranzitu
- (4.1) Počet kusů, přepravních obalových souborů a kontejnerů obsahujících štěpné látky uložené při tranzitu v jakémkoli skladovacím prostoru musí být tak omezen, aby součet kritických bezpečnostních indexů v jakékoli skupině takových kusů, přepravních obalových souborů nebo kontejnerů nepřekročil 50. Skupiny takových kusů, přepravních obalových souborů a kontejnerů musí být skladovány tak, aby byl udržen prostor nejméně 6 m od ostatních skupin takových kusů, přepravních obalových souborů nebo kontejnerů.
- (4.2) Pokud celkový součet kritických bezpečnostních indexů ve vozidle nebo v kontejneru překročí 50, jak je dovoleno v tabulce E výše, musí se skladovat tak, aby byl udržen prostor nejméně 6 m od jiných skupin takových kusů, přepravních obalových souborů nebo kontejnerů obsahujících štěpné látky nebo jiných vozidel přepravujících radioaktivní látky.
- (5) Poškozené nebo děravé kusy, kontaminované obaly
- (5.1) Pokud je zřejmé, že kus je poškozený nebo děravý, nebo pokud je podezření, že kus může být děravý nebo poškozený, přístup ke kusu musí být omezen a kvalifikovaná osoba musí co možno nejdříve odhadnout rozsah kontaminace a výslednou dávkovou intenzitu kusu. Rozsah odhadu musí zahrnovat kus, vozidlo, sousední nakládací a vykládací prostory a, pokud je to nezbytné, všechny ostatní věci, které byly přepravovány ve vozidle. Pokud je to nezbytné, musí být učiněny dodatečné kroky pro ochranu osob, majetku a prostředí v souladu s ustanoveními vydanými příslušným orgánem, aby se zdolaly a minimalizovaly následky takového úniku nebo poškození.
- (5.2) Kusy poškozené nebo s únikem radioaktivního obsahu převyšujícím přípustné meze pro normální podmínky přepravy mohou být přemístěny pod dozorem na jiné místo, ale nesmí být odeslány, aniž byly opraveny nebo obnoveny a dekontaminovány.
- (5.3) Vozidlo a zařízení používané pravidelně pro přepravu radioaktivních látek musí být periodicky kontrolována pro stanovení úrovně kontaminace. Četnost takových kontrol musí být přiměřená pravděpodobnosti kontaminace a objemu přepravovaných radioaktivních látek.

- (5.4) S výhradou ustanovení odstavce (5.5), jakékoli vozidlo nebo zařízení nebo jejich část, které byly kontaminovány nad meze uvedené v 4.1.9.1.2 během přepravy radioaktivních látek nebo které vykazují dávkovou intenzitu na povrchu překračující 5 $\mu\text{Sv/h}$, musí být dekontaminovány co možno nejdříve kvalifikovanou osobou a nesmí být znovu použity, ledaže nefixovaná radioaktivní kontaminace nepřekročí meze uvedené v 4.1.9.1.2 a dávková intenzita následkem fixované radioaktivní kontaminace na povrchu po dekontaminaci je menší než 5 $\mu\text{Sv/h}$ na povrchu.
- (5.5) Přepravní obalový soubor, kontejner, cisterna, velká nádoba pro volně ložené látky (IBC) nebo vozidlo určené pro přepravu radioaktivních látek při výlučném použití jsou vyňaty z požadavků uvedených v předchozím odstavci (5.4) a v 4.1.9.1.4 jedině s hlediska svých vnitřních povrchů a jen po dobu, po kterou zůstávají ve výlučném použití.
- (6) Jiné požadavky
- Pokud není možno zásilku dodat, musí být uložena na bezpečném místě a příslušný orgán musí být co možno nejdříve informován a požádán o pokyny pro další činnost.
- CV34 Před přepravou tlakových nádob musí být zajištěno, aby se nezvýšil tlak v důsledku případné tvorby vodíku.
- CV35 Jsou-li použity pytle jako samostatné obaly, musí být vzájemně od sebe dostatečně vzdáleny, aby se dosáhlo dobrého rozptylu tepla.
- CV36 Kusy musí být nakládány nejlépe do nekrytých nebo odvětrávaných vozidel nebo nekrytých nebo odvětrávaných kontejnerů. Pokud toto není možné a kusy jsou přepravovány v jiných uzavřených vozidlech nebo kontejnerech, musí být dveře do nákladového prostoru opatřeny následujícím nápisem o výšce písmen nejméně 25 mm:

„POZOR
NEODVĚTRÁVANÝ PROSTOR
OTEVÍRAT OPATRNĚ“

Tento nápis musí být v jazyce, který považuje za vhodný odesílatel.

PŘÍLOHA B

USTANOVENÍ O DOPRAVNÍCH PROSTŘEDCÍCH A O PŘEPRAVĚ

ČÁST 8

**POŽADAVKY NA OSÁDKY VOZIDEL, JEJICH VÝBAVU,
PROVOZ A PRŮVODNÍ DOKLADY**

KAPITOLA 8.1

VŠEOBECNÉ POŽADAVKY NA DOPRAVNÍ JEDNOTKY A JEJICH VYBAVENÍ

8.1.1 Dopravní jednotky

Dopravní jednotka naložená nebezpečnými věcmi nesmí mít v žádném případě více než jeden přívěs (nebo návěš).

8.1.2 Průvodní doklady

8.1.2.1 Kromě dokladů vyžadovaných jinými předpisy musí být dopravní jednotka vybavena těmito doklady:

- (a) přepravními doklady předepsanými v oddílu 5.4.1, které zahrnují všechny přepravované nebezpečné věci a, pokud je to vhodné, osvědčením o naložení velkého kontejneru nebo vozidla předepsané v oddílu 5.4.2;
- (b) písemnými pokyny předepsanými v oddílu 5.4.3;
- (c) *(vyhrazeno)*;
- (d) průkazy totožnosti s fotografií každého člena osádky vozidla podle pododdílu 1.10.1.4.

8.1.2.2 Stanoví-li tak ustanovení ADR, musí být dopravní jednotka vybavena ještě těmito dalšími doklady:

- (a) osvědčením o schválení uvedeným v oddílu 9.1.3 pro každou dopravní jednotku nebo vozidlo této dopravní jednotky;
- (b) osvědčením o školení řidiče, které je předepsáno v oddílu 8.2.1;
- (c) kopií schválení příslušného orgánu, pokud je vyžadováno 5.4.1.2.1(c) nebo (d) nebo 5.4.1.2.3.3.

8.1.2.3 Písemné pokyny předepsané v 5.4.3 musí být uloženy takovým způsobem, aby je bylo možno snadno nalézt.

8.1.2.4 *(Vypuštěno)*

8.1.3 Označování

Dopravní jednotky přepravující nebezpečné věci musí být označeny podle kapitoly 5.3.

8.1.4 Hasicí přístroje

8.1.4.1 Následující tabulka ukazuje minimální ustanovení pro přenosné hasicí přístroje pro třídy hořlavosti¹ A, B a C, která se vztahují na dopravní jednotky přepravující nebezpečné věci, s výjimkou těch, které jsou uvedeny v 8.1.4.2:

¹ K definici tříd hořlavosti viz normu EN 2:1992 Klasifikace požárů.

(1) <i>Největší povolená hmotnost dopravní jednotky</i>	(2) <i>Nejmenší počet hasicích přístrojů</i>	(3) <i>Nejmenší celková kapacita na dopravní jednotku</i>	(4) <i>Hasicí přístroj vhodný pro požár motoru nebo kabiny. Alespoň jeden s nejmenší kapacitou:</i>	(5) <i>Dodatečný požadavek na hasicí přístroj(e). Alespoň jeden hasicí přístroj musí mít nejmenší kapacitu:</i>
≤ 3,5 tuny	2	4 kg	2 kg	2 kg
> 3,5 tuny ≤ 7,5 tuny	2	8 kg	2 kg	6 kg
> 7,5 tuny	2	12 kg	2 kg	6 kg

Kapacity jsou pro přístroje se suchým práškem (nebo s odpovídajícím obsahem jiné vhodné hasicí látky).

8.1.4.2 Dopravní jednotky přepravující nebezpečné věci podle pododdílu 1.1.3.6 musí být vybaveny jedním přenosným hasicím přístrojem pro třídy hořlavosti¹ A, B a C s obsahem nejméně 2 kg suchého prášku (nebo s odpovídajícím obsahem jiné vhodné hasicí látky).

8.1.4.3 Přenosné hasicí přístroje musí být vhodné pro použití na vozidle a musí splňovat příslušné požadavky normy EN 3 Přenosné hasicí přístroje, části 7 (EN 3-7:2004 + A1:2007).

Jestliže je vozidlo vybaveno pevným hasicím přístrojem pro hašení požáru v motoru, automaticky nebo snadno uváděným v činnost, přenosný hasicí přístroj nemusí být vhodný pro hašení požáru motoru. Hasicí látky musí být takové, aby nebyly náchylné k uvolňování toxických plynů do kabiny řidiče nebo vlivem horka způsobeného požárem.

8.1.4.4 Přenosné hasicí přístroje podle ustanovení pododdílu 8.1.4.1 nebo 8.1.4.2 musí být opatřeny plombou, která umožňuje ověřit, že jich nebylo použito.

Kromě toho musí být opatřeny značkou osvědčující, že odpovídají normě uznávané příslušným orgánem, jakož i nápisem udávajícím alespoň datum (měsíc, rok) příští periodické kontroly nebo popřípadě maximální dovolenou dobu používání.

Hasicí přístroje se musí podrobovat periodickým kontrolám podle uznávaných vnitrostátních norem, aby byla zaručena jejich funkční bezpečnost.

8.1.4.5 Hasicí přístroje musí být na dopravní jednotce instalovány takovým způsobem, aby byly snadno přístupné pro osádku vozidla. Instalace musí být provedena takovým způsobem, aby hasicí přístroje byly chráněny proti účinkům počasí a nebyla tak ovlivněna jejich funkční bezpečnost.

8.1.5 Další výbava a výbava pro osobní ochranu

8.1.5.1 Každá dopravní jednotka, kterou se přepravují nebezpečné věci, musí být vybavena částmi výbavy pro obecnou a osobní ochranu podle 8.1.5.2. Části výbavy musí být vybrány podle čísla bezpečnostní značky naložených věcí. Čísla bezpečnostních značek mohou být identifikována z přepravního dokladu.

8.1.5.2 Následující výbava musí být při přepravě v dopravní jednotce:

- pro každé vozidlo zakládací klín, jehož velikost odpovídá maximální hmotnosti vozidla;
- dva stojací výstražné prostředky;
- kapalina pro výplach očí²; a

pro každého člena osádky vozidla

² Nevžaduje se pro čísla bezpečnostních značek 1, 1.4, 1.5, 1.6, 2.1, 2.2 a 2.3.

- fluoreskující výstražná vesta (např. jak je popsána v normě EN 471);
- přenosná svítilna odpovídající ustanovením 8.3.4;
- pár ochranných rukavic; a
- ochrana očí (např. ochranné brýle).

8.1.5.3 Dodatečná výbava vyžadovaná pro určité třídy:

- nouzová úniková maska³ pro každého člena osádky vozidla musí být při přepravě ve vozidle pro čísla bezpečnostních značek 2.3 nebo 6.1;
- lopata⁴;
- ucpávka kanalizační vpusti⁴;
- sběrná nádoba⁴.

³ Například nouzová úniková maska s kombinovaným plynovým/prachovým filtrem typu A1B1E1K1-P1 nebo A2B2E2K2 P2, která je podobná masce popsané v normě EN 141.

⁴ Vyžaduje se jen pro tuhé látky a kapaliny s čísly bezpečnostních značek 3, 4.1, 4.3, 8 nebo 9.

KAPITOLA 8.2

POŽADAVKY NA ŠKOLENÍ OSÁDKY VOZIDLA

8.2.1 Rozsah platnosti a všeobecné požadavky na školení řidičů

8.2.1.1 Řidiči vozidel přepravujících nebezpečné věci musí být držiteli osvědčení vydaného příslušným orgánem, jímž se osvědčuje, že absolvovali školení a prošli úspěšně zkouškou ze zvláštních požadavků, které musí být splněny při přepravě nebezpečných věcí.

8.2.1.2 Řidiči vozidel přepravujících nebezpečné věci musí absolvovat základní školicí kurz. Školení musí mít formu kurzu schváleného příslušným orgánem. Jeho hlavním posláním je seznámit řidiče s riziky vznikajícími při přepravě nebezpečných věcí a poskytnout jim základní informace nezbytné pro minimalizaci pravděpodobnosti vzniku případné nehody, a pokud k ní dojde, umožnit jim provést bezpečnostní opatření nezbytná pro jejich vlastní bezpečnost, pro bezpečnost veřejnosti, pro ochranu životního prostředí a pro omezení následků nehody. Toto školení, které musí zahrnovat rovněž individuální praktická cvičení, musí jako základní školení pro všechny kategorie řidičů obsahovat alespoň náplň stanovenou v 8.2.2.3.2. Příslušný orgán může schválit základní školicí kurzy omezené na určité nebezpečné věci nebo na určitou třídu nebo třídy. Tyto omezené základní školicí kurzy nesmějí být poskytovány řidičům vozidel uvedených v 8.2.1.4.

8.2.1.3 Řidiči vozidel nebo MEMU přepravujících nebezpečné věci v nesnímatelných nebo snímatelných cisternách s vnitřním objemem větším než 1 m^3 , řidiči bateriových vozidel s celkovým vnitřním objemem větším než 1 m^3 a řidiči vozidel nebo MEMU přepravujících nebezpečné věci na dopravní jednotce v cisternových kontejnerech, přemístitelných cisternách a MEGC s vnitřním objemem každé(ho) z nich větším než 3 m^3 musí absolvovat specializační kurz pro přepravu v cisternách, jehož náplň musí být nejméně taková, jaká je uvedena v 8.2.2.3.3. Příslušný orgán může schválit specializační školicí kurzy pro přepravu v cisternách omezené na určité nebezpečné věci nebo na určitou třídu nebo třídy. Tyto omezené specializační školicí kurzy pro přepravu v cisternách nesmějí být poskytovány řidičům vozidel uvedených v 8.2.1.4.

8.2.1.4 Řidiči vozidel přepravujících nebezpečné látky nebo předměty třídy 1, kromě látek a předmětů podtřídy 1.4, skupiny snášenlivosti S (viz S1 v kapitole 8.5), řidiči MEMU přepravujících smíšené náklady látek nebo předmětů třídy 1 a látek třídy 5.1 (viz 7.5.5.2.3) a řidiči vozidel přepravujících určitý radioaktivní materiál (viz S11 a S12 v kapitole 8.5) musí absolvovat specializační školení obsahující nejméně náplň stanovenou v 8.2.2.3.4 nebo 8.2.2.3.5.

8.2.1.5 Všechna školení, praktická cvičení a zkoušky, jakož i úloha příslušných orgánů musí odpovídat ustanovením uvedeným v oddílu 8.2.2.

8.2.1.6 Všechna osvědčení o školení odpovídající požadavkům tohoto oddílu a vydaná podle 8.2.2.8. příslušným orgánem smluvní strany ADR musí být uznávána během své doby platnosti příslušnými orgány ostatních smluvních stran ADR.

8.2.2 Zvláštní požadavky na školení řidičů

8.2.2.1 Školení musí poskytovat nezbytné znalosti a dovednosti teoretickým školením a praktickými cvičeními. Znalosti musí být ověřeny zkouškou.

8.2.2.2 Školicí organizace musí zajistit, aby školitelé měli dobré znalosti a brali v úvahu poslední vývoj v předpisech a požadavcích na školení týkající se přepravy nebezpečných věcí. Školení musí být prováděno s ohledem na praxi. Program školení musí odpovídat schválení uvedenému v 8.2.2.6, s náplní uvedenou v 8.2.2.3.2 až 8.2.2.3.5. Školení musí zahrnovat také individuální praktická cvičení (viz 8.2.2.3.8).

8.2.2.3 Struktura školení

8.2.2.3.1 Školení musí mít formu základního školícího kurzu a, pokud je to potřebné, specializačních školících kurzů. Základní školící kurzy a specializační školící kurzy mohou být ve formě rozšířeného kurzu, spojení v jeden u stejné školící organizace.

8.2.2.3.2 Náplň základního školícího kurzu musí obsahovat nejméně:

- (a) všeobecné předpisy vztahující se na přepravu nebezpečných věcí;
- (b) hlavní druhy nebezpečí;
- (c) informace o ochraně životního prostředí kontrolou pohybu odpadů;
- (d) preventivní a bezpečnostní opatření vhodná pro různé druhy nebezpečí;
- (e) co dělat v případě nehody (první pomoc, bezpečnost silničního provozu, základní znalosti o používání ochranných prostředků, písemné pokyny atd.);
- (f) označování nápisy, bezpečnostními značkami, velkými bezpečnostními značkami a oranžovými tabulkami;
- (g) co řidič během přepravy musí a co nesmí dělat;
- (h) účel a funkce technických zařízení na vozidlech;
- (i) zákazy společné nakládky do jednoho vozidla nebo do jednoho kontejneru;
- (j) bezpečnostní opatření při nakládce a vykládce nebezpečných věcí;
- (k) všeobecné informace týkající se právní odpovědnosti;
- (l) informace o provozu kombinované dopravy;
- (m) manipulaci a uložení kusů (ve vozidle);
- (n) omezení provozu v tunelech a pokyny pro chování se v tunelech (prevence nehod, bezpečnost, činnost v případě požáru nebo v jiných případech nouze atd.);
- (o) povědomí o bezpečnosti

8.2.2.3.3 Náplň specializačního školícího kurzu pro přepravu v cisternách musí obsahovat nejméně:

- (a) chování vozidel při jízdě po silnici, včetně pohybů nákladu;
- (b) zvláštní požadavky týkající se vozidel;
- (c) všeobecné teoretické znalosti různých systémů plnění a vyprazdňování;
- (d) specifická dodatečná ustanovení vztahující se na používání těchto vozidel (osvědčení o schválení, schvalovací značení, označování velkými bezpečnostními značkami a oranžovými tabulkami atd.).

8.2.2.3.4 Náplň specializačního školícího kurzu pro přepravu látek a předmětů třídy 1 musí obsahovat nejméně:

- (a) zvláštní rizika, která jsou vlastní výbušninám a pyrotechnickým látkám a předmětům;
- (b) zvláštní požadavky týkající se společné nakládky látek a předmětů třídy 1.

8.2.2.3.5 Náplň specializačního školícího kurzu pro přepravu radioaktivních látek třídy 7 musí obsahovat nejméně:

- (a) zvláštní rizika vzhledem k ionizujícímu záření;
- (b) zvláštní požadavky týkající se balení, manipulace, společné nakládky a uložení radioaktivních látek ve vozidle;
- (c) zvláštní opatření, která musí být učiněna při nehodě za přítomnosti radioaktivních látek.

8.2.2.3.6 Vyučovací hodina trvá zásadně 45 minut.

8.2.2.3.7 Za normálních okolností není dovoleno pro každý den školícího kurzu více než 8 vyučovacích hodin.

8.2.2.3.8 Individuální praktická cvičení musí být prováděna v návaznosti na teoretické školení a musí zahrnovat nejméně první pomoc, hašení ohně a co dělat v případě poruchy nebo nehody.

8.2.2.4 *Program prvního školení*

8.2.2.4.1 Nejkratší časový rozsah teoretické části každého prvního kurzu nebo části rozšířeného kurzu musí být následující:

Základní školící kurz	18 vyučovacích hodin
Specializační školící kurz pro přepravu v cisternách	12 vyučovacích hodin
Specializační školící kurz pro přepravu látek a předmětů třídy 1	8 vyučovacích hodin
Specializační školící kurz pro přepravu radioaktivních látek třídy 7	8 vyučovacích hodin

Pro základní školící kurz a specializační školící kurz pro přepravu v cisternách, jsou vyžadovány dodatečné vyučovací hodiny pro praktická cvičení uvedené v 8.2.2.3.8, jejichž počet bude různý v závislosti na počtu školených řidičů.

8.2.2.4.2 Celkový časový rozsah rozšířeného kurzu může být stanoven příslušným orgánem, kde musí dodržet časový rozsah základního školícího kurzu a specializačního školícího kurzu pro přepravu v cisternách, ale může ho doplnit zkrácenými specializačními školícími kurzy pro třídy 1 a 7.

8.2.2.5 *Program obnovovacího školení*

8.2.2.5.1 Obnovovací školení prováděné v pravidelných časových intervalech má za cíl aktualizovat znalosti řidičů; musí zahrnovat novinky v oblasti techniky, právních předpisů a nebezpečných věcí.

8.2.2.5.2 Časový rozsah obnovovacího školení včetně individuálních praktických cvičení musí být nejméně dva dny pro rozšířené školící kurzy, nebo nejméně polovina časového rozsahu stanoveného pro odpovídající první základní nebo první specializační kurzy, jak je pro jednotlivé kurzy uvedeno v 8.2.2.4.1.

8.2.2.5.3 Řidič smí nahradit obnovovací školící kurz a zkoušku odpovídajícím prvním školícím kurzem a zkouškou.

8.2.2.6 *Schvalování školení*

8.2.2.6.1 Školící kurzy musí být schváleny příslušným orgánem.

8.2.2.6.2 Toto schválení smí být vydáno pouze na písemnou žádost.

8.2.2.6.3 K žádosti o schválení musí být připojeny tyto doklady:

- podrobný program školení upřesňující náplň výuky a uvádějící časový rozvrh a plánované vyučovací metody;
- kvalifikace a obor činnosti vyučujících;
- informace o místech konání kurzů a o učebních pomůckách, jakož i o prostředcích pro praktická cvičení;
- podmínky pro účast na kurzech, např. počet účastníků.

8.2.2.6.4 Příslušný orgán musí zajišťovat dozor nad školením a zkouškami.

8.2.2.6.5 Schválení bude uděleno příslušným orgánem písemně při splnění těchto podmínek:

- školení musí být prováděno v souladu s doklady připojenými k žádosti o schválení;
- příslušný orgán si vyhrazuje právo vyslat pověřené osoby k účasti na školících kurzech a zkouškách;

- (c) příslušný orgán musí být včas informován o době a místě konání jednotlivých školicích kurzů;
- (d) schválení může být odebráno, jestliže podmínky schválení nejsou plněny.

8.2.2.6.6 Ve schvalovacím dokladu musí být uvedeno, zda jde o základní nebo specializační školicí kurzy, první nebo obnovovací školicí kurzy a zda jsou omezeny na určité nebezpečné věci nebo na určitou třídu nebo třídy.

8.2.2.6.7 Jestliže školicí organizace po obdržení schválení školicího kurzu hodlá provést změny, které jsou závažné vzhledem k udělenému schválení, musí k tomu předem získat povolení od příslušného orgánu. Toto ustanovení se vztahuje zejména na změny týkající se programu školení.

8.2.2.7 Zkoušky

8.2.2.7.1 Zkoušky pro první základní školicí kurz

8.2.2.7.1.1 Po ukončení školení, včetně praktických cvičení, musí být provedeny zkoušky odpovídající základnímu školicímu kurzu.

8.2.2.7.1.2 Při zkoušce musí kandidát prokázat, že má znalosti, přehled a dovednosti potřebné pro výkon povolání řidiče vozidel přepravujících nebezpečné věci, které jsou náplní základního kurzu.

8.2.2.7.1.3 Pro tento účel musí příslušný orgán připravit seznam otázek, které odpovídají bodům náplně uvedeným v 8.2.2.3.2. Otázky při zkoušce musí být vybrány z tohoto seznamu. Kandidáti nesmějí před zkouškou znát otázky vybrané pro zkoušku z tohoto seznamu.

8.2.2.7.1.4 Po ukončení rozšířeného školicího kurzu může být uspořádána pouze jedna zkouška.

8.2.2.7.1.5 Každý příslušný orgán musí dohlížet na způsoby zkoušek.

8.2.2.7.1.6 Zkouška musí mít formu písemné zkoušky nebo kombinace písemné a ústní zkoušky. Každý kandidát musí dostat nejméně 25 písemných otázek pro základní školicí kurz. Pokud zkouška následuje po obnovovacím školicím kurzu, musí dostat nejméně 15 písemných otázek. Doba trvání těchto zkoušek musí být nejméně 45 resp. 30 minut. Otázky mohou být různého stupně obtížnosti a mohou být hodnoceny různou váhou.

8.2.2.7.2 Zkoušky pro první specializační školicí kurzy pro přepravu v cisternách nebo pro přepravu výbušných látek a předmětů třídy 1 nebo radioaktivních látek třídy 7

8.2.2.7.2.1 Po úspěšném složení zkoušky ze základního školicího kurzu a po absolvování specializačního školicího kurzu pro přepravu v cisternách nebo pro přepravu výbušných látek a předmětů třídy 1 nebo radioaktivních látek třídy 7 se kandidát může účastnit zkoušky odpovídající školení.

8.2.2.7.2.2 Zkouška musí být provedena a dohlížena stejným způsobem, jak je uvedeno v 8.2.2.7.1. Seznam otázek se musí týkat témat shrnutých v 8.2.2.3.3, 8.2.2.3.4 nebo 8.2.2.3.5, jak je to náležité.

8.2.2.7.2.3 V každém specializačním kurzu musí být při zkoušce položeno nejméně 15 písemných otázek. Pokud zkouška následuje po obnovovacím školicím kurzu, musí dostat nejméně 10 písemných otázek. Doba trvání těchto zkoušek musí být nejméně 30 resp. 20 minut.

8.2.2.7.2.4 Je-li zkouška založena na omezeném základním školicím kurzu, omezuje se tím zkouška specializačního kurzu na stejný rozsah.

8.2.2.8 Osvědčení o školení řidiče

8.2.2.8.1 Podle 8.2.1.8 bude osvědčení vydáno:

- (a) po absolvování základního kurzu, za podmínky, že kandidát úspěšně složil zkoušku podle 8.2.2.7.1;
- (b) případně po absolvování specializačního kurzu pro přepravu v cisternách nebo pro přepravu látek a předmětů třídy 1 nebo radioaktivních látek třídy 7, nebo po získání znalostí

uvedených ve zvláštních ustanoveních S1 a S11 v kapitole 8.5, za podmínky, že kandidát úspěšně složil zkoušku podle 8.2.2.7.2.;

- (c) případně po absolvování omezeného základního školicího kurzu nebo omezeného specializačního školicího kurzu pro přepravu v cisternách, za podmínky, že kandidát úspěšně složil zkoušku podle 8.2.2.7.1 nebo 8.2.2.7.2. Na vydaném osvědčení musí být jasně uveden jeho omezený rozsah platnosti na příslušné nebezpečné věci nebo třídu (třídy).

8.2.2.8.2 Doba platnosti osvědčení o školení řidiče je pět let ode dne, kdy řidič úspěšně složil zkoušku z prvního základního nebo prvního rozšiřovacího školení.

Doba platnosti osvědčení se prodlouží, jestliže řidič prokáže, že se zúčastnil obnovovacího školení podle 8.2.2.5 a úspěšně složil zkoušku podle 8.2.2.7 v těchto případech:

- (a) v období dvanácti měsíců před datem skončení platnosti osvědčení. Příslušný orgán vydá nové osvědčení, platné na pět let, jehož doba platnosti započne datem skončení platnosti předchozího osvědčení;
- (b) před obdobím dvanácti měsíců před datem skončení platnosti osvědčení. Příslušný orgán vydá nové osvědčení, platné na pět let, jehož doba platnosti započne datem, v němž byla úspěšně složena obnovovací zkouška.

Pokud řidič rozšíří rozsah platnosti svého osvědčení v průběhu jeho doby platnosti splněním požadavků uvedených v 8.2.2.8.1 (b) a (c), zůstává doba platnosti nového osvědčení stejná jako u předchozího osvědčení. Jestliže řidič úspěšně složil zkoušku ze specializačního školení, je specializace platná až do dne skončení platnosti osvědčení.

8.2.2.8.3 Osvědčení musí mít formu vzoru uvedeného v 8.2.2.8.5. Jeho rozměry musí vyhovovat normě ISO 7810: 2003 ID-1 a musí být zhotoveno z plastu. Jeho barva musí být bílá, s černým písmem. Musí obsahovat dodatečný bezpečnostní prvek, jako je hologram, UV tisk nebo gilošovaný vzorek.

8.2.2.8.4 Osvědčení musí být vystaveno v jazyce (jazycích) nebo v jednom z jazyků státu příslušného orgánu, který osvědčení vydal. Pokud žádný z těchto jazyků není angličtina, francouzština nebo němčina, musí být nadpis položky 8 a nadpisy na zadní straně napsány také v angličtině, francouzštině nebo němčině.

8.2.2.8.5

Vzor osvědčení o školení pro řidiče vozidel přepravujících nebezpečné věci

Přední
strana

ADR OSVĚDČENÍ O ŠKOLENÍ ŘIDIČE	
**	
(Vložit fotografii řidiče) *	1. (OSVĚDČENÍ Č.)* 2. (PŘÍJMENÍ)* 3. (JINÉ JMÉNO(A))* 4. (DATUM NAROZENÍ dd/mm/yyyy)* 5. (STÁTNÍ PŘÍSLUŠNOST)* 6. (PODPIS ŘIDIČE)* 7. (VYDÁVAJÍCÍ ORGÁN)* 8. PLATNÉ DO: (dd/mm/yyyy)*

Zadní
strana

PLATNÉ PRO TŘÍDU(Y) NEBO UN čís.:	
V CISTERNÁCH	JINAK NEŽ V CISTERNÁCH
9. (Vepsat třídu nebo UN číslo(a))*	10. (Vepsat třídu nebo UN číslo(a))*

* Nahradit text příslušnými údaji.

** Rozlišovací značka používaná pro motorová vozidla v mezinárodním provozu (pro smluvní strany Úmluvy o silničním provozu 1968 nebo Úmluvy o silničním provozu 1949, jak oznámeno generálnímu tajemníkovi Organizace spojených národů podle článku 45 (4) nebo popřípadě přílohy 4 těchto úmluv).

8.2.3

Školení všech osob, kromě řidičů majících osvědčení podle oddílu 8.2.1, podílejících se na silniční přepravě nebezpečných věcí

Osoby, jejichž pracovní povinnosti se týkají silniční přepravy nebezpečných věcí, musí být podle kapitoly 1.3 vyškoleny o předpisech pro dopravu takových věcí podle své odpovědnosti a pracovní náplně. Tento požadavek se vztahuje na osoby, jako jsou zaměstnanci silničních dopravců nebo odesílatelů, personál provádějící nakládku nebo vykládku nebezpečných věcí, personál zasílatelů nebo nakládců a řidiči vozidel, kromě řidičů majících osvědčení podle odstavce 8.2.1, podílejících se na silniční přepravě nebezpečných věcí.

KAPITOLA 8.3

DALŠÍ POŽADAVKY, KTERÉ MUSÍ PLNIT OSÁDKA VOZIDLA

8.3.1 Osoby

V dopravních jednotkách, jimiž se přepravují nebezpečné věci, je zakázáno přepravovat osoby, kromě členů osádky vozidla.

8.3.2 Používání hasicích přístrojů

Členové osádky vozidla musí být řádně obeznámeni s obsluhou hasicích přístrojů.

8.3.3 Zákaz otevírání kusů

Řidič ani žádný jiný člen osádky nesmí otevřít kus obsahující nebezpečné věci.

8.3.4 Přenosná osvětlovací zařízení

Přenosné svítilny nesmějí mít kovový povrch, který by mohl vyvolat jiskření.

8.3.5 Zákaz kouření

Při provádění ložných operací je zakázáno kouřit ve vozidlech a v jejich blízkosti.

8.3.6 Běh motoru při nakládce nebo vykládce

Během nakládky a vykládky musí být motor zastaven, kromě případů, kdy je nutno použít motoru pro pohon čerpadel nebo jiných zařízení pro nakládku nebo vykládku vozidla a kdy toto použití připouštějí právní předpisy státu, v němž se vozidlo nachází.

8.3.7 Používání parkovacích brzd a zakládacích klínů

Žádná vozidla přepravující nebezpečné věci nesmí stát bez zatažených parkovacích brzd. Přípojná vozidla bez brzdových ústrojí musí být při stání mimo provoz založena nejméně jedním zakládacím klínem, jak je uvedeno v 8.1.5.2.

8.3.8 Použití kabelových spojů

V případě dopravní jednotky vybavené antiblokovacím brzdovým systémem sestávající z motorového vozidla a přípojného vozidla O₃ nebo O₄ elektrická instalace uvedená v odstavci 9.2.2.6.3 musí spojovat tažné vozidlo a přípojně vozidlo po celou dobu přepravy.

KAPITOLA 8.4

POŽADAVKY NA DOZOR NAD VOZIDLY

8.4.1.

Vozidla přepravující nebezpečné věci v množstvích uvedených ve zvláštních ustanoveních S1 (6) a S14 až S24 kapitoly 8.5 pro dané látky podle sloupce (19) tabulky A kapitoly 3.2 musejí být pod dozorem, nebo smějí být zaparkována bez dozoru v objektu dopravního nebo průmyslového závodu, který poskytuje plnou záruku bezpečnosti. Nejsou-li tyto možnosti parkování, může být vozidlo po vhodných bezpečnostních opatřeních zaparkováno na izolovaném místě odpovídajícím podmínkám stanoveným pod písmeny (a), (b) nebo (c) níže:

- (a) parkoviště hlídané dozorcem, který byl informován o povaze nákladu a místě, kde se zdržuje řidič,
- (b) veřejné nebo soukromé parkoviště, na němž vozidlo nebude pravděpodobně vystaveno žádnému nebezpečí poškození jinými vozidly; nebo
- (c) vhodné volné prostranství situované stranou od veřejných pozemních komunikací a obývaných míst, které normálně neslouží veřejnosti jako cesta nebo shromaždiště.

Parkovišť uvedených pod písmenem (b) se smí použít jen v případě, že nejsou k dispozici parkoviště uvedená pod písmenem (a), a parkovišť uvedených pod písmenem (c) se smí použít, jen nejsou-li k dispozici parkoviště uvedená pod písmeny (a) a (b).

8.4.2

Naložené MEMU musejí být pod dozorem nebo alternativně smějí být zaparkovány bez dozoru v objektu dopravního nebo průmyslového závodu, který poskytuje plnou záruku bezpečnosti. Prázdné nevyčistěné MEMU jsou vyňaty z platnosti tohoto požadavku.

KAPITOLA 8.5

DODATEČNÉ POŽADAVKY NA JEDNOTLIVÉ TŘÍDY NEBO LÁTKY

Kromě požadavků kapitol 8.1 až 8.4 se na přepravu látek nebo předmětů, u nichž jsou ve sloupci (19) tabulky A kapitoly 3.2 příslušné odvolávky, vztahují ještě dále uvedené požadavky. V případě rozporu s požadavky kapitol 8.1 až 8.4 mají požadavky této kapitoly přednost.

S1: Požadavky na přepravu výbušných látek a předmětů (třída 1)

(1) Zvláštní školení řidičů

Jestliže podle jiných předpisů platných ve státě smluvní strany řidič již absolvoval rovnocenné školení v odlišném režimu nebo pro odlišný účel, zahrnující náplň stanovenou v 8.2.2.3.4, může mu být absolvování specializačního školicího kurzu buď částečně, nebo úplně prominuto.

(2) Úřední osoba

Příslušný orgán státu smluvní strany ADR může na náklady dopravce požadovat, aby ve vozidle byla přítomna schválená úřední osoba, pokud to stanoví jeho vnitrostátní předpisy.

(3) Zakaz kouření, ohně a otevřeného plamene

Kouření, použití ohně nebo otevřeného plamene je zakázáno ve vozidlech přepravujících látky a předměty třídy 1, v jejich blízkosti a během nakládky a vykládky těchto látek a předmětů.

(4) Místa nakládky a vykládky

- (a) Je zakázáno nakládat a vykládat látky a předměty třídy 1 na veřejném místě v zastavěném území bez zvláštního povolení příslušných orgánů.
- (b) Je zakázáno nakládat a vykládat látky a předměty třídy 1 na veřejném místě mimo zastavěné území bez předchozího oznámení příslušným orgánům, pokud tyto ložné operace nejsou ospravedlněny vážnými bezpečnostními důvody.
- (c) Je-li z nějakého důvodu nutno provádět manipulační operace na veřejném místě, musí se látky a předměty různého druhu od sebe oddělit podle bezpečnostních značek.
- (d) Jsou-li vozidla přepravující látky nebo předměty třídy 1 nucena stát na veřejných místech z důvodů nakládky nebo vykládky, musí být mezi stojícími vozidly dodržena vzdálenost nejméně 50 m.

(5) Kolony

- (a) Jedou-li vozidla přepravující látky a předměty třídy 1 v koloně, musí být mezi každou dopravní jednotkou a dopravní jednotkou následující dodržena vzdálenost nejméně 50 m.
- (b) Příslušný orgán může stanovit pravidla pro pořadí nebo složení kolon.

(6) Dozor nad vozidly

Požadavky kapitoly 8.4 se použijí pouze tehdy, když látky a předměty třídy 1 přepravované ve vozidle obsahují celkovou čistou hmotnost výbušné látky překračující limitní množství uvedené níže:

Podtřída 1.1:	0 kg
Podtřída 1.2:	0 kg
Podtřída 1.3, skupina snášenlivosti C:	0 kg
Podtřída 1.3, kromě skupiny snášenlivosti C:	50 kg
Podtřída 1.4, kromě níže uvedených:	50 kg
Podtřída 1.5:	0 kg
Podtřída 1.6:	50 kg

Látky a předměty podtřídy 1.4 zařazené do UN čísel 0104, 0237, 0255, 0267, 0289, 0361, 0365, 0366, 0440, 0441, 0455, 0456 a 0500: 0 kg

Pro společnou nákladku se musí použít nejnižší limit pro jakékoli přepravované látky nebo předměty pro náklad jako celek.

Kromě toho musí být tyto látky a předměty pod stálým dozorem, aby se předešlo jakémukoli jednání ze zlého úmyslu a aby byli uvědoměni řidič a příslušné orgány v případě ztráty nebo požáru.

Tato ustanovení se nevztahují na prázdné nevyčištěné obaly.

(7) ***Uzamčení vozidel***

Dveře a pevné střechy ložných prostorů vozidel EX/II a všechny otvory do ložných prostorů vozidel EX/III přepravujících látky a předměty třídy 1 musí být během přepravy uzamčeny, kromě doby nakládky a vykládky.

S2: Dodatečné požadavky na přepravu hořlavých kapalin nebo plynů

(1) ***Přenosné svítilny***

Je zakázáno vstupovat do ložného prostoru uzavřeného vozidla, kterým se přepravují kapaliny s bodem vzplanutí nejvýše 60°C, nebo hořlavé látky nebo předměty třídy 2, s přenosnými svítilnami jinými než konstruovanými a vyrobenými tak, aby nemohly zapálit hořlavé páry nebo plyny, které se mohly rozšířit ve vnitřním prostoru vozidla.

(2) ***Provoz vytápěcího systému s vnitřním spalováním během nakládky a vykládky***

Provoz vytápěcího systému s vnitřním spalováním vozidel typu FL (viz část 9) je zakázán během nakládky a vykládky a na nakládacích místech.

(3) ***Opatření proti akumulaci elektrostatických nábojů***

V případě vozidel typu FL (viz část 9) musí být před plněním nebo vyprazdňováním cisteren zajištěno dobré elektrické spojení mezi podvozkem vozidla a zemí. Kromě toho se musí omezit rychlost plnění.

S3: Zvláštní ustanovení o přepravě infekčních látek

Požadavky uvedené ve sloupcích (2), (3) a (5) tabulky v 8.1.4.1 a v oddílu 8.3.4 neplatí.

S4: Dodatečné požadavky na přepravu při řízené teplotě

Udržení předepsané teploty je nezbytnou podmínkou pro bezpečnou přepravu. Všeobecně musí být zajištěno:

- provedení dokonalé kontroly dopravní jednotky před nakládkou;
- poučení dopravce o provozu chladicího systému, včetně seznamu možných dodavatelů chladicí látky na přepravní trase;

- postupy v případě poruchy řízení teploty;
- pravidelné monitorování provozních teplot; a
- možnost náhradního chladicího systému nebo náhradních dílů.

Teplota vzduchu uvnitř ložného prostoru dopravní jednotky musí být měřena dvěma nezávislými snímači (čidly) a údaje o teplotě musí být registrovány tak, aby jakékoli změny teploty byly snadno pozorovatelné.

Teplota musí být kontrolována každé čtyři až šest hodin a zaznamenána.

Jestliže se během přepravy překročí řízená teplota, musí být učiněna pohotovostní opatření zahrnující nezbytné opravy chladicího zařízení nebo zvýšení chladicí kapacity (např. doplněním kapalné nebo tuhé chladicí látky). Musí se též často provádět kontrola teploty a připravovat se na použití nouzových postupů. Jestliže je dosaženo kritické teploty (viz též 2.2.41.1.17 a 2.2.52.1.15 až 2.2.52.1.18), musí být zahájeny nouzové postupy.

POZNÁMKA: *Toto ustanovení S4 se nepoužije pro látky zmíněné v 3.1.2.6, jsou-li tyto látky stabilizovány přidáním chemických inhibitorů tak, že SADT je vyšší než 50 °C. V tomto případě může být řízení teploty vyžadováno za podmínek přepravy, kdy teplota může přesáhnout 55 °C.*

S5: Zvláštní ustanovení společná pro přepravu radioaktivních látek třídy 7 pouze ve vyjmutých kusech (UN čísla 2908, 2909, 2910 a 2911)

Na tyto přepravy se ustanovení o písemných pokynech uvedená v pododdílu 8.1.2.1 (b) a ustanovení uvedená v oddílech 8.2.1, 8.3.1 a 8.3.4 nevztahují.

S6: Zvláštní ustanovení společná pro přepravu radioaktivních látek třídy 7, jiných než látek ve vyjmutých kusech

Ustanovení uvedená v oddílu 8.3.1 se nevztahují na vozidla, která přepravují pouze kusy, přepravní obalové soubory nebo kontejnery opatřené bezpečnostními značkami kategorie I – BÍLÁ.

Ustanovení uvedená v 8.3.4 se nepoužijí, pokud neexistuje vedlejší nebezpečí.

Další dodatečné požadavky nebo zvláštní ustanovení

S7: (Vypuštěno)

S8: Pokud je v dopravní jednotce naloženo více než 2 000 kg těchto látek, nesmějí být zastávky z provozních důvodů, pokud je to možné, v blízkosti obydlí nebo shromaždišť. Zastávka v blízkosti takových míst smí být prodloužena pouze se souhlasem příslušných orgánů.

S9: Během přepravy těchto látek nesmějí být zastávky z provozních důvodů, pokud je to možné, v blízkosti obydlí nebo shromaždišť. Zastávka v blízkosti takových míst smí být prodloužena pouze se souhlasem příslušných orgánů.

S10: Během měsíců dubna až října musí být kusy přepravované vozidlem, které zůstalo stát, účinně chráněny proti slunci, např. plachtami umístěnými alespoň 20 cm nad nákladem, pokud to vyžadují právní předpisy státu, v němž vozidlo zastavilo.

S11: Jestliže podle jiných předpisů platných ve státě smluvní strany řidič již absolvoval rovnocenné školení v odlišném režimu nebo pro odlišný účel, zahrnující náplň stanovenou v 8.2.2.3.5, může mu být absolvování specializačního školicího kurzu buď částečné, nebo úplně prominuto.

S12: Jestliže celkový počet přepravovaných kusů obsahujících radioaktivní látky nepřevyšuje 10 a součet přepravních indexů ve vozidle nepřevyšuje 3, nemusí se použít ustanovení v 8.2.1.4 týkající se

specializačního školicího kurzu pro řidiče vozidel přepravujících radioaktivní látky. Avšak řidiči musí absolvovat vhodné školení odpovídající jejich pracovní náplni, které je poučí o radiačních nebezpečích při přepravě radioaktivních látek. Takové informativní školení musí být potvrzeno osvědčením vystaveným jejich zaměstnavatelem.

- S13:** Pokud nemůže být zásilka dodána, je nutno ji uložit na bezpečném místě, co nejdříve informovat příslušný orgán a požádat jej o pokyny, jak dále postupovat.
- S14:** Ustanovení kapitoly 8.4 o dozoru nad vozidly se použijí pro vozidla přepravující jakékoli množství těchto látek.
- S15:** Ustanovení kapitoly 8.4 o dozoru nad vozidly se použijí pro vozidla přepravující jakékoli množství těchto látek. Avšak ustanovení kapitoly 8.4 se nemusejí použít, pokud ložný prostor je uzamčen a přepravované kusy jsou jinak chráněny proti jakékoli nedovolené vykládce.
- S16:** Ustanovení kapitoly 8.4 o dozoru nad vozidly se použijí, jen jsou-li vozidlem přepravovány látky, které mají celkovou hmotnost větší než 500 kg.
- Kromě toho vozidla přepravující více než 500 kg těchto látek musí být pod stálým dozorem, aby se předešlo jakémukoli jednání ze zlého úmyslu a aby byli uvědoměni řidič a příslušné orgány v případě ztráty nebo požáru.
- S17:** Ustanovení kapitoly 8.4 o dozoru nad vozidly se použijí, jen jsou-li vozidlem přepravovány látky, které mají celkovou hmotnost větší než 1 000 kg.
- S18:** Ustanovení kapitoly 8.4 o dozoru nad vozidly se použijí, jen jsou-li vozidlem přepravovány látky, které mají celkovou hmotnost větší než 2 000 kg.
- S19:** Ustanovení kapitoly 8.4 o dozoru nad vozidly se použijí, jen jsou-li vozidlem přepravovány látky, které mají celkovou hmotnost větší než 5 000 kg.
- S20:** Ustanovení kapitoly 8.4 o dozoru nad vozidly se použijí, pokud celková hmotnost nebo objem těchto látek ve vozidle překračuje 10 000 kg věcí v kusech nebo 3 000 litrů v cisternách.
- S21:** Ustanovení kapitoly 8.4 o dozoru nad vozidly se použijí pro všechny látky bez ohledu na jejich hmotnost. Kromě toho musí být tyto věci pod stálým dozorem, aby se předešlo jakémukoli jednání ze zlého úmyslu a aby byli uvědoměni řidič a příslušné orgány v případě ztráty nebo požáru. Avšak ustanovení kapitoly 8.4 se nemusí použít, pokud:
- (a) je ložný prostor uzamčen, anebo jsou přepravované kusy jinak chráněny proti jakékoli nedovolené vykládce; a
 - (b) dávková intenzita nepřesáhne 5 $\mu\text{Sv/h}$ na jakémkoli přístupném místě vnějšího povrchu vozidla.
- S22:** Ustanovení kapitoly 8.4 o dozoru nad vozidly se použijí, pokud celková hmotnost nebo objem těchto látek ve vozidle překračuje 5 000 kg věcí v kusech nebo více než 3 000 litrů v cisternách.
- S23:** Ustanovení kapitoly 8.4 o dozoru nad vozidly se použijí, pokud je látka přepravovaná ve volně loženém stavu nebo v cisternách a celková hmotnost nebo objem ve vozidle přesahuje 3 000 kg nebo 3 000 litrů.
- S24:** Ustanovení kapitoly 8.4 o dozoru nad vozidly se použijí, pokud celková hmotnost ve vozidle překračuje 100 kg.

KAPITOLA 8.6

OMEZENÍ PRŮJEZDU VOZIDEL PŘEPRAVUJÍCÍCH NEBEZPEČNÉ VĚCI SILNIČNÍMI TUNELY

8.6.1 Všeobecná ustanovení

Ustanovení této kapitoly se použijí, pokud průjezd vozidel silničními vozidly je omezen v souladu s oddílem 1.9.5.

8.6.2 Silniční dopravní značky a signály upravující průjezd vozidel přepravujících nebezpečné věci

Kategorie tunelu přiřazená podle 1.9.5.1 příslušným orgánem danému tunelu za účelem omezení průjezdu dopravních jednotek přepravujících nebezpečné věci musí být vyznačena dále uvedenými silničními dopravními značkami a signály.

Značka a signál	Kategorie tunelu
Žádné	Kategorie tunelu A
Značka s dodatečnou tabulkou opatřenou písmenem B	Kategorie tunelu B
Značka s dodatečnou tabulkou opatřenou písmenem C	Kategorie tunelu C
Značka s dodatečnou tabulkou opatřenou písmenem D	Kategorie tunelu D
Značka s dodatečnou tabulkou opatřenou písmenem E	Kategorie tunelu E

8.6.3 Kódy omezení průjezdu tunelem

8.6.3.1

Omezení pro přepravu specifických nebezpečných věcí tunely vycházejí z kódu omezení průjezdu tunelu těchto věcí uvedeného ve sloupci (15) tabulky A kapitoly 3.2. Kódy omezení průjezdu tunelem jsou vloženy do závorek na spodku buňky. Pokud „(-)“ je uvedeno místo jednoho z kódů omezení průjezdu tunelu, nebezpečné věci nepodléhají žádnému omezení průjezdu tunely; pro nebezpečné věci zařazené do UN 2919 a UN 3331 omezení průjezdu tunely může být však částí zvláštního ujednání příslušného(ých) orgánu(ů) na základě 1.7.4.2.

8.6.3.2

Pokud dopravní jednotka obsahuje nebezpečné věci, jimž byly přiřazeny různé kódy omezení průjezdu tunely, nejpřísnější z těchto kódů omezení průjezdu se musí přiřadit celému nákladu.

8.6.3.3

Nebezpečné věci přepravované podle 1.1.3 nepodléhají omezením průjezdu tunely a nesmí být brány v úvahu při určování kódu omezení průjezdu pro celý náklad dopravní jednotky, s výjimkou případů, kdy je vyžadováno označení dopravní jednotky podle 3.4.13 s výhradou ustanovení v 3.4.14¹.

8.6.4 Omezení průjezdu dopravních jednotek přepravujících nebezpečné věci tunely

Omezení průjezdu tunely se vztahují na:

- dopravní jednotky, pro které je vyžadováno označení podle 3.4.13 s výhradou ustanovení v 3.4.14¹, pro průjezd tunely kategorie E; a
- dopravní jednotky, pro které je vyžadováno označení oranžovými tabulkami podle 5.3.2, v souladu s níže uvedenou tabulkou, jakmile byl určen kód omezení průjezdu tunely, který musí být přiřazen celému nákladu dopravní jednotky.

¹ nebo podle 3.4.10 s výhradou ustanovení v 3.4.11 ADR platné do 31. prosince 2010, jestliže se použije přechodných ustanovení uvedených v 1.6.1.20.

Kód omezení průjezdu tunelem celého nákladu	Omezení
B	Průjezd zakázán tunely kategorie B, C, D a E
B1000C	Přeprava, kde celková čistá hmotnost výbušnin v dopravní jednotce <ul style="list-style-type: none"> - přesahuje 1000 kg: Průjezd zakázán tunely kategorie B, C, D a E; - nepřesahuje 1000 kg: Průjezd zakázán tunely kategorie C, D a E
B/D	Přeprava v cisternách: Průjezd zakázán tunely kategorie B, C, D a E; Jiná přeprava: Průjezd zakázán tunely kategorie D a E
B/E	Přeprava v cisternách: Průjezd zakázán tunely kategorie B, C, D a E; Jiná přeprava: Průjezd zakázán tunely kategorie E
C	Průjezd zakázán tunely kategorie C, D a E
C5000D	Přeprava, kde celková čistá hmotnost výbušnin v dopravní jednotce <ul style="list-style-type: none"> - přesahuje 5000 kg: Průjezd zakázán tunely kategorie C, D a E - nepřesahuje 5000 kg: Průjezd zakázán tunely kategorie D a E
C/D	Přeprava v cisternách: Průjezd zakázán tunely kategorie C, D a E; Jiná přeprava: Průjezd zakázán tunely kategorie D a E
C/E	Přeprava v cisternách: Průjezd zakázán tunely kategorie C, D a E; Jiná přeprava: Průjezd zakázán tunely kategorie E
D	Průjezd zakázán tunely kategorie D a E
D/E	Přeprava volně ložených látek nebo v cisternách: Průjezd zakázán tunely kategorie D a E; Jiná přeprava: Průjezd zakázán tunely kategorie E
E	Průjezd zakázán tunely kategorie E
—	Průjezd dovolen všemi tunely (pro UN 2919 a UN 3331, viz též 8.6.3.1).

POZNÁMKA 1: Například průjezd dopravní jednotky přepravující UN 0161 prach bezdýmny, klasifikační kód 1.3C, kód omezení průjezdu tunely C5000D, v množství představující celkovou čistou výbušnou hmotnost 3000 kg tunely kategorií D a E, je zakázán.

POZNÁMKA 2: Nebezpečné věci balené v omezených množstvích, přepravované v kontejnerech nebo dopravních jednotkách označených podle IMDG Code, nepodléhají omezením průjezdu tunely kategorie E, pokud celková (brutto) hmotnost kusů obsahujících nebezpečné věci balené v omezených množstvích nepřekračuje 8 tun na dopravní jednotku.

ČÁST 9

POŽADAVKY NA KONSTRUKCI A SCHVALOVÁNÍ VOZIDEL

KAPITOLA 9.1

ROZSAH PLATNOSTI, DEFINICE A POŽADAVKY NA SCHVALOVÁNÍ VOZIDEL

9.1.1. Rozsah platnosti a definice

9.1.1.1 *Rozsah platnosti*

Požadavky části 9 se vztahují na vozidla kategorií N a O, jak je definováno v příloze 7 Souhrnné rezoluce o konstrukci vozidel (R.E.3)¹, určená pro přepravu nebezpečných věcí.

Tyto požadavky se týkají vozidel z hlediska jejich konstrukce, schválení typu, schválení ADR a roční technické prohlídky.

9.1.1.2 *Definice*

Pro účely části 9 se rozumí pojmem:

„Vozidlo“ jakékoli vozidlo, ať kompletní, nekompletní nebo zkompletované, určené pro silniční přepravu nebezpečných věcí;

„Vozidlo EX/III“ nebo „Vozidlo EX/III“ vozidlo určené pro přepravu výbušných látek a předmětů (Třída 1);

„Vozidlo FL“:

- (a) Vozidlo určené pro přepravu kapalin s bodem vzplanutí nejvýše 60 °C (kromě motorové nafty odpovídající evropské normě EN 590:2004, plynového oleje a lehkého topného oleje – UN 1202 – s bodem vzplanutí stanoveným v evropské normě EN 590:2004) v nesnímatelných cisternách nebo snímatelných cisternách s vnitřním objemem větším než 1 m³ nebo v cisternových kontejnerech nebo v přemístitelných cisternách s jednotlivým vnitřním objemem větším než 3 m³; nebo
- (b) vozidlo určené pro přepravu hořlavých plynů v nesnímatelných cisternách nebo snímatelných cisternách s vnitřním objemem větším než 1 m³ nebo v cisternových kontejnerech, v přemístitelných cisternách nebo MEGC s jednotlivým vnitřním objemem větším než 3 m³; nebo
- (c) bateriové vozidlo s celkovým vnitřním objemem větším než 1 m³ určené pro přepravu hořlavých plynů;

„Vozidlo OX“ vozidlo určené pro přepravu peroxidu vodíku, stabilizovaného nebo peroxidu vodíku, vodného roztoku, stabilizovaného s více než 60 % peroxidu vodíku (Třída 5.1, UN 2015) v nesnímatelných cisternách nebo snímatelných cisternách s vnitřním objemem větším než 1 m³ nebo v cisternových kontejnerech nebo přemístitelných cisternách s jednotlivým vnitřním objemem větším než 3 m³;

„Vozidlo AT“:

- (a) vozidlo jiné, než vozidlo EX/III, FL nebo OX nebo než MEMU, určené pro přepravu nebezpečných věcí v nesnímatelných cisternách nebo snímatelných cisternách s vnitřním objemem větším než 1 m³ nebo v cisternových kontejnerech, přemístitelných cisternách nebo MEGC s jednotlivým vnitřním objemem větším než 3 m³; nebo
- (b) bateriové vozidlo s celkovým vnitřním objemem větším než 1 m³ jiné než vozidlo FL;

„MEMU“ znamená vozidlo odpovídající definici Mobilní jednotka připravující výbušniny v 1.2.1.

¹ Dokument Evropské hospodářské komise OSN č. TRANS/WP.29/78/Rev. 1, včetně změn.

„Kompletní vozidlo“ jakékoli vozidlo, které nevyžaduje žádnou další kompletaci (např. skříňová vozidla, nákladní automobily, tahače, přípojná vozidla);

„Nekompletní vozidlo“ jakékoli vozidlo, které vyžaduje nejméně jeden další stupeň kompletace (např. podvozky s kabinou, podvozky přípojných vozidel);

„Zkompleťované vozidlo“ vozidlo, které je výsledkem víceetapového kompletačního procesu (např. podvozky nebo podvozky s kabinou s namontovanou nástavbou);

„Typově schválené vozidlo“ jakékoli vozidlo, které bylo schváleno podle předpisu EHK č. 105² nebo Směrnice 98/91/ES³;

„Schválení ADR“ potvrzení příslušného orgánu smluvní strany, že jednotlivé vozidlo určené pro přepravu nebezpečných věcí splňuje relevantní technické požadavky této části jako vozidlo EX/II, EX/III, FL, OX nebo AT nebo jako MEMU.

9.1.2 Schvalování vozidel EX/II, EX/III, FL, OX a AT a MEMU

POZNÁMKA: Pro vozidla jiná, než jsou vozidla typů EX/II, EX/III, FL, OX a AT a MEMU, se nevyžaduje žádné zvláštní osvědčení o schválení, nehledě na ta, která jsou vyžadována všeobecnými bezpečnostními předpisy obecně se vztahujícím na vozidla v zemi jejich původu (registrace).

9.1.2.1 Vozidla EX/II, EX/III, FL, OX a AT a MEMU musí splňovat příslušné technické požadavky této části.

Každé kompletní nebo zkompleťované vozidlo musí být podrobeno první prohlídce příslušným orgánem v souladu se správnými požadavky této kapitoly pro ověření shodnosti s příslušnými technickými požadavky kapitol 9.2 až 9.8.

Příslušný orgán může upustit od první inspekce tahače pro návěs schváleného typu podle 9.1.2.2, pro který výrobce, jeho odpovědný pověřený zástupce nebo instituce uznávaná příslušným orgánem vydala prohlášení o shodnosti s požadavky kapitoly 9.2.

Shodnost vozidla musí být osvědčena vydáním osvědčení o schválení podle oddílu 9.1.3.

Pokud se požaduje, aby vozidla byla vybavena zpomalovacím brzdovým systémem, musí výrobce vozidla nebo jeho řádně pověřený zástupce vydat prohlášení o shodě s příslušnými předpisy Přílohy 5 předpisu EHK č. 13⁴. Toto prohlášení musí být předloženo při první technické prohlídce.

9.1.2.2 Požadavky na typově schválená vozidla

Na základě požadavku výrobce nebo jeho řádně pověřeného zástupce mohou být vozidla podléhající schválení podle 9.1.2.1 typově schválena příslušným orgánem. Příslušné technické požadavky kapitoly 9.2 musí být považovány za splněné, jestliže osvědčení o schválení typu bylo vydáno příslušným orgánem podle předpisu EHK č. 105² nebo Směrnice 98/91/ES³ za podmínky, že technické požadavky uvedeného předpisu nebo Směrnice odpovídají požadavkům kapitoly 9.2 této části a že žádná modifikace vozidla nezměnila jeho platnost. V případě MEMU schvalovací značka typu upevněná podle předpisu EHK č. 105 může identifikovat vozidlo buď jako MEMU nebo EX/III. MEMU je pouze třeba identifikovat jako takové v osvědčení o schválení vydaném podle 9.1.3.

Toto typové schválení, vydané jednou smluvní stranou Dohody, musí být uznáváno ostatními smluvními stranami Dohody jako zajišťující shodnost vozidla, pokud jednotlivé vozidlo bylo podrobeno prohlídce pro schválení ADR.

Při prohlídce pro schválení ADR musí být podrobeny prohlídce pouze ty části typově schváleného nekompletního vozidla, které byly dodatečně namontovány nebo pozměněny v procesu kompletace, zda odpovídají příslušným požadavkům kapitoly 9.2.

² Předpis č. 105 (Jednotná ustanovení pro schvalování vozidel určených pro přepravu nebezpečných věcí s ohledem na jejich specifické konstrukční vlastnosti).

³ Směrnice 98/91/ES Evropského parlamentu a Rady ze dne 14. prosince 1998 o motorových vozidlech a jejich přípojných vozidlech určených pro silniční přepravu nebezpečných věcí, pozměňující Směrnici 70/156/EES o schválení typu motorových vozidel a jejich přípojných vozidel (Official Journal of the European Communities No. L 011 ze dne 16.1.1999, str. 0025 – 0036).

⁴ Předpis EHK č. 13 (Jednotná ustanovení týkající se schvalování vozidel kategorií M, N a O z hlediska brzdění).

9.1.2.3 *Roční technická prohlídka*

Vozidla EX/II, EX/III, FL, OX a AT a MEMU musí být podrobena roční technické prohlídce v zemi jejich registrace, aby bylo zajištěno, že odpovídají příslušným ustanovením této části a všeobecným bezpečnostním předpisům (týkajícím se brzd, osvětlení atd.) platným v zemi jejich registrace. Shodnost vozidla musí být potvrzena buď rozšířením platnosti osvědčení o schválení, nebo vydáním nového osvědčení o schválení podle 9.1.3.

9.1.3 *Osvědčení o schválení*

9.1.3.1

Shodnost vozidel EX/II, EX/III, FL, OX a AT a MEMU s požadavky této části je předmětem osvědčení o schválení (osvědčení o schválení ADR) vydaného příslušným orgánem státu registrace pro každé vozidlo, při jehož prohlídce bylo dosaženo uspokojivých výsledků, nebo je uvedeno v prohlášení o shodnosti s požadavky kapitoly 9.2 podle 9.1.2.1.

9.1.3.2

Osvědčení o schválení vydané příslušným orgánem jedné smluvní strany pro vozidlo registrované na území této smluvní strany se uznává po dobu jeho platnosti příslušnými orgány ostatních smluvních stran.

9.1.3.3

Osvědčení o schválení musí mít formu podle vzoru uvedeného v 9.1.3.5. Jeho rozměry musí být 210 mm x 297 mm (formát A4). Může se použít přední i zadní strana. Barva musí být bílá, s úhlopříčným pruhem v růžové barvě.

Osvědčení musí být vydáno v jazyce nebo v jednom z jazyků vydávajícího státu. Není-li tento jazyk anglický, francouzský nebo německý, název osvědčení o schválení a jakékoli poznámky pod bodem 11 musí být uvedeny též v angličtině nebo ve francouzštině nebo v němčině.

Osvědčení o schválení cisternového vozidla pro podtlakové vyčerpávání odpadů musí obsahovat zápis: „cisternové vozidlo pro podtlakové vyčerpávání odpadů“.

9.1.3.4

Platnost osvědčení o schválení končí nejpozději jeden rok po dnu technické prohlídky vozidla předcházející vydání osvědčení. Datum ukončení příští platnosti osvědčení o schválení však musí být vztahováno k poslednímu dni ukončení předchozí platnosti, jestliže je technická prohlídka uskutečněna v průběhu jednoho měsíce před tímto datem nebo jednoho měsíce po tomto datu.

Toto ustanovení však nevyžaduje, aby se u cisteren, které podléhají povinným periodickým inspekcím, prováděly zkoušky těsnosti, hydraulické tlakové zkoušky nebo prohlídky vnitřku cisteren v kratších lhůtách, než jsou stanoveny v kapitolách 6.8 a 6.9.

9.1.3.5 Vzor osvědčení o schválení vozidel pro přepravu některých nebezpečných věcí

<p style="text-align: center;">OSVĚDČENÍ O SCHVÁLENÍ VOZIDEL PRO PŘEPRAVU NĚKTERÝCH NEBEZPEČNÝCH VĚCÍ</p> <p style="text-align: center;">Toto osvědčení potvrzuje, že níže uvedené vozidlo splňuje podmínky předepsané Evropskou dohodou o mezinárodní silniční přepravě nebezpečných věcí (ADR).</p> <p style="text-align: center;">CERTIFICATE OF APPROVAL FOR VEHICLES CARRYING CERTAIN DANGEROUS GOODS</p> <p style="text-align: center;">This certificate testifies that the vehicle specified below fulfils the conditions prescribed by the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).</p>						
1. Osvědčení č.	2. Výrobce vozidla:	3. Identifikační číslo vozidla:	4. Registrační značka (existuje-li):			
5. Název a obchodní adresa dopravce, uživatele nebo vlastníka:						
6. Popis vozidla:¹						
7. Označení vozidla podle 9.1.1.2 ADR:²						
EX/II	EX/III	FL	OX	AT	MEMU	
8. Zpomalovací brzdový systém:³						
<input type="checkbox"/> Nevztahuje se <input type="checkbox"/> Účinnost podle 9.2.3.1.2 ADR je dostatečná pro největší povolenou hmotnost dopravní jednotky ____ t ⁴						
9. Popis nesnímatelné(ých) cisterny(en)/bateriového vozidla (jsou-li):						
9.1 Výrobce cisterny:						
9.2 Schvalovací číslo cisterny/bateriového vozidla:						
9.3 Výrobní sériové číslo cisterny/identifikace článků bateriového vozidla:						
9.4 Rok výroby:						
9.5 Kód cisterny podle 4.3.3.1 nebo 4.3.4.1 dohody ADR:						
9.6 Zvláštní ustanovení TC a TE podle 6.8.4 ADR (pokud jsou použitelná). ⁶						
10. Nebezpečné věci schválené pro přepravu:						
Vozidlo splňuje podmínky požadované pro přepravu níže uvedených nebezpečných věcí ve vozidle specifikovaném v předchozím bodu 7.						
10.1 V případě vozidla EX/II nebo EX/III ³ věci třídy 1 včetně skupiny snášenlivosti J věci třídy 1 kromě skupiny snášenlivosti J						
10.2 V případě cisternového vozidla/bateriového vozidla ³ smějí být přepravovány pouze látky dovolené podle kódu cisterny a jakýchkoli zvláštních ustanovení uvedených v předchozím bodu 9 ⁵ nebo smějí být přepravovány pouze dále uvedené látky (třída, UN číslo, a pokud je to nezbytné, obalová skupina a oficiální pojmenování pro přepravu):						
Smějí být přepravovány pouze látky, které nejsou náchylné nebezpečně reagovat s materiály nádrže, těsnění, výstroje a ochranných povlaků, pokud jsou použity.						
11. Poznámky:						
12. Platné do:						
			Razítko vydávajícího orgánu			
			Místo, datum, podpis			

¹ Podle definicí motorových vozidel a přípojných vozidel kategorií N a O, jak je uvedeno v příloze 7 Souhrnné rezoluce o konstrukci vozidel (R.E.3) nebo ve Směrnici 97/27/ES.

² Nehodící se škrtněte

³ Příslušné označte

⁴ Uveďte příslušnou veličinu. Veličina 44 t neomezuje "registrační / největší povolenou hmotnost" uvedenou v registračním(ch) dokumentu(ech)/technickém průkazu/osvědčení.

⁵ Látky podle kódu cisterny uvedeného v předchozím bodě 9 nebo podle jiného kódu cisterny dovoleného podle pořadí v 4.3.3.1.2 nebo 4.3.4.1.2, se zřetelem ke zvláštnímu(m) ustanovení(m), jsou-li.

⁶ Nevyžaduje se, pokud látky schválené pro přepravu jsou uvedeny v č. 10.2.

13. Prodloužení platnosti

Platnost prodloužena do

Razítko vydávajícího orgánu, místo, datum, podpis:

POZNAMKA: Toto osvědčení musí být vráceno vydávajícímu orgánu, je-li vozidlo vyřazeno z provozu, v případě změny dopravce, uživatele nebo vlastníka uvedeného v bodě 5, po uplynutí doby platnosti a při významné změně podstatných charakteristik vozidla.

KAPITOLA 9.2

POŽADAVKY NA KONSTRUKCI VOZIDEL

9.2.1 Shoda s požadavky této kapitoly

9.2.1.1

Vozidla EX/II, EX/III, FL, OX a AT musí splňovat požadavky této kapitoly uvedené v následující tabulce.

Pro jiná vozidla, než vozidla EX/II, EX/III, FL, OX a AT:

- požadavky uvedené v 9.2.3.1.1 (brzdový systém podle předpisu EHK č. 13 nebo Směrnice 71/320/EHS) se vztahují na všechna vozidla poprvé registrovaná (nebo uvedená do provozu, není-li jejich registrace povinná) po 30. červnu 1997;
- požadavky uvedené v oddílu 9.2.5 (omezovač rychlosti podle předpisu EHK č. 89 nebo 92/24/EHS) se vztahují na všechna motorová vozidla s největší povolenou hmotností převyšující 12 tun poprvé registrovaná po 31. prosinci 1987 a všechna motorová vozidla s největší povolenou hmotností převyšující 3,5 tuny avšak nejvýše 12 tun poprvé registrovaná po 31. prosinci 2007.

TECHNICKÁ SPECIFIKACE	VOZIDLA					VYSVĚTLIVKY
	EX/II	EX/III	AT	FL	OX	
9.2.2	ELEKTRICKÉ PŘÍSLUŠENSTVÍ					
9.2.2.2		X	X	X	X	
9.2.2.3						
9.2.2.3.1		X ^a		X ^a		^a Poslední věta v 9.2.2.3.1 se vztahuje na vozidla poprvé registrovaná (nebo uvedená do provozu, není-li jejich registrace povinná) od 1. července 2005.
9.2.2.3.2		X		X		
9.2.2.3.3				X		
9.2.2.3.4		X		X		
9.2.2.4	X	X		X		
9.2.2.5						
9.2.2.5.1				X		
9.2.2.5.2		X				
9.2.2.6		X		X		

9.2.3 BRZDOVÝ SYSTÉM									
9.2.3.1	Všeobecná ustanovení	X		X	X	X	X	X	X
	Antiblokovací brzdový systém		X ^b	X ^b	X ^b	X ^b	X ^b	X ^b	X ^b
	Zpomalovací brzdový systém		X ^c	X ^c	X ^c	X ^c	X ^c	X ^c	X ^c
9.2.4	PREVENCE NEBEZPEČÍ POŽÁRU a OMEZOVÁČE RYCHLOSTI								
9.2.4.2	Kabina vozidla							X	
9.2.4.3	Palivové nádrže	X				X		X	
9.2.4.4	Motor	X				X		X	
9.2.4.5	Výfukový systém	X				X		X	
9.2.4.6	Zpomalovací brzdový systém vozidla		X						X
9.2.4.7	Vytápěcí systém s vnitřním spalováním								

^b Vztahuje se na motorová vozidla (tahače a samostatná vozidla) s největší povolenou hmotností převyšující 16 tun a na motorová vozidla, která jsou schválena k tažení přípojných vozidel (tj. přívěsů, návěsů a přívěsů s centrální nápravou) s největší povolenou hmotností převyšující 10 tun. Motorová vozidla musí být vybavena antiblokovacím brzdovým systémem kategorie 1.

Vztahuje se na přípojná vozidla (tj. přívěsy, návěsy a přívěsy s centrální nápravou) s největší povolenou hmotností převyšující 10 tun. Přípojná vozidla musí být vybavena antiblokovacím brzdovým systémem kategorie A.

^c Vztahuje se na motorová vozidla s největší povolenou hmotností převyšující 16 tun nebo na motorová vozidla schválená k tažení přípojných vozidel s největší povolenou hmotností převyšující 10 tun. Zpomalovací brzdový systém musí být typu IIA.

9.2.4.7.1 9.2.4.7.2 9.2.4.7.5		X ^d	X ^d	X ^d	X ^d	X ^d	X ^d	X ^d	^d Vztahuje se na motorová vozidla vybavená po 30. červnu 1999. Vztahuje se povinně od 1. ledna 2010 na vozidla vybavená před 1. červencem 1999. Jestliže datum vybavení není zjištělné, musí být místo něho použito datum první registrace vozidla.
9.2.4.7.3 9.2.4.7.4					X ^d				^d Vztahuje se na motorová vozidla vybavená po 30. červnu 1999. Vztahuje se povinně od 1. ledna 2010 na vozidla vybavená před 1. červencem 1999. Jestliže datum vybavení není zjištělné, musí být místo něho použito datum první registrace vozidla.
9.2.4.7.6		X				X			
9.2.5	OMEZOVACÍ RYCHLOSTI	X ^e	X ^e	X ^e	X ^e	X ^e	X ^e	X ^e	^e Vztahuje se na motorová vozidla s největší povolenou hmotností převyšující 12 tun poprvé registrovaná po 31. prosinci 1987 a všechna motorová vozidla s největší povolenou hmotností převyšující 3,5 tuny avšak nejvýše 12 tun registrovaná po 31. prosinci 2007.
9.2.6	SPOJOVACÍ ZAŘÍZENÍ PŘIPOJNÝCH VOZIDEL	X				X			

9.2.1.2 MEMU musí splňovat požadavky této kapitoly, které se vztahují na vozidla EX/III.

9.2.2 Elektrické příslušenství

9.2.2.1 Všeobecná ustanovení

Elektrická instalace jako celek musí odpovídat ustanovením pododdílů 9.2.2.2 až 9.2.2.6 v souladu s tabulkou uvedenou v oddílu 9.2.1.

9.2.2.2 Elektrické vedení

9.2.2.2.1 Elektrické vodiče musí být dostatečně dimenzovány, aby nedocházelo k jejich přehřívání. Vedení musí být izolováno přiměřeným způsobem. Všechny okruhy musí být chráněny pojistkami nebo automatickými jističi, s výjimkou následujících okruhů:

- od akumulátoru ke spínači studeného startu a vypínači chodu motoru;
- od akumulátoru k alternátoru;
- od alternátoru k pojistkové skříňce nebo skříňce jističů;
- od akumulátoru ke spouštěči;
- od akumulátoru k ovládací skříňce zpomalovacího brzdového systému (viz 9.2.3.1.2), pokud je tento systém elektrický nebo elektromagnetický;
- od akumulátoru k elektrickému zdvihacímu mechanismu zadní zdvižné nápravy.

Výše uvedené nechráněné okruhy musí být co možno nejkratší.

9.2.2.2.2 Kabely musí být bezpečně uchyceny a umístěny tak, aby elektrické vodiče byly přiměřeně chráněny proti mechanickému a tepelnému namáhání.

9.2.2.3 Odpojovač akumulátorů

9.2.2.3.1 Odpojovač pro přerušení elektrických okruhů musí být umístěn co možno nejbližně akumulátoru, jak je to jen prakticky možné. Jestliže je použit jedнопólový odpojovač, musí být umístěn v přívodovém vedení a nikoli v ukostřovacím vedení.

9.2.2.3.2 Ovládací zařízení usnadňující rozpojovací a zapojovací funkce odpojovače akumulátoru musí být umístěno v kabině řidiče. Musí být pro řidiče snadno přístupné a zřetelně označené. Musí být chráněno před neúmyslným uvedením v činnost buď ochrannou schránkou, zdvojeným ovládacím zařízením nebo jiným vhodným způsobem. Dodatečné ovládací zařízení může být instalováno, pokud je zřetelně označeno a chráněno před neúmyslným uvedením v činnost. Jestliže je (jsou) ovládací zařízení elektricky ovládána(a), musí obvody ovládacího(ch) zařízení splňovat požadavky uvedené v pododdílu 9.2.2.5.

9.2.2.3.3 Odpojovač musí být umístěn ve skříňce s ochranou stupně IP 65 podle normy IEC 60529.

9.2.2.3.4 Kabelové konektory odpojovače akumulátorů musí mít ochranu stupně IP 54. Tento požadavek se však nevztahuje na konektory v pouzdře, kterým smí být schrána akumulátorů. V tomto případě je dostatečnou izolace konektorů proti zkratu, například gumovou čepičkou.

9.2.2.4 Akumulátory

Svorky akumulátorů musí být elektricky izolované nebo zakryty izolovaným víkem akumulátoru. Pokud akumulátory nejsou umístěny pod kapotou motoru, musí být pevně uloženy v odvětrávané schránce.

9.2.2.5 Příslušenství pod stálým napětím

9.2.2.5.1 (a) Ty části elektrického příslušenství včetně vedení, které musí zůstat pod napětím i při vypnutém odpojovači akumulátoru, musí být vhodné pro použití v nebezpečné zóně. Takové

části musí splňovat všeobecné požadavky normy IEC 60079, část 0 a 14¹ a dodatečné požadavky použitelné z normy IEC 60079, části 1, 2, 5, 6, 7, 11, 15 nebo 18².

- (b) K aplikaci normy IEC 60079, část 14¹ se musí použít tato klasifikace:

Elektrická zařízení pod stálým napětím včetně vedení, která nepodléhají ustanovením v pododdílech 9.2.2.3 a 9.2.2.4, musí splňovat požadavky pro zónu 1 pro elektrické zařízení všeobecně nebo splňovat požadavky pro zónu 2 pro elektrická zařízení umístěná v kabině řidiče. Požadavky pro skupinu výbušnosti IIC, teplotní třída T6 musí být splněny.

Avšak pro elektrická zařízení pod stálým napětím instalovaná v zóně, kde teplota způsobená neelektrickým zařízením umístěným v této zóně přesahuje teplotní limit T6, teplotní klasifikace tohoto elektrického zařízení pod stálým napětím musí být nejméně teplotní třídy T4.

- (c) Přívodní vedení elektrického zařízení pod stálým napětím musí odpovídat buď ustanovením normy IEC 60079, část 7 („Zvýšená bezpečnost“) a být chráněna tavnou pojistkou nebo automatickým jističem umístěným co možno nejbližší zdroji proudu, jak je to jen prakticky možné, nebo v případě „vlastního (intrinzického) bezpečnostního zařízení“ musí být chráněna bezpečnostní pojistkou umístěnou co možno nejbližší zdroji proudu, jak je to jen prakticky možné.

9.2.2.5.2 Elektrické vedení od akumulátoru k elektrickému zařízení, které zůstává pod stálým napětím při vypnutém odpojovači akumulátoru, musí být chráněno proti přehřátí vhodným způsobem, jako je tavná pojistka, přerušovač proudu nebo bezpečnostní pojistka (omezovač proudu).

9.2.2.6 Ustanovení o částech elektrické instalace umístěné za kabinou řidiče

Veškerá tato instalace musí být navržena, provedena a chráněna tak, aby nemohla způsobit vznícení nebo zkrat za normálních podmínek používání vozidla a aby tato rizika byla minimalizována i v případě nárazu nebo deformace. Zejména:

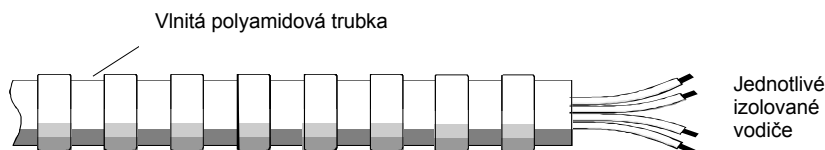
9.2.2.6.1 Elektrické vedení

Vedení umístěné za kabinou řidiče musí být chráněno proti nárazu, odírání a tření v průběhu normálního provozu vozidla. Příklady vyhovující ochrany jsou uvedeny na následujících obrázcích 1, 2, 3 a 4. Kably ovladačů antiblokovacího brzdového systému však nevyžadují dodatečnou ochranu.

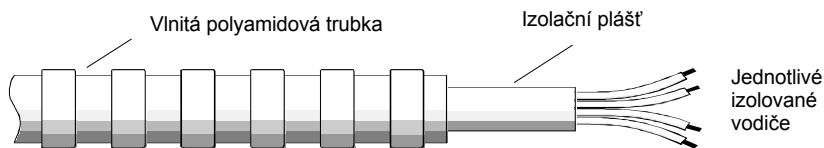
¹ Požadavky normy IEC 60079, části 14 nemají přednost před požadavky této části.

² Alternativně mohou být použity všeobecné požadavky normy EN 50014 a dodatečné požadavky norem EN 50016, 50017, 50018, 50019, 50020, 50021 nebo 50028.

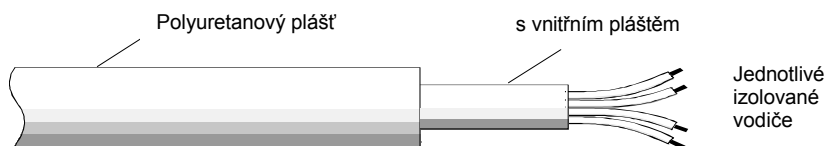
Obrázek č. 1



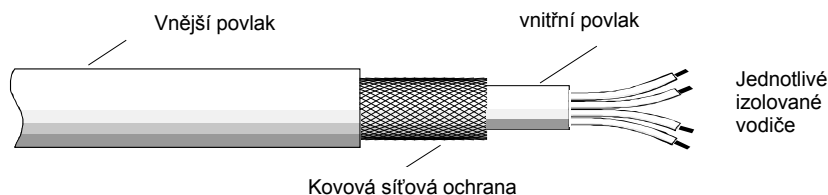
Obrázek č. 2



Obrázek č. 3



Obrázek č. 4



9.2.2.6.2 Osvětlení

Žárovky se závitovou patičkou nesmějí být používány.

9.2.2.6.3 Elektrická spojení

Elektrická spojení mezi motorovými vozidly a přípojnými vozidly musí mít ochranu stupně IP54 podle normy IEC 60529 a musí být konstruována tak, aby se zabránilo náhodnému přerušení spojení. Konektory musí být v souladu s ISO 12098:2004³, ISO 7638:2003³ a EN 15207:2006, jak je to vhodné.

9.2.3 Brzdový systém

9.2.3.1 Všeobecná ustanovení

9.2.3.1.1

Motorová vozidla a přípojná vozidla určená k použití jako dopravní jednotky pro přepravu nebezpečných věcí, musí splňovat všechny příslušné technické požadavky předpisu EHK č. 13⁴ nebo Směrnice 71/320/EHS⁵ včetně posledních změn, v souladu s daty jejich vstupu v platnost v nich uvedených.

³ ISO 4009, zmíněná v této normě, nemusí být použita.

⁴ Předpis EHK č. 13 (Jednotná ustanovení týkající se schvalování vozidel kategorií M, N a O z hlediska brzdění).

⁵ Směrnice 71/320/EES (originál uveřejněn v Official Journal of the European Communities č. L 202 ze dne 6.9.1971).

9.2.3.1.2 Vozidla EX/III, FL, OX a AT musí splňovat požadavky předpisu EHK č. 13⁴, Příloha 5.

9.2.3.2 *(Vypuštěno)*

9.2.4 **Prevence nebezpečí požáru**

9.2.4.1 **Všeobecná ustanovení**

Následující technická ustanovení se vztahují na vozidla v souladu s tabulkou uvedenou v oddílu 9.2.1.

9.2.4.2 **Kabina vozidla**

Pokud není kabina řidiče vyrobena z nesnadno hořlavých materiálů, musí být na zadní stěně kabiny upevněn štít z kovu nebo jiného vhodného materiálu, který bude mít stejnou šířku jako cisterna. Jakákoliv okna v zadní části kabiny nebo ve štítu musí být hermeticky uzavřena a musí být z ohnivzdorného bezpečnostního skla s ohnivzdornými rámy. Kromě toho musí být ponechán volný prostor široký minimálně 15 cm mezi cisternou a kabinou nebo štítem.

9.2.4.3 **Palivové nádrže**

Nádrže na palivo pro pohon motoru vozidla musí vyhovovat následujícím požadavkům:

- (a) V případě jakéhokoli netěsnosti nádrže musí palivo vytékat přímo na zem, aniž by se dostalo do styku s horkými částmi vozidla nebo nákladu.
- (b) Palivová nádrž obsahující benzin musí být opatřena účinnou pojistkou proti prošlehnutí plamene v plnicím otvoru nádrže nebo uzávěrem, který zajistí hermetické uzavření plnicího otvoru.

9.2.4.4 **Motor**

Hnací motor vozidla musí být vybaven a umístěn tak, aby se zamezilo ohrožení nákladu zahřátím nebo vznícením. Vozidla EX/II a EX/III musí mít vždy vznětový motor.

9.2.4.5 **Výfukový systém**

Výfukový systém (včetně výfukového potrubí) musí být umístěn nebo chráněn tak, aby se zamezilo ohrožení nákladu zahřátím či vznícením. Části výfukového systému umístěné přímo pod palivovou nádrží (motorová nafta) musí být od ní vzdáleny minimálně 100 mm nebo musí být chráněny tepelným štítem.

9.2.4.6 **Zpomalovací brzdový systém**

Vozidla vybavená zpomalovacími brzdovými systémy, vytvářejícími vysoké teploty, umístěnými za zadní stěnou kabiny řidiče, musí být vybavena bezpečně upevněným tepelným štítem, umístěným mezi tímto zpomalovacím brzdovým systémem a cisternou nebo nákladem tak, aby se zabránilo jakémukoli zahřátí, i lokálnímu, stěny cisterny nebo nákladu.

Navíc musí tento tepelný štít chránit zpomalovací brzdový systém proti vytékání nebo úniku, i náhodnému, přepravovaného nákladu. Například ochrana zahrnující dvojité štíty je považována za uspokojivou.

9.2.4.7 **Vytápěcí systémy s vnitřním spalováním**

9.2.4.7.1 Vytápěcí systémy s vnitřním spalováním musí odpovídat příslušným technickým požadavkům Předpis EHK č. 122⁶ se změnami a doplňky nebo Směrnice 2001/56/ES⁷ se změnami a doplňky v souladu

⁴ Předpis EHK č. 13 (Jednotná ustanovení týkající se schvalování vozidel kategorií M, N a O z hlediska brzdění).

⁶ Předpis EHK č. 122 (Jednotná technická ustanovení pro homologaci vozidel kategorií M, N a O s hlediska jejich systémů vytápění)

⁷ Směrnice 2001/56/ES Evropského parlamentu a Rady ze dne 27. září 2001 o vytápěcích systémech motorových vozidlech a jejich přípojných vozidlech (originál uveřejněn v Official Journal of the European Communities č. L 292 ze dne 9. listopadu 2001).

s daty jejich zavádění v ní uvedenými a s ustanoveními 9.2.4.7.2 až 6.2.4.7.6 aplikovatelnými podle tabulky v oddílu 9.2.1.

- 9.2.4.7.2** Vytápěcí systémy s vnitřním spalováním a jejich výfuková potrubí musí být konstruovány, umístěny, chráněny nebo zakryty tak, aby se zabránilo jakémukoli nepřijatelnému riziku přehřátí nebo vznícení nákladu. Tyto požadavky se považují za splněné, jestliže palivová nádrž a výfukový systém zařízení odpovídají obdobným ustanovením, která jsou předeepsána pro palivové nádrže a výfukové systémy vozidel, uvedeným v pododdílech 9.2.4.3 a 9.2.4.5.
- 9.2.4.7.3** Vytápěcí systémy s vnitřním spalováním musí být vypínány alespoň jedním z těchto způsobů:
- (a) úmyslným ručním vypnutím z kabiny řidiče;
 - (b) zastavením chodu motoru vozidla; v tomto případě systém může být znovu uveden do provozu ručně řidičem;
 - (c) zapnutím sacího čerpadla přepravovaných nebezpečných věcí instalovaného na motorovém vozidle.
- 9.2.4.7.4** Doběh vytápěcího systému s vnitřním spalováním po jeho vypnutí je dovolen. Pro způsoby uvedené v 9.2.4.7.3 (b) a (c) dodávka spalovacího vzduchu musí být přerušena vhodnými opatřeními po doběhovém cyklu trvajícím nejvýše 40 s. Smějí být používány pouze vytápěcí systémy, u nichž bylo prokázáno, že výměník tepla je odolný proti sníženému doběhovému cyklu 40 s po dobu jejich normálního používání.
- 9.2.4.7.5** Vytápěcí systém s vnitřním spalováním musí být zapínán ručně. Programovaná zařízení jsou zakázána.
- 9.2.4.7.6** Vytápěcí systémy s vnitřním spalováním plynného paliva jsou zakázány.

9.2.5 Omezovač rychlosti

Motorová vozidla (nákladní automobily a tahače návěsů) o největší povolené hmotnosti převyšující 3,5 tuny musí být vybavena omezovačem rychlosti odpovídajícím ustanovením aktuálního znění předpisu EHK č. 89⁸. Omezovač rychlosti musí být seřízen s přihlédnutím k technické toleranci přístroje tak, aby rychlost nemohla překročit 90 km/h.

9.2.6 Spojovací zařízení přípojných vozidel

Spojovací zařízení přípojných vozidel musí splňovat aktuální technické požadavky předpisu EHK č. 55⁹ nebo Směrnice 94/20/ES¹⁰ v souladu s daty jejich vstupu v platnost v nich uvedenými.

⁸ Předpis EHK č. 89: jednotná ustanovení týkající se schvalování:

- I. vozidel z hlediska omezení jejich nejvyšší rychlosti;
- II. vozidel z hlediska jejich vybavení omezovačem rychlosti (SLD) schváleného typu;
- III. omezovačů rychlosti (SLD).

Alternativně se mohou uplatňovat odpovídající aktuální ustanovení Směrnice Rady 92/24/EHS z 31. března 1992 (originál publikován v *Official Journal of the European Communities* č. L 129 ze 14.5.1992, pokud byly změněny v souladu s poslední změněnou formou předpisu EHK č. 89 platnou v době schválení vozidla.

⁹ Předpis EHK č. 55 (Jednotná ustanovení týkající se schvalování mechanických spojovacích zařízení souprav vozidel).

¹⁰ Směrnice 94/20/ES Evropského parlamentu a Rady ze dne 30. května 1994 (originál uveřejněn v *Official Journal of the European Communities* č. L 195 ze dne 29.7.1994).

KAPITOLA 9.3

DODATEČNÉ POŽADAVKY NA KOMPLETNÍ NEBO ZKOMPLETOVANÁ VOZIDLA EX/II NEBO EX/III

9.3.1 Materiály používané pro konstrukci nástaveb vozidel

Ke konstrukci nástavby se nesmí použít materiálů, které mohou tvořit s přepravovanými výbušnými látkami nebezpečné sloučeniny.

9.3.2 Vytápěcí systémy s vnitřním spalováním

9.3.2.1 Vytápěcí systémy s vnitřním spalováním smějí být instalovány do vozidel EX/II a EX/III pouze pro vyhřívání kabiny řidiče nebo motoru.

9.3.2.2 Vytápěcí systémy s vnitřním spalováním musí splňovat požadavky uvedené v 9.2.4.7.1, 9.2.4.7.2, 9.2.4.7.5 a 9.2.4.7.6.

9.3.2.3 Vypínač vytápěcího systému s vnitřním spalováním může být instalován zvnějšku kabiny řidiče.

Není nezbytné prokazovat, že výměník tepla je odolný proti sníženému doběhovému cyklu.

9.3.2.4 Žádné vytápěcí systémy s vnitřním spalováním nebo palivové nádrže, zdroje energie, vstupy spalovacího a vyhřívacího vzduchu, ani vyústění výfukového potrubí, potřebné pro provoz vytápěcího systému nesmějí být instalovány v ložném prostoru.

9.3.3 Vozidla EX/II

Vozidla musí být konstruována, vyrobena a vybavena tak, aby výbušné látky a předměty byly chráněny před vnějšími riziky a nepříznivým počasím. Tato vozidla musí být uzavřená, nebo krytá plachtou. Plachta vozidel musí být odolná proti roztržení a musí být zhotovena z nepromokavého a těžko hořlavého materiálu¹. Musí být dobře napjata tak, aby pokrývala ložný prostor vozidla ze všech stran.

Všechny otvory ložného prostoru uzavřených vozidel musí mít uzamykatelné, těsně přiléhající dveře nebo tuhé kryty. Kabina řidiče musí být od ložného prostoru oddělena celistvou stěnou (beze spár).

9.3.4 Vozidla EX/III

9.3.4.1 Vozidla musí být konstruována, vyrobena a vybavena tak, aby výbušné látky a předměty byly chráněny před vnějšími riziky a nepříznivým počasím. Tato vozidla musí být uzavřená. Kabina řidiče musí být od ložného prostoru oddělena celistvou stěnou (beze spár). Povrch ložného prostoru musí být celistvý (beze spár).

Kotevní úchyty pro upevnění nákladu mohou být instalovány. Všechny spoje musí být utěsněny. Všechny otvory musí být uzamykatelné. Jejich dveře nebo uzávěry musí být zkonstruovány a umístěny tak, aby překrývaly spoje.

9.3.4.2 Nástavba musí být vyrobena z tepelně odolných a ohnivzdorných materiálů o minimální tloušťce 10 mm. Materiály klasifikované jako Třída B-S₃-d₂ podle normy EN 13501-1:2002 se považují za splňující tento požadavek.

Pokud je materiálem použitým pro nástavbu kov, musí být celý vnitřek nástavby pokryt materiály splňujícími tentýž požadavek.

¹ V případě hořlavosti se tento požadavek považuje za splněný, jestliže podle postupu uvedeného v mezinárodní normě ISO 3795:1989 "Silniční vozidla, traktory a zemědělské a lesnické stroje – Stanovení průběhu hoření vnitřních materiálů" stupeň hořlavosti vzorků plachty nepřevyší 100 mm/min.

9.3.5 Motor a ložný prostor

Motor pohánějící vozidla EX/II nebo EX/III musí být umístěn před čelní stěnou ložného prostoru; může však být umístěn i pod ložným prostorem, pokud je to provedeno takovým způsobem, aby jakékoli nadměrné teplo nevyvolalo riziko pro náklad zvýšením teploty na vnitřním povrchu ložného prostoru nad 80 °C.

9.3.6 Vnější zdroje tepla a ložný prostor

Výfukový systém vozidel EX/II a EX/III nebo jiné části kompletních nebo zkompletovaných vozidel musí být konstruovány a umístěny tak, aby jakékoli nadměrné teplo nevyvolalo riziko pro náklad zvýšením teploty na vnitřním povrchu ložného prostoru nad 80 °C.

9.3.7 Elektrické příslušenství

9.3.7.1 Jmenovité napětí elektrického systému nesmí přesáhnout 24 voltů.

9.3.7.2 Jakékoli osvětlení v ložném prostoru vozidel EX/II musí být umístěno na stropě a zakryto, tj. s žádným vyčnívajícím vedením nebo žárovkou.

V případě skupiny snášenlivosti J musí být ochrana elektrické instalace nejméně IP 65 (např. způsob antideflační ochrany EEx d). Jakékoli elektrické zařízení přístupné z vnitřku ložného prostoru musí být dostatečně chráněno proti mechanickému nárazu zevnitř.

9.3.7.3 Elektrická instalace vozidel EX/III musí splňovat příslušné požadavky uvedené v 9.2.2.2, 9.2.2.3, 9.2.2.4, 9.2.2.5.2 a 9.2.2.6.

Elektrická instalace v ložném prostoru musí být chráněna proti prachu (ochrana nejméně IP 54 nebo ekvivalentní), nebo, v případě skupiny snášenlivosti J, nejméně IP 65 (např. způsob antideflační ochrany EEx d).

KAPITOLA 9.4

DODATEČNÉ POŽADAVKY NA KONSTRUKCI NÁSTAVEB KOMPLETNÍCH NEBO ZKOMPLETOVANÝCH VOZIDEL URČENÝCH PRO PŘEPRAVU NEBEZPEČNÝCH VĚCÍ V KUSECH (KROMĚ VOZIDEL EX/II A EX/III)

- 9.4.1** Vytápěcí systémy s vnitřním spalováním musí splňovat následující požadavky:
- (a) Vypínač může být instalován zvnějšku kabiny řidiče;
 - (b) Zařízení může být možno vypnout zvnějšku ložného prostoru; a
 - (c) Není nezbytné prokazovat, že výměník tepla je odolný proti sníženému doběhovému cyklu.
- 9.4.2** U vozidel určených pro přepravu nebezpečných věcí, pro které je předepsáno označení bezpečnostní značkou podle vzorů č. 1, 1.4, 1.5, 1.6, 3, 4.1, 4.3, 5.1 nebo 5.2, nesmějí být žádné palivové nádrže, zdroje energie, nasávání vzduchu pro spalování nebo ohřívacího vzduchu, ani vyústění výfukového potrubí potřebné pro provoz vytápěcího systému s vnitřním spalováním umístěny v ložném prostoru. Musí být zajištěno, že výstup horkého vzduchu nemůže být blokován přepravovaným nákladem. Teplota, na kterou jsou kusy zahřívány, nesmí překročit 50 °C. Vytápěcí systém instalovaný uvnitř ložného prostoru musí být konstruován tak, aby se zabránilo vznícení výbušné atmosféry za provozních podmínek.
- 9.4.3** Dodatečné požadavky na konstrukci nástaveb vozidel určených pro přepravu daných nebezpečných věcí nebo zvláštních obalů mohou být uvedeny v části 7, kapitole 7.2 v souladu s údaji ve sloupci (16) tabulky A kapitoly 3.2 pro danou látku.

KAPITOLA 9.5

DODATEČNÉ POŽADAVKY NA KONSTRUKCI NÁSTAVEB KOMPLETNÍCH NEBO ZKOMPLETOVANÝCH VOZIDEL URČENÝCH PRO PŘEPRAVU VOLNĚ LOŽENÝCH TUHÝCH NEBEZPEČNÝCH LÁTEK

9.5.1

Vytápěcí systémy s vnitřním spalováním musí splňovat následující požadavky:

- (a) Vypínač může být instalován zvnějšku kabiny řidiče;
- (b) Zařízení může být možné vypnout z vnějšku strany ložného prostoru; a
- (c) Není nezbytné prokazovat, že výměník tepla je odolný proti sníženému dobohovému cyklu.

9.5.2

U vozidel určených pro přepravu nebezpečných věcí, pro které je předepsáno označení bezpečnostní značkou podle vzorů č. 4.1, 4.3 nebo 5.1, nesmějí být žádné palivové nádrže, zdroje energie, nasávání vzduchu pro spalování nebo ohřívacího vzduchu, ani vyústění výfukového potrubí potřebné pro provoz vytápěcího systému s vnitřním spalováním umístěny v ložném prostoru. Musí být zajištěno, že výstup horkého vzduchu nemůže být blokován přepravovaným nákladem. Teplota, na kterou je zahříván náklad, nesmí překročit 50°C. Vytápěcí systém instalovaný uvnitř ložného prostoru musí být konstruován tak, aby se zabránilo vznícení výbušné atmosféry za provozních podmínek.

9.5.3

Nástavby vozidel určených pro přepravu volně ložených tuhých nebezpečných látek musí splňovat příslušné požadavky kapitol 6.11 a 7.3, včetně požadavků uvedených v oddílech 7.3.2 nebo 7.3.3, které se na ně mohou vztahovat podle údajů ve sloupcích (10) nebo (17) tabulky A kapitoly 3.2 pro danou látku.

KAPITOLA 9.6

DODATEČNÉ POŽADAVKY NA KOMPLETNÍ NEBO ZKOMPLETOVANÁ VOZIDLA URČENÁ PRO PŘEPRAVU LÁTEK PŘI ŘÍZENÉ TEPLOTĚ

9.6.1 Izotermická, chlazená a chladicí a mrazicí vozidla určená pro přepravu látek při řízené teplotě musí splňovat následující podmínky:

- (a) vozidlo musí být takové a tak vybaveno, pokud se týče izolace a prostředků chlazení, aby řízená teplota předepsaná v 2.2.41.1.17 a 2.2.52.1.16 a v pododdílech 2.2.41.4 a 2.2.52.4 pro přepravovanou látku nebyla překročena. Celkový koeficient prostupu tepla nesmí být vyšší než $0,4 \text{ W/m}^2 \text{ K}$;
- (b) vozidlo musí být vybaveno tak, aby páry přepravovaných látek nebo chladicí látky nemohly proniknout do kabiny řidiče;
- (c) vhodný přístroj musí umožnit kdykoli zjistit teplotu v ložném prostoru z kabiny řidiče,
- (d) ložný prostor musí být opatřen větracími otvory nebo větracími ventily, jestliže existuje jakékoli riziko nebezpečného nadměrného tlaku vznikajícího v ložném prostoru. Je nutno učinit opatření, aby se v případě potřeby zajistilo, že se chlazení větracími otvory nebo ventily nezhorší;
- (e) používaná chladicí látka nesmí být hořlavá; a
- (f) chladicí jednotka chladicího a mrazicího vozidla musí být schopna provozu nezávisle na hnacím motoru vozidla.

9.6.2 Vhodné metody [viz V8(3)] pro zabránění, aby byla překročena řízená teplota, jsou uvedeny v kapitole 7.2 (R1 až R5). V závislosti na použité metodě mohou být použita dodatečná ustanovení týkající se konstrukce nástaveb vozidel uvedená v kapitole 7.2.

KAPITOLA 9.7

DODATEČNÉ POŽADAVKY NA NESNÍMATELNÉ CISTERNY (CISTERNOVÁ VOZIDLA), BATERIOVÁ VOZIDLA A KOMPLETNÍ NEBO ZKOMPLETOVANÁ VOZIDLA POUŽÍVANÁ PRO PŘEPRAVU NEBEZPEČNÝCH VĚCÍ VE SNÍMATELNÝCH CISTERNÁCH S VNITŘNÍM OBJEMEM VĚTŠÍM NEŽ 1 m³ NEBO V CISTERNOVÝCH KONTEJNERECH, PŘEMÍSTITELNÝCH CISTERNÁCH NEBO MEGC S VNITŘNÍM OBJEMEM VĚTŠÍM NEŽ 3 m³ (VOZIDLA FL, OX A AT)

9.7.1 Všeobecná ustanovení

9.7.1.1 Kromě vlastního vozidla nebo podvozkových jednotek používaných místo něho tvoří cisternové vozidlo jedna nebo více nádrží, jejich výstroj a spojovací prvky pro jejich připevnění k vozidlu nebo k podvozkovým jednotkám.

9.7.1.2 Jakmile je snímatelná cisterna připevněna na nosné vozidlo, musí tento celek vyhovovat požadavkům předepsaným pro cisternová vozidla.

9.7.2 Požadavky na cisterny

9.7.2.1 Kovové nesnímatelné nebo snímatelné cisterny musí splňovat příslušné požadavky kapitoly 6.8.

9.7.2.2 Články bateriových vozidel a MEGC musí splňovat příslušné požadavky kapitoly 6.2 v případě lahví, trubkových nádob, tlakových sudů a svazků lahví a požadavky kapitoly 6.8, pokud jde o cisterny.

9.7.2.3 Kovové cisternové kontejnery musí splňovat požadavky kapitoly 6.8, přemístitelné cisterny musí splňovat požadavky kapitoly 6.7 nebo, pokud je to vhodné, požadavky IMDG Code (viz 1.1.4.2).

9.7.2.4 Cisterny vyrobené z vyztužených plastů musí splňovat požadavky kapitoly 6.9.

9.7.2.5 Cisterny pro podtlakové vyčerpávání odpadů musí splňovat požadavky kapitoly 6.10.

9.7.3 Upevňovací prvky

Upevňovací prvky musí být konstruovány tak, aby odolávaly statickým a dynamickým namáháním za normálních podmínek přepravy a nejmenším namáháním uvedeným v 6.8.2.1.2, 6.8.2.1.11 až 6.8.2.1.15 a 6.8.2.1.16 v případě cisternových vozidel, bateriových vozidel a vozidel přepravujících snímatelné cisterny.

9.7.4 Uzemnění vozidel FL

Kovové cisterny nebo cisterny z vyztužených plastů cisternových vozidel FL a články bateriových vozidel FL musí být připojeny k podvozku nejméně jedním dobrým elektrickým spojem. Musí být vyloučen každý dotyk kovů, který by mohl způsobit elektrochemickou korozi.

POZNÁMKA: Viz též 6.9.1.2 a 6.9.2.14.3.

9.7.5 Stabilita cisternových vozidel

9.7.5.1 Celková šířka plochy, kterou zaujímá podvozek cisternového vozidla na vozovce (vzdálenost mezi krajními body dotyku pravé pneumatiky a levé pneumatiky téže nápravy s vozovkou), musí být rovna nejméně 90 % výšky těžiště naloženého cisternového vozidla. U návěsové soupravy nesmí hmotnost na nápravu naloženého návěsu překročit 60 % největší povolené hmotnosti návěsové soupravy.

9.7.5.2 Kromě toho cisterny s nesnímatelnými cisternami o vnitřním objemu větším než 3 m³ určená pro přepravu nebezpečných věcí v kapalném nebo roztaveném stavu a zkoušená tlakem menším než 4 bary musí splňovat technické požadavky předpisu EHK č. 111¹ na boční stabilitu, se změnami a doplňky, v souladu s daty jejich vstupu v platnost v nich uvedenými. Tyto požadavky se vztahují na cisterny poprvé registrované po 1. červenci 2003.

9.7.6 Ochrana vozidel proti nárazu zezadu

Na zadní straně vozidla musí být přes celou šířku cisterny připevněn nárazník dostatečně odolný proti nárazům zezadu. Mezi zadní stěnou cisterny a zadní stranou nárazníku musí být světlá vzdálenost nejméně 100 mm; tato vzdálenost se měří od nejzadnějšího bodu cisternové stěny nebo od vyčnívající výstroje nebo příslušenství, které jsou ve styku s přepravovanou látkou. Vozidla se sklápěcí nádrží určená pro přepravu práškových nebo zrnitých látek a cisterny pro podtlakové vyčerpávání odpadů se sklápěcí nádrží se zadním vyprazdňováním nemusí být vybavena předepsaným zadním nárazníkem, pokud je zadní část cisterny vybavena způsobem zajišťujícím cisterně stejnou ochranu jako nárazník.

POZNÁMKA 1: *Toto ustanovení se nevztahuje na vozidla používaná pro přepravu nebezpečných věc v cisternových kontejnerech, MEGC nebo přemístitelných cisternách.*

POZNÁMKA 2: *K ochraně cisteren proti poškození v důsledku bočního nárazu nebo převrácení viz 6.8.2.1.20 a 6.8.2.1.21 nebo pro přemístitelné cisterny 6.7.2.4.3 a 6.7.2.4.5.*

9.7.7 Vytápěcí systémy s vnitřním spalováním

9.7.7.1 Vytápěcí systémy s vnitřním spalováním musí splňovat požadavky uvedené v 9.2.4.7.1, 9.2.4.7.2, 9.2.4.7.5 a následující požadavky:

- (a) Vypínač může být instalován zvnějšku kabiny řidiče.
- (b) Zařízení může být možno vypnout z vnějšku ložného prostoru; a
- (c) Není nezbytné prokazovat, že výměník tepla je odolný proti sníženému dobohovému cyklu.

Kromě toho vozidla FL musí splňovat požadavky uvedené v 9.2.4.7.3 a 9.2.4.7.4.

9.7.7.2 U vozidel určených pro přepravu nebezpečných věcí, pro které je předepsáno označení bezpečnostní značkou podle vzorů č. 3, 4.1, 4.3, 5.1 nebo 5.2, nesmějí být žádné palivové nádrže, zdroje energie, nasávání vzduchu pro spalování nebo ohřívacího vzduchu, ani vyústění výfukového potrubí potřebné pro provoz vytápěcího systému s vnitřním spalováním umístěny v ložném prostoru. Musí být zajištěno, že výstup horkého vzduchu nemůže být blokován přepravovaným nákladem. Teplota, na kterou je zahříván náklad, nesmí překročit 50°C. Vytápěcí systém instalovaný uvnitř ložného prostoru musí být konstruován tak, aby se zabránilo vznícení výbušné atmosféry za provozních podmínek.

9.7.8 Elektrické příslušenství

9.7.8.1 Elektrická instalace vozidel FL, jejichž schválení je vyžadováno podle oddílu 9.1.2, musí splňovat požadavky uvedené v 9.2.2.2, 9.2.2.3, 9.2.2.4, 9.2.2.5.1 a 9.2.2.6.

Avšak dodatečná elektrická instalace nebo modifikace elektrické instalace vozidla musí splňovat požadavky na elektrické přístroje příslušné skupiny a teplotní třídy podle látek, které se mají přepravovat.

POZNÁMKA: *Přechodná ustanovení, viz též 1.6.5.*

9.7.8.2 Elektrické příslušenství vozidel FL, umístěné v prostorech, kde je výbušná atmosféra nebo kde je možno ji očekávat v takových koncentracích, že si vyžaduje zvláštní opatření, musí být vhodné pro použití v nebezpečné zóně. Takové příslušenství musí splňovat všeobecné požadavky normy IEC 60079, částí 0 a 14 a dodatečné použitelné požadavky normy IEC 60079, částí 1, 2, 5, 6, 7, 11 nebo

¹ Předpis EHK č. 111: *Jednotná ustanovení o schvalování cisternových vozidel kategorií N a O z hlediska stability proti převrácení.*

18². Musí být splněny požadavky na elektrické přístroje příslušné skupiny a teplotní třídy podle látek, které se mají přepravovat.

Pro aplikaci normy IEC 60079, části 14² se musí použít následující klasifikace:

ZÓNA 0

Vnitřek cisternových komor, plnicí a vyprazdňovací armatury a potrubí zpětného vedení par.

ZÓNA 1

Vnitřek skříněk pro zařízení používaná pro plnění a vyprazdňování a zóna do vzdálenosti 0,5 m od odvětrávacích zařízení a pojistných ventilů pro vyrovnávání tlaku.

- 9.7.8.3** Elektrické příslušenství pod stálým napětím, včetně vedení, které je umístěno vně zón 0 a 1, musí splňovat všeobecné požadavky na zónu 1 pro elektrické příslušenství nebo požadavky na zónu 2 pro elektrické zařízení umístěné v kabině řidiče podle normy IEC 60079, části 14². Musí být splněny požadavky na příslušnou skupinu elektrických přístrojů podle látek, které se mají přepravovat.

9.7.9 Dodatečné bezpečnostní požadavky na vozidla EX/III

- 9.7.9.1** Vozidla EX/III musí být vybavena automatickými systémy pro hašení požáru v motorovém prostoru.
- 9.7.9.2** Ochrana nákladu proti požáru pneumatik musí být zajištěna kovovými tepelnými stínicími kryty.

² Alternativně mohou být použity všeobecné požadavky evropské normy EN 50014 a dodatečné požadavky evropských norem EN 50015, 50016, 50017, 50018, 50019, 50020 nebo 50028.

KAPITOLA 9.8

DODATEČNÉ POŽADAVKY NA KOMPLETNÍ A ZKOMPLETOVANÉ MEMU

9.8.1 Všeobecná ustanovení

Kromě vlastního vozidla nebo podvozkových jednotek používaných místo něho tvoří MEMU jedna nebo více nádrží a kontejnerů pro volně ložené látky, jejich výstroj a spojovací prvky pro jejich připevnění k vozidlu nebo k podvozkovým jednotkám.

9.8.2 Požadavky na cisterny a kontejnery pro volně ložené látky

Cisterny, kontejnery pro volně ložené látky a zvláštní komory pro kusy výbušnin MEMU musí splňovat požadavky kapitoly 6.12.

9.8.3 Uzemnění MEMU

Cisterny, kontejnery pro volně ložené látky a zvláštní komory pro kusy výbušnin vyrobené z kovu nebo z vyztužených plastů musí být připojeny k podvozku nejméně jedním dobrým elektrickým spojem. Musí být vyloučen jakýkoli dotyk kovů, který by mohl způsobit elektrochemickou korozi nebo reakci s nebezpečnými věcmi přepravovanými v cisternách a kontejnerech pro volně ložené látky.

9.8.4 Stabilita MEMU

Celková šířka plochy, kterou zaujímá podvozek cisternového vozidla na vozovce (vzdálenost mezi krajními body dotyku pravé pneumatiky a levé pneumatiky téže nápravy s vozovkou), musí být rovna nejméně 90 % výšky těžiště naloženého vozidla. U návěsové soupravy nesmí hmotnost na nápravu naloženého návěsu překročit 60 % největší povolené hmotnosti návěsové soupravy.

9.8.5 Ochrana MEMU proti nárazu zezadu

Na zadní straně vozidla musí být přes celou šířku cisterny připevněn nárazník dostatečně odolný proti nárazům zezadu. Mezi zadní stěnou cisterny a zadní stranou nárazníku musí být světlá vzdálenost nejméně 100 mm (tato vzdálenost se měří od nejzadnějšího bodu cisternové stěny nebo od vyčnívající výstroje nebo příslušenství, které jsou ve styku s přepravovanou látkou). Vozidla se sklápěcí nádrží se zadním vyprazdňováním nemusí být vybavena předepsaným zadním nárazníkem, pokud jsou zadní části cisterny provedeny způsobem zajišťujícím cisterně stejnou ochranu jako nárazník.

POZNÁMKA 1: Toto ustanovení se nevztahuje na MEMU, kde cisterny jsou přiměřeně chráněny proti nárazu zezadu jinými prostředky, např. strojním zařízením nebo potrubím neobsahujícím nebezpečné věci.

9.8.6 Vytápěcí systémy s vnitřním spalováním

9.8.6.1 Vytápěcí systémy s vnitřním spalováním musí splňovat požadavky uvedené v 9.2.4.7.1, 9.2.4.7.2, 9.2.4.7.5, 9.2.4.7.6 a následující požadavky:

- (a) Vypínač může být instalován z vnějšku kabiny řidiče;
- (b) zařízení musí být možno vypnout z vnějšku komory MEMU; a
- (d) není nezbytné prokazovat, že výměník tepla je odolný proti sníženému doběhovému cyklu.

9.8.6.2

Žádné palivové nádrže, zdroje energie, nasávání vzduchu pro spalování nebo ohřívacího vzduchu, ani vyústění výfukového potrubí potřebné pro provoz vytápěcího systému s vnitřním spalováním nesmějí být umístěny v ložném prostoru obsahujícím cisterny. Musí být zajištěno, že výstup horkého vzduchu nemůže být uzavřen. Teplota, na kterou je zahřívána jakákoli výstroj, nesmí překročit 50 °C. Vytápěcí systém instalovaný uvnitř ložného prostoru musí být konstruován tak, aby se zabránilo vznícení výbušné atmosféry za provozních podmínek.

9.8.7 Dodatečné bezpečnostní požadavky

9.8.7.1 MEMU musí být vybavena automatickým hasicím systémem pro prostor motoru.

9.8.7.2 Musí být provedena ochrana nákladu proti požáru pneumatik kovovými tepelnými štíty.

9.8.8 Dodatečné další bezpečnostní požadavky

Připravující a nabíjecí výstroj a zvláštní komory v MEMU musí být opatřeny zámky.



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